

Submission Data File

General Information	
Form Type*	20-F
Contact Name	M2 Compliance
Contact Phone	754-243-5120
Filer Accelerated Status*	Accelerated Filer
Filer File Number	
Filer CIK*	0001437424 (POET TECHNOLOGIES INC.)
Filer CCC*	*****
Filer is Shell Company*	N
Filer is Voluntary Filer*	N
Filer is Well Known Seasoned Issuer*	N
Confirming Copy	No
Notify via Website only	No
Return Copy	Yes
SROS*	NONE
Period*	12-31-2021
Emerging Growth Company	No
Elected not to use extended transition period	No
(End General Information)	

Document Information	
File Count*	28
Document Name 1*	form20-f.htm
Document Type 1*	20-F
Document Description 1	
Document Name 2*	ex1-3.htm
Document Type 2*	EX-1.3
Document Description 2	
Document Name 3*	ex4-10.htm
Document Type 3*	EX-4.10
Document Description 3	
Document Name 4*	ex8-1.htm
Document Type 4*	EX-8.1
Document Description 4	
Document Name 5*	ex12-1.htm
Document Type 5*	EX-12.1
Document Description 5	
Document Name 6*	ex12-2.htm
Document Type 6*	EX-12.2
Document Description 6	
Document Name 7*	ex13-1.htm
Document Type 7*	EX-13.1
Document Description 7	
Document Name 8*	ex13-2.htm
Document Type 8*	EX-13.2
Document Description 8	
Document Name 9*	ex23-1.htm
Document Type 9*	EX-23.1
Document Description 9	
Document Name 10*	form20-f_001.jpg
Document Type 10*	GRAPHIC
Document Description 10	
Document Name 11*	form20-f_002.jpg
Document Type 11*	GRAPHIC
Document Description 11	
Document Name 12*	ex1-3_001.jpg
Document Type 12*	GRAPHIC
Document Description 12	
Document Name 13*	ex1-3_002.jpg
Document Type 13*	GRAPHIC
Document Description 13	
Document Name 14*	ex1-3_003.jpg
Document Type 14*	GRAPHIC
Document Description 14	
Document Name 15*	ex4-10_001.jpg
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Document Description 26	Graphic
Document Name 27*	form20f_001.jpg
Document Type 27*	GRAPHIC
Document Description 27	Graphic
Document Name 28*	form20f_002.jpg
Document Type 28*	GRAPHIC
Document Description 28	Graphic
(End Document Information)	

Notifications	
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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 20-F

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2021

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report

Commission file number: 000-55135

POET TECHNOLOGIES INC.

(Exact name of Registrant as specified in its charter)

Ontario, Canada
(Jurisdiction of incorporation or organization)

1107 – 120 Eglinton Avenue East
Toronto, Ontario, M4P 1E2, Canada
(Address of principal executive offices)

Suresh Venkatesan, CEO

Email: svv@poet-technologies.com
(Name, Telephone, Email and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act: None.

Securities registered or to be registered pursuant to Section 12(g) of the Act: Common Stock, no par value.

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: Not Required.

The number of outstanding shares of common stock, no par value, as of December 31, 2021 was 36,494,228

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes No

Note – Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in the Exchange Act.

Large accelerated filer <input type="checkbox"/>	Accelerated filer <input checked="" type="checkbox"/>	Emerging Growth Company <input type="checkbox"/>	Non-accelerated filer <input type="checkbox"/>
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If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S GAAP <input type="checkbox"/>	International Financial Reporting Standards as issued by the International Accounting Standards Board <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
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If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

POET TECHNOLOGIES INC.
FORM 20-F ANNUAL REPORT
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INTRODUCTION

POET Technologies Inc. is organized under the Business Corporations Act (Ontario). In this Annual Report, the “Company”, “we”, “our”, “POET” and “us” refer to POET Technologies Inc. and its subsidiaries (unless the context otherwise requires). We refer you to the documents attached as exhibits hereto for more complete information than may be contained in this Annual Report. Our principal Canadian corporate offices are located at Suite 1107, 120 Eglinton Avenue East, Toronto, Ontario M4P 1E2, Canada. Our U.S. office is located in the U.S. 1605 N. Cedar Crest Boulevard, Allentown, PA, 18104. Our telephone number in Toronto is (416) 368-9411.

We file reports and other information with the Securities and Exchange Commission (“SEC”) located at 100 F Street NE, Washington, D.C. 20549. You may obtain copies of our filings with the SEC by accessing their website located at www.sec.gov. We also file reports under Canadian regulatory requirements on SEDAR; you may access our reports filed on SEDAR by accessing the website www.sedar.com.

This Annual Report (including the consolidated audited financial statements for the years ended December 31, 2021, 2020 and 2019 attached thereto, together with the auditors’ report thereon), and the exhibits thereto shall be deemed to be incorporated by reference as exhibits to the Registration Statement of the Company on Form F- 10, as amended (File No. 333-227873), and to be a part thereof from the date on which this report was filed, to the extent not superseded by documents or reports subsequently filed or furnished.

Business of POET Technologies Inc.

POET designs, develops, manufactures and sells integrated opto-electronic solutions for data communications and telecommunications markets. POET has developed and is marketing its proprietary POET Optical InterposerTM platform which utilizes a novel waveguide technology that allows the integration of electronic and photonic devices into a single multi-chip module. The integration of devices into a single package is achieved by applying advanced wafer-level semiconductor manufacturing techniques and novel packaging methods developed by POET. POET's Optical Interposer eliminates costly components, assembly and testing methods employed in conventional photonics solutions. It is anticipated that in addition to lowering costs compared to conventional devices, POET's Optical Interposer provides a flexible and scalable platform for a variety of photonics applications ranging from data centers to consumer products.

On October 21, 2020, the Company signed a Joint Venture Agreement ("JVA") establishing a joint venture company, Super Photonics Integrated Circuit Xiamen Co., Ltd ("SPX") with Xiamen Sanan Integrated Circuit Co. Ltd. ("Sanan IC") whose purpose is to assemble, test, package and sell cost-effective, high-performance optical engines based on POET's proprietary Optical Interposer platform technology.

SPX'S capitalization is a combination of committed cash, capital equipment and intellectual property from Sanan IC and intellectual property and know-how from POET, with a combined estimated value of approximately US\$50M. Capitalization is on-going and has not yet been completed. POET's contribution of certain intellectual property and know-how was valued by an independent appraiser at \$22.5M. Sanan IC will contribute cash of approximately \$25M for capital equipment and operating expenses over a 2-3year period, with the expectation that the eventual ownership of the JV will be approximately 52% Sanan IC and 48% POET. SPX is an independent company and is operated as a true joint venture, so its financial results are not consolidated into POET's but are reported as a gain in the value of the contribution to the JV and a gain or loss in the Company's percentage ownership of the JV.

Sanan IC is a world-class wafer foundry service company with an advanced compound semiconductor technology platform, serving the optical, RF microelectronics and power electronics markets. Sanan IC is a wholly owned subsidiary of Sanan Optoelectronics Co., Ltd. (Shanghai Stock Exchange, SSE: 600703), the leading manufacturer of advanced ultra-high brightness LED epitaxial wafers and chips in the world.

SPX will assemble, test, package and sell 100G, 200G and 400G optical engines with customized lasers and photodiodes from Sanan IC combined with optical interposer platform technology from POET. Optical engines are primary components of optical transceivers that transmit data between switches and servers in data centers and between data centers and metro areas. With assembly and test operations built upon the non-linear, wafer-scale methods of the semiconductor industry, compared to the linear scale of conventional photonics assembly, SPX will be able to offer optical engines at dramatically lower cost and higher performance. Device volumes can scale rapidly with marginal investments in capital equipment and labor compared to conventional methods. This ability to manufacture optical engines at the large-scale volumes as needed, offer the opportunity for SPX and POET to penetrate rapidly the large markets for high-speed data communications applications, including internet data centers and 5G carrier networks.

During the year ended December 31, 2021, the Company reported non-recurring engineering revenue of \$209,100 related to a specific Optical Interposer design project.

Net loss for the year was \$15,669,093. The net loss included \$8,165,128 incurred for research and development activities directly related to the development and commercialization of the POET Optical Interposer Platform. Research and development included non-cash costs of \$1,769,951 related to stock-based compensation. \$9,055,528 was incurred for selling, marketing and administration expenses which included non-cash costs of \$2,764,419 related to stock-based compensation and \$1,100,522 related to depreciation and amortization.

The Company incurred \$364,619 of interest expense, of which \$213,843 was non-cash, primarily related to funds borrowed at various dates and from various lenders in 2019 by way of convertible debentures. During the year, \$3,571,342 worth of the convertible debentures were converted into 1,119,750 units of the Company. Each unit consists of one common share and one common share purchase warrant of the Company.

During the period ended December 31, 2021, the Company recognized a gain of \$2,587,500 related to its contribution of intellectual property to SPX in accordance with IAS 28. Additionally, the Company recognized its share of SPX's losses using the equity method. The Company recognized 94.2% or \$1,142,249 of the net operating loss of SPX for the period from March 12, 2021 to December 31, 2021. The Company's current share of the operating loss is a result of the high value of the Company's initial contribution. The Company's share of the loss will reduce as Sanan IC periodically contributes cash and other assets to SPX.

The Company's statement of financial position as of December 31, 2021 reflects assets with a book value of \$27,153,977 compared to \$11,636,728 as of December 31, 2020. Eighty percent (80%) of the book value at December 31, 2021 was in current assets consisting primarily of cash, cash equivalents and short-term investments of \$21,308,603 compared to sixty-four percent (64%) of the book value as of December 31, 2020, which consisted primarily of cash of \$6,872,894. Non-current assets included \$1,445,251 related to the Company's investment in SPX.

On February 24, 2022, the Company filed Articles of Amendment to consolidate its common shares on a ten-for-one basis. For further clarity, for every ten (10) pre-consolidated common shares, shareholders received one (1) post-consolidated common share. On February 28, 2022 the Company's common shares began trading on the TSX Venture Exchange on a post consolidation basis. The Company's name and trading symbol remained unchanged. All references to share and per share amounts in these consolidated financial statements and accompanying notes to the consolidated financial statements have been retroactively restated to reflect the ten-for-one share consolidation.

On March 14, 2022, the Company's common shares began trading on Nasdaq Stock Market LLC (the "Nasdaq") under the ticker symbol "POET".

Financial and Other Information

In this Annual Report, unless otherwise specified, all dollar amounts are expressed in United States Dollars (“US\$”, “USD” or “\$”).

Cautionary Statements Regarding Forward-Looking Statements

This Annual Report on Form 20-F and other publicly available documents, including the documents incorporated herein and therein by reference contain forward- looking statements and information within the meaning of U.S. and Canadian securities laws. Forward-looking statements and information can generally be identified by the use of forward- looking terminology or words, such as, “continues”, “with a view to”, “is designed to”, “pending”, “predict”, “potential”, “plans”, “expects”, “anticipates”, “believes”, “intends”, “estimates”, “projects”, and similar expressions or variations thereon, or statements that events, conditions or results “can”, “might”, “will”, “shall”, “may”, “must”, “would”, “could”, or “should” occur or be achieved and similar expressions in connection with any discussion, expectation, or projection of future operating or financial performance, events or trends. Forward- looking statements and information are based on management’s current expectations and assumptions, which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict.

Our actual results, performance and achievements may differ materially from those expressed in, or implied by, the forward-looking statements and information in this Annual Report as a result of various risks, uncertainties and other factors, many of which are difficult to predict and generally beyond the control of the Company, including without limitation:

- o we have a limited operating history;
- o our need for additional financing, which may not be available on acceptable terms or at all;
- o the possibility that we will not be able to compete in the highly competitive semiconductor market;
- o the risk that our objectives will not be met within the timelines we expect or at all;
- o research and development risks;
- o the risks associated with successfully protecting patents and trademarks and other intellectual property;
- o the need to control costs and the possibility of unanticipated expenses;
- o manufacturing and development risks;
- o the risk that the price of our common stock will be volatile;
- o the risk that geopolitical uncertainties may negatively impact our business venture in China;
- o the risk that shareholders’ interests will be diluted through future stock offerings, option and warrant exercises; and
- o other risks and uncertainties described in ITEM 3.D. “Risk Factors”.

For all of the reasons set forth above, investors should not place undue reliance on forward-looking statements. Other than any obligation to disclose material information under applicable securities laws or otherwise as maybe required by law, we undertake no obligation to revise or update any forward-looking statements after the date hereof.

Data relevant to estimated market sizes for our technologies under development are presented in this Annual Report. These data have been obtained from a variety of published resources including published scientific literature, websites and information generally available through publicized means. The Company attempts to source reference data from multiple sources whenever possible for confirmatory purposes. However, the Company has not independently verified the accuracy and completeness of this data.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

A. Not Required.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not Required.

ITEM 3. KEY INFORMATION

A. Selected Financial Data

The selected financial data of the Company for the years ended December 31, 2021, 2020 and 2019 was derived from the audited annual consolidated financial statements of the Company, which have been audited by Marcum LLP, independent registered public accounting firm. Selected financial data of the Company for the years ended December 31, 2018 and 2017 was derived from the consolidated financial statements of the Company, which are not included in this Annual Report.

The information contained in the selected financial data for the 2021, 2020 and 2019 years is qualified in its entirety by reference to the Company's audited consolidated financial statements and related notes included under the heading "ITEM 17". Financial Statements" and should be read in conjunction with such financial statements and related notes and with the information appearing under the heading "ITEM 5".

Operating and Financial Review and Prospects." Except where otherwise indicated, all amounts are presented in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

The Company has financed its operations from public and private sales of equity securities, issuance of convertible debentures, proceeds received upon the exercise of warrants and stock options, sales of the Company's photonic products and, prior to 2012, by sales of solar energy equipment products. The Company has never been profitable, so its ability to finance operations has been dependent on equity financings. Since 2016, through its former subsidiary, DenseLight Semiconductor Pte. Ltd, the Company generated cash flow from the sale of its photonic sensing products and non-recurring revenue (NRE). We believe, however, that it will need to rely on the sale of equity securities, debt securities or a combination of both, to provide funds for its activities on an ongoing basis until we have concluded the development of the Optical Inter-poser. See ITEM 3.D. "Risk Factors."

The Company has not declared any dividends since incorporation and does not anticipate that it will do so in the foreseeable future.

Consolidated Statements of Operations Under
International Financial Reporting Standards
(US\$)

Years Ended December 31,	2021	2020	2019	Restated 2018	Restated 2017
Revenue	\$ 209,100				
Operating Expenses					
Selling, marketing and administrative	\$ 9,055,528	\$ 8,137,998	\$ 6,697,387	\$ 6,173,875	\$ 5,887,709
Research and development	8,165,128	6,634,317	2,083,815	2,262,476	2,039,421
Operating Expenses	17,220,656	14,772,315	8,781,202	8,436,351	7,927,130
Impairment loss	-	-	1,764,459	-	-
Interest expense	364,619	937,903	819,911	-	-
Amortization of debt issuance costs	-	-	372,340	-	-
Other income, including interest	(75,084)	(41,148)	(10,540)	(14,234)	(18,279)
Credit loss on receivable from the sale of discontinued operations	-	2,500,000			
Forgiveness of Covid-19 government support loans	(186,747)		-	-	-
Gain on contribution of intellectual property to joint venture	(2,587,500)				
Share of loss in joint venture	1,142,249				
Net loss from continuing operations	15,669,093	18,169,070	11,727,372	8,422,117	7,908,851
Income tax recovery	-	-	(292,740)	-	-
Net loss from continuing operations, net of taxes	(15,669,093)	(18,169,070)	(11,434,632)	(8,422,117)	(7,908,851)
Income (loss) from discontinued operations, net of taxes	-	-	5,481,757	(7,900,662)	(4,888,946)
Net loss	(15,669,093)	(18,169,070)	(5,952,875)	(16,322,779)	(12,797,797)
Deficit, beginning of year	(157,317,877)	(139,148,807)	(133,195,932)	(116,873,153)	(104,075,356)
Deficit, end of year	\$ (172,986,970)	\$ (157,317,877)	\$ (139,148,807)	\$ (133,195,932)	\$ (116,873,153)
Basic and diluted loss per share, continuing operations					
	\$ (0.45)	\$ (0.62)	\$ (0.40)	\$ (0.30)	\$ (0.30)
Basic and diluted income (loss) per share, discontinued operations					
	-	-	\$ 0.20	\$ (30.00)	\$ (0.20)
Basic and diluted loss per share	\$ (0.45)	\$ (0.62)	\$ (0.20)	\$ (0.60)	\$ (0.50)

Consolidated Statements of Discontinued Operations Under
International Financial Reporting Standards
(US\$)

			For the Period from January 1, 2019 to November 8,	For the Years Ended December 31,	
	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
Revenue	-	-	\$ 4,426,355	\$ 3,888,185	\$ 2,794,044
Cost of Revenue	-	-	1,201,373	1,475,969	1,342,691
Gross Margin	-	-	3,224,982	2,412,216	1,451,353
Operating Expenses	-	-			
Selling, marketing and administrative	-	-	1,950,526	5,515,329	4,983,032
Research and development	-	-	5,677,222	6,430,328	3,403,452
Operating Expenses	-	-	7,627,748	11,945,657	8,386,484
Interest expense	-	-	74,494	-	-
Impairment loss	-	-	-	156,717	-
Other income	-	-	(1,251,737)	(1,491,556)	(1,748,245)
Expenses	-	-	6,450,505	10,610,818	6,638,239
Net loss from operations	-	-	(3,225,523)	(8,198,602)	(5,186,886)
Change in fair value contingent consideration	-	-	-	-	-
Gain on sale of discontinued operations, net of taxes	-	-	8,707,280	-	-
Net income (loss) from discontinued operations	-	-	5,481,757	(8,198,602)	(5,186,886)
Income tax recovery	-	-	-	297,940	297,940
Income (loss) from discontinued operations, net of income taxes	-	-	\$ 5,481,757	\$ (7,900,662)	\$ (4,888,946)

Consolidated Statements of Financial Position
Under International Financial Reporting Standards
(US\$)

	December 31,				
	2021	2020	2019	2018	2017
Assets					
Cash and cash equivalents	\$ 14,941,775	\$ 6,872,894	\$ 1,428,129	\$ 2,567,868	\$ 4,974,478
Short-term investments	6,366,828	-	-	-	-
Accounts receivable	-	-	-	946,944	493,925
Receivable from the sale of discontinued operations	-	-	18,000,000	-	-
Prepays and other current assets	480,523	618,717	831,265	2,936,619	1,957,727
Inventory	-	-	-	436,833	524,582
Investment in joint venture	1,445,251	-	-	-	-
Property and equipment	3,064,234	3,185,754	3,143,060	9,299,513	8,278,170
Patents and licenses	528,476	438,677	452,384	466,714	456,250
Right of use asset	326,890	520,686	222,517	-	-
Intangible assets	-	-	-	802,409	839,637
Goodwill	-	-	-	7,681,003	7,681,003
Total Assets	\$ 27,153,977	\$ 11,636,728	\$ 24,077,355	\$ 25,137,903	\$ 25,205,772
Liabilities					
Accounts payable and accrued liabilities	\$ 1,791,222	\$ 1,730,361	\$ 1,725,708	\$ 3,040,422	\$ 810,593
Covid-19 government support loans	31,660	147,841	-	-	-
Lease liability	101,074	172,949	223,758	-	-
Convertible debentures	-	3,341,246	3,089,033	-	-
Non-current covid-19 government support	-	70,310	-	-	-
Non-current lease liability	258,274	359,048	-	-	-
Deferred tax liability	-	-	-	1,000,427	1,298,367
Deferred rent	-	-	-	1,814	24,031
Total Liabilities	2,182,230	5,821,755	5,038,499	4,042,663	2,132,991
Shareholders' Equity					
Share capital	147,729,846	114,586,260	112,144,172	112,028,194	103,616,221
Equity component of loan payable	-	565,121	627,511	-	-
Warrants	5,328,455	5,557,002	8,525,358	8,303,738	5,985,378
Contributed surplus	46,954,333	44,407,679	38,799,337	36,042,754	32,102,967
Accumulated other comprehensive loss	(2,053,917)	(1,983,212)	(1,908,715)	(2,083,514)	(1,758,632)
Deficit	(172,986,970)	(157,317,877)	(139,148,807)	(133,195,932)	(116,873,153)
Total Equity	24,971,747	5,814,973	19,038,856	21,095,240	23,072,781
Total Liabilities and Equity	\$ 27,153,977	\$ 11,636,728	\$ 24,077,355	\$ 25,137,903	\$ 25,205,772

B. Capitalization and Indebtedness

During 2021, holders of certain convertible debentures converted \$3,571,342 (2020 - \$369,545) worth of convertible debentures into 1,119,750 (2020 – 123,500) units of the Company. On September 19, 2021, \$7,886 of convertible debentures matured and was repaid to the holder of the convertible debenture. As of December 31, 2021 all convertible debentures were either exercised or matured and repaid.

C. Reasons for the Offer and Use of Proceeds

Not Required.

D. Risk Factors

We are subject to various risks, including those described below, which could materially adversely affect our business, financial condition and results of operations and, in turn, the value of our securities. In addition, other risks not presently known to us or that we currently believe to be immaterial may also adversely affect our business, financial condition and results of operations, perhaps materially. The risks discussed below also include forward-looking statements and information within the meaning of U.S. and Canadian securities laws that involve risks and uncertainties. The Company's actual results may differ materially from the results discussed in the forward-looking statements and information Factors that might cause such differences include those discussed. Before making an investment decision with respect to any of our securities, you should carefully consider the following risks and uncertainties described below and elsewhere in this Annual Report. See also "Cautionary Statement Regarding Forward-Looking Statements."

Risks Related to Our Business

We have a history of large operating losses. We may not be able to achieve or sustain profitability in the future and as a result we may not be able to maintain sufficient levels of liquidity.

We have historically incurred losses and negative cash flows from operations since our inception. As of December 31, 2021, we had an accumulated deficit of \$172,986,970. For the years ended December 31, 2021, December 31, 2020 and December 31, 2019, we incurred net losses of \$15,669,093, \$18,169,070 and \$5,952,875 respectively.

As of December 31, 2021, we held \$21,308,603 in cash and cash equivalents and short-term investments, and we had working capital of \$19,865,170.

We divested our major operating asset, adopted a new “fab-light” strategy, and we plan to focus on the Optical Interposer as our main business. Any or all of these decisions if incorrect may have a material adverse effect on the results of our operations, financial position and cash flows, and pose further risks to the successful operation of our business over the short and long-term.

There are substantial risks associated with our adoption of a “fab-light” strategy, including the loss of revenue associated with the divested operation, the loss of control over an internal development asset, and the loss of key technical knowledge available from personnel who will no longer be employed by the Company, many of whom we may have to replace.

We have some previous experience with managing development without an internal development resource under a similar “fab-light” strategy which was not successful, and there is no guarantee that our new approach to operating a company with our chosen strategy will be successful. Further, our strategy will be solely dependent on the future market acceptance and sale of Optical Interposer-based solutions, which are either not fully developed or are in qualification stages, and which no customer has yet fully committed to adopting in a production product.

We have taken substantial measures to protect POET’s intellectual property in the Optical Interposer, including development and production with a separate third-party company which engaged no engineering personnel from our former subsidiary company DenseLight. We conducted development of component devices with a segregated team at our DenseLight facility and took measures to protect POET’s intellectual property on those developments as well. However, we cannot guarantee that all our measures to protect our intellectual property on either the POET Optical Interposer or its component devices have been totally effective. In addition, we cannot guarantee that DenseLight or any other third-party that we rely on to perform development, manufacturing, packaging or testing services will perform as expected and produce the devices we will need to grow our Optical Interposer business.

We may not be able to obtain additional capital when desired, on favorable terms or at all.

We operate in a market that makes our prospects difficult to evaluate and, to remain competitive, we will be required to make continued investments in capital equipment, facilities and technology. We expect that substantial capital will be required to continue technology and product development, to expand our contract manufacturing capacity if we need to do so and to fund working capital for anticipated growth. If we do not generate sufficient cash flow from operations or otherwise have the capital resources to meet our future capital needs, we may need additional financing to implement our business strategy.

If we raise additional funds through the issuance of our common stock or convertible securities, the ownership interests of our stockholders could be significantly diluted. These newly issued securities may have rights, preferences or privileges senior to those of existing stockholders. Additional financing may not, however, be available on terms favorable to us, or at all, if and when needed, and our ability to fund our operations, take advantage of unanticipated opportunities, develop or enhance our infrastructure or respond to competitive pressures could be significantly limited. If we cannot raise required capital when needed we may be unable to continue technology and product development, meet the demands of existing and prospective customers, adversely affecting our sales and market opportunities and consequently our business, financial condition and results of operations.

The process of developing new, technologically advanced products in semiconductor manufacturing and photonics products is highly complex and uncertain, and we cannot guarantee a positive result.

The development of new, technologically advanced products is a complex and uncertain process requiring frequent innovation, highly-skilled engineering and development personnel and significant capital, as well as the accurate anticipation of technological and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully or on a timely basis. Further, we cannot assure you that our new products will gain market acceptance or that we will be able to respond effectively to product introductions by competitors, technological changes or emerging industry standards. We also may not be able to develop the underlying core technologies necessary to create new products and enhancements, license these technologies from third parties, or remain competitive in our markets.

The optical data communications industry in which we have chosen to operate is subject to significant risks, including rapid growth and volatility, dependence on rapidly changing underlying technologies, market and political risks and uncertainties and extreme competition. We cannot guarantee that we will be able to anticipate or overcome any or all of these risks and uncertainties, especially as a small company operating in an environment dominated by large, well-capitalized competitors with substantially more resources.

The optical data communications industry is subject to significant operational fluctuations. In order to remain competitive, we incur substantial costs associated with research and development, qualification, prototype production capacity and sales and marketing activities in connection with products that may be purchased, if at all, long after we have incurred such costs. In addition, the rapidly changing industry in which we operate, the length of time between developing and introducing a product to market, frequent changing customer specifications for products, customer cancellations of products and general down cycles in the industry, among other things, make our prospects difficult to evaluate. As a result of these factors, it is possible that we may not (i) generate sufficient positive cash flow from operations; (ii) raise funds through the issuance of equity, equity-linked or convertible debt securities; or (iii) otherwise have sufficient capital resources to meet our future capital or liquidity needs. There are no guarantees we will be able to generate additional financial resources beyond our existing balances.

We have contributed a portion of our intellectual property and exclusive assembly and sales rights for certain key initial products to a joint venture company that we have recently formed in China. Although we believe that the joint venture offers significant opportunities for growth that we might not otherwise have and solves several major known challenges, we also recognize that there are substantial risks and uncertainties associated with executing a major portion of our strategy through a joint venture, regardless of the intentions and capabilities of the parties involved.

On October 21, 2020, the Company signed a Joint Venture Agreement (“JVA”) with Sanan IC to form a joint venture company, Super Photonics Xiamen Co., Ltd. (“SPX”), which will eventually be owned 48% by the Company once SAIC is fully invested. SPX will assemble, test, package and sell certain optical engines on an exclusive basis globally and certain others on an exclusive basis in the territory of Greater China. Optical engines based on the POET Optical Interposer are expected to be a primary component of several types of optical transceivers used in data centers. The joint venture is based on the contribution by the Company of certain assembly and test know-how and other intellectual property and cash to be contributed by Sanan IC in stages, subject to meeting certain milestones, to cover all capital and operating expenses of SPX until it is self-sustaining. We cannot guarantee that SPX will meet each milestone or that Sanan IC will or will not contribute capital on schedule when and if such milestones are met, nor can we guarantee that SPX will be successful in assembling and testing optical engines, nor in the marketing and sales once the optical engines are tested and qualified by potential customers.

Because no party to the joint venture, including the Company has a control position, we are not able to consolidate revenue and expenses directly into the Company’s financial statements. The earnings or loss from the joint venture operations are included as a single line item in the financial statements and the gain or loss on the intellectual property contributed to the joint venture is reported on another. Further, even though the joint venture may appreciate in market value if successful, the Company will not be able to reflect any increase in fair value, other than adding or subtracting on a periodic basis the income or loss experienced by the joint venture in relation to the Company’s percentage ownership at the time.

The Company's investment into "Super Photonics Xiamen" ("SPX") is into an independent company operating as a true joint venture under the laws of the Peoples Republic of China ("PRC"). There are significant governance and operational risks associated with joint ventures and with companies operating in the PRC, in general. We cannot guarantee that we will be able to anticipate or overcome the risks and uncertainties of operating a joint venture company in China.

Although SPX has its own governance structure to which both parties contribute directors, most major decisions must be unanimous, which means that such decisions will require the support of the management of SPX and both of the JV partners. Although the Company has sought the support of well-known and competent legal and other professional advisors and has had a major role in the recruitment of the senior management team of SPX, the Company has no prior experience with either the operation of a joint venture or with the operation of a JV company under the laws of the PRC, so we cannot guarantee that the joint venture will be successfully managed without substantial investment in time and effort by the Company's current management team or at all

If our customers do not qualify our products for use on a timely basis, our results of operations may suffer.

Prior to the sale of new products, our customers typically require us to "qualify" our products for use in their applications. At the successful completion of this qualification process, we refer to the resulting sales opportunity as a "design win." Additionally, new customers often audit our manufacturing facilities and perform other evaluations during this qualification process. The qualification process involves product sampling and reliability testing and collaboration with our product management and engineering teams in the design and manufacturing stages. If we are unable to accurately predict the amount of time required to qualify our products with customers, or are unable to qualify our products with certain customers at all, then our ability to generate revenue could be delayed or our revenue would be lower than expected and we may not be able to recover the costs associated with the qualification process or with our product development efforts, which would have an adverse effect on our results of operations.

We have limited operating history in the data center market, and our business could be harmed if this market does not develop as we expect.

The initial target market for our Optical Interposer-based optical engine is the data center market for data communications within the data center and beyond. We have limited experience in selling products in this market. We may not be successful in developing a product for this market and even if we do, it may never gain widespread acceptance by large data center operators. If our expectations for the growth of the data center / datacom market are not realized, our financial condition or results of operations may be adversely affected.

Customer demand is difficult to forecast accurately and, as a result, we may be unable to match production with customer demand.

We make planning and spending decisions, including determining the levels of business that we will seek and accept, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of product demand and customer requirements. Our products are typically sold pursuant to individual purchase orders. While our customers may provide us with their demand forecasts, they are typically not contractually committed to buy any quantity of products beyond firm purchase orders. Furthermore, many of our customers may increase, decrease, cancel or delay purchase orders already in place without significant penalty. The short-term nature of commitments by our expected customers and the possibility of unexpected changes in demand for their products reduce our ability to accurately estimate future customer requirements. If any of our customers decrease, stop or delay purchasing our products for any reason, we will likely have excess manufacturing capacity or inventory and our business and results of operations would be harmed.

The markets in which we operate are highly competitive, which could result in lost sales and lower revenues.

The market for optical components and modules is highly competitive and this competition could result in our existing customers moving their orders to our competitors. We are aware of a number of companies that have developed or are developing integrated optical products, including silicon photonics engines, remote light sources, pluggable components, modules and subsystems, photonic integrated circuits, among others, that compete (or may in the future compete) directly with our current and proposed product offerings.

Some of our current competitors, as well as some of our potential competitors, have longer operating histories, greater name recognition, broader customer relationships and industry alliances and substantially greater financial, technical and marketing resources than we do. We may not be able to compete successfully with our competitors and aggressive competition in the market may result in lower prices for our products and/or decreased gross margins. Any such development could have a material adverse effect on our business, financial condition and results of operations.

We depend on a limited number of suppliers and key contract manufacturers who could disrupt our business and technology development activities if they stopped, decreased, delayed or were unable to meet our demand for shipments of their products or manufacturing of our products.

We depend on a limited number of suppliers of epitaxial wafers and contract manufacturers for our Indium Phosphide (“InP”) laser developments and optical interposer production activities. Some of these suppliers are sole source suppliers. We typically have not entered into long-term agreements with our suppliers. As a result, these suppliers generally may stop supplying us materials and other components at any time. Our reliance on a sole supplier or limited number of suppliers could result in delivery problems, reduced control over technology development, product development, pricing and quality, and an inability to identify and qualify another supplier in a timely manner. Some of our suppliers that may be small or under-capitalized may experience financial difficulties that could prevent them from supplying us materials and other components. In addition, our suppliers, including our sole source suppliers, may experience manufacturing delays or shutdowns due to circumstances beyond their control such as pandemics, earthquakes, floods, fires, labor unrest, political unrest or other natural disasters. A change in supplier could require technology transfer that could require multiple iterations of test wafers. This could result in significant delays in resumption of production.

Any supply deficiencies relating to the quality or quantities of materials or equipment we use to manufacture our products could materially and adversely affect our ability to fulfill customer orders and our results of operations. Lead times for the purchase of certain materials and equipment from suppliers have increased and, in some cases, have limited our ability to rapidly respond to increased demand, and may continue to do so in the future. To the extent we introduce additional contract manufacturing partners, introduce new products with new partners and/or move existing internal or external production lines to new partners, we could experience supply disruptions during the transition process. In addition, due to our customers’ requirements relating to the qualification of our suppliers and contract manufacturing facilities and operations, we cannot quickly enter into alternative supplier relationships, which prevent us from being able to respond immediately to adverse events affecting our suppliers.

Our international business and operations expose us to additional risks.

We have significant tangible assets located outside Canada and the United States. Conducting business outside Canada and the United States subjects us to a number of additional risks and challenges, including:

- periodic changes in a specific country’s or region’s economic conditions, such as recession;
- licenses and other trade barriers;

- the provision of services may require export licenses;
- environmental regulations;
- certification requirements;
- fluctuations in foreign currency exchange rates;
- inadequate protection of intellectual property rights in some countries;
- preferences of certain customers for locally produced products;
- potential political, legal and economic instability, foreign conflicts, and the impact of regional and global infectious illnesses in the countries in which we and our customers, suppliers and contract manufacturers are located;
- Canadian and U. S. and foreign anticorruption laws;
- seasonal reductions in business activities in certain countries or regions; and
- fluctuations in freight rates and transportation disruptions.

These factors, individually or in combination, could impair our ability to effectively operate one or more of our foreign facilities or deliver our products, result in unexpected and material expenses, or cause an unexpected decline in the demand for our products in certain countries or regions. Our failure to manage the risks and challenges associated with our international business and operations could have a material adverse effect on our business.

If we fail to attract and retain key personnel, our business could suffer.

Our future success depends, in part, on our ability to attract and retain key personnel, including executive management. Competition for highly skilled technical personnel is extremely intense and we may face difficulty identifying and hiring qualified engineers in many areas of our business. We may not be able to hire and retain such personnel at compensation levels consistent with our existing compensation and salary structure. Our future success also depends on the continued contributions of our executive management team and other key management and technical personnel, each of whom would be difficult to replace. The loss of services of these or other executive officers or key personnel or the inability to continue to attract qualified personnel could have a material adverse effect on our business.

If we fail to protect, or incur significant costs in defending, our intellectual property and other proprietary rights, our business and results of operations could be materially harmed.

Our success depends on our ability to protect our intellectual property and other proprietary rights. We rely on a combination of patent, trademark, copyright, trade secret and unfair competition laws, as well as license agreements and other contractual provisions, to establish and protect our intellectual property and other proprietary rights. We have applied for patent registrations in the U.S. and in foreign countries, some of which have been issued. We cannot guarantee that our pending applications will be approved by the applicable governmental authorities. Moreover, our existing and future patents and trademarks may not be sufficiently broad to protect our proprietary rights or may be held invalid or unenforceable in court. A failure to obtain patents or trademark registrations or a successful challenge to our registrations in the U.S. or foreign countries may limit our ability to protect the intellectual property rights that these applications and registrations intended to cover.

Policing unauthorized use of our technology is difficult and we cannot be certain that the steps we have taken will prevent the misappropriation, unauthorized use or other infringement of our intellectual property rights. Further, we may not be able to effectively protect our intellectual property rights from misappropriation or other infringement in foreign countries where we have not applied for patent protections, and where effective patent, trademark, trade secret and other intellectual property laws may be unavailable or may not protect our proprietary rights as fully as Canadian or U.S. law. We may seek to secure comparable intellectual property protections in other countries. However, the level of protection afforded by patent and other laws in other countries may not be comparable to that afforded in Canada and the U.S.

We also attempt to protect our intellectual property, including our trade secrets and know-how, through the use of trade secret and other intellectual property laws, and contractual provisions. We enter into confidentiality and invention assignment agreements with our employees and independent consultants. We also use non-disclosure agreements with other third parties who may have access to our proprietary technologies and information. Such measures, however, provide only limited protection, and there can be no assurance that our confidentiality and non-disclosure agreements will not be breached, especially after our employees end their employment, and that our trade secrets will not otherwise become known by competitors or that we will have adequate remedies in the event of unauthorized use or disclosure of proprietary information. Unauthorized third parties may try to copy or reverse engineer our products or portions of our products, otherwise obtain and use our intellectual property, or may independently develop similar or equivalent trade secrets or know-how. If we fail to protect our intellectual property and other proprietary rights, or if such intellectual property and proprietary rights are infringed or misappropriated, our business, results of operations or financial condition could be materially harmed.

In the future, we may need to take legal actions to prevent third parties from infringing upon or misappropriating our intellectual property or from otherwise gaining access to our technology. Protecting and enforcing our intellectual property rights and determining their validity and scope could result in significant litigation costs and require significant time and attention from our technical and management personnel, which could significantly harm our business. We may not prevail in such proceedings, and an adverse outcome may adversely impact our competitive advantage or otherwise harm our financial condition and our business.

We may be involved in intellectual property disputes in the future, which could divert management's attention, cause us to incur significant costs and prevent us from selling or using the challenged technology.

Participants in the markets in which we sell our products have experienced frequent litigation regarding patent and other intellectual property rights. There can be no assurance that third parties will not assert infringement claims against us, and we cannot be certain that our products would not be found infringing on the intellectual property rights of others. Regardless of their merit, responding to such claims can be time consuming, divert management's attention and resources and may cause us to incur significant expenses. Intellectual property claims against us could result in a requirement to license technology from others, discontinue manufacturing or selling the infringing products, or pay substantial monetary damages, each of which could result in a substantial reduction in our revenue and could result in losses over an extended period of time.

If we fail to obtain the right to use the intellectual property rights of others that are necessary to operate our business, and to protect their intellectual property, our business and results of operations will be adversely affected.

From time to time, we may choose to or be required to license technology or intellectual property from third parties in connection with the development of our products. We cannot assure you that third party licenses will be available to us on commercially reasonable terms, if at all. Generally, a license, if granted, would include payments of up-front fees, ongoing royalties or both. These payments or other terms could have a significant adverse impact on our results of operations. Our inability to obtain a necessary third-party license required for our product offerings or to develop new products and product enhancements could require us to substitute technology of lower quality or performance standards, or of greater cost, either of which could adversely affect our business. If we are not able to obtain licenses from third parties, if necessary, then we may also be subject to litigation to defend against infringement claims from these third parties. Our competitors may be able to obtain licenses or cross-license their technology on better terms than we can, which could put us at a competitive disadvantage.

Failure to comply with requirements to design, implement and maintain effective internal control over financial reporting could have a materially adverse impact on our financial reporting and our business. Although we were previously exempt from certain requirements to audit our internal controls over financial reporting, as a result of our "emerging growth company" status recently expiring, we are now, and in the future expect to continue to be, required to have our internal controls over financial reporting audited under Section 404(b) of the Sarbanes-Oxley Act. The audit of our internal control over financial reporting identified a material weakness in our internal control over financial reporting as of December 31, 2021.

Preparing our consolidated financial statements involves a number of complex manual and automated processes, which are dependent upon individual data input or review and require significant management judgment. One or more of these elements may result in errors that may not be detected and could result in a material misstatement of our consolidated financial statements. The Sarbanes-Oxley Act in the U.S. requires, among other things, that as a publicly traded company we disclose whether our internal control over financial reporting and disclosure controls and procedures are effective. Until December 31, 2021 we qualified as an "emerging growth company" under the JOBS Act, and, as a result, were exempted from certain SEC reporting requirements, including those requiring registrants to include an auditor's report regarding the Company's internal controls as part of such registrant's periodic reports. Our "emerging growth company" status expired on December 31, 2021, and the report of our auditors regarding the effectiveness of our internal controls over disclosure and financial reporting as of December 31, 2021 is attached as an exhibit to this annual report.

Our internal control over financial reporting cannot guarantee that no accounting errors exist or that all accounting errors, no matter how immaterial, will be detected because a control system, no matter how well designed and operated, can provide only reasonable, but not absolute assurance that the control system's objectives will be met. If we are unable to implement and maintain effective internal control over financial reporting, our ability to accurately and timely report our financial results could be adversely impacted. This could result in late filings of our annual and quarterly reports under the *Securities Act* (Ontario) and the Securities Exchange Act of 1934 (the "Exchange Act"), restatements of our consolidated financial statements, a decline in our stock price, suspension or delisting of our common stock by the TSX Venture Exchange, or other material adverse effects on our business, reputation, results of operations or financial condition.

The process of designing and implementing effective internal control over financial reporting is a continuous effort that requires us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to maintain a system of internal control that is adequate to satisfy our reporting obligations as a public company. In addition, we are required, pursuant to Section 404(a) of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment must include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing and possible remediation. Testing and maintaining our internal control over financial reporting may divert our management's attention from other matters that are important to our business. In connection with the implementation of the necessary procedures and practices related to our internal control over financial reporting, we and/or our independent registered accounting firm may identify material weaknesses and other deficiencies that may require significant effort and expense to remediate. We may encounter problems or delays in completing the remediation of any such weaknesses or other deficiencies.

In the process of completing their audit of our internal control over financial reporting as of December 31, 2021, our independent registered accounting firm identified a material weakness with respect to user access controls over certain software we utilize for financial reporting. Specifically, our independent registered accounting firm found that adequate restrictions were not in place to ensure appropriate segregation of duties among our personnel, which could result in inappropriate access rights in certain instances. Accordingly, we and our independent registered accounting firm determined that our internal control over financial reporting, and our management determined that our disclosure controls and procedures, were not effective as of December 31, 2021. See Item 15 "Controls and Procedures."

Although we have taken steps to remediate the material weakness identified to us by our independent registered accounting firm, the material weakness will not be considered remediated until the applicable remedial controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. Further, our independent registered accounting firm has not performed a new audit of our internal control over financial reporting and we cannot give assurances that the measures we have thus far taken to remediate the aforementioned material weakness were sufficient or that they will prevent future material weaknesses. As management continues to evaluate and work to improve our internal control over financial reporting, we may determine it necessary to take additional measures or modify the remediation measures we have taken to date.

If we or our independent registered accounting firm later determine that the remedial measures we have taken are insufficient to address such material weakness, we will continue to disclose such material weakness in our periodic reports. Additionally, if there is a change in conditions, or the degree of compliance with policies or procedure deteriorates, internal review of our internal control over financial reporting or the subsequent testing by our independent registered public accounting firm may reveal other deficiencies in our internal control over financial reporting that are deemed material weaknesses. If this occurs, our consolidated financial statements or disclosures may contain material misstatements and we could be required to restate our financial results. In addition, we may not be able to conclude on an ongoing basis that we have effective internal control over financial reporting or our independent registered public accounting firm may not in future issue an unqualified opinion, each of which could lead to investors losing confidence in our reported financial information, which could have a material adverse effect on the trading price of our common stock, and we may be unable to maintain compliance with applicable stock exchange listing requirements.

Our ability to use our net operating losses and certain other tax attributes may be limited.

As of December 31, 2021, we had accumulated net operating losses (“NOLs”), of approximately \$122 million. Varying jurisdictional tax codes have restrictions on the use of NOLs, if a corporation undergoes an “ownership change,” the Company’s ability to use its pre-change NOLs, R&D credits and other pre-change tax attributes to offset its post-change income may be limited. An ownership change is generally defined as a greater than 50% change in equity ownership. Based upon an analysis of our equity ownership, we do not believe that we have experienced such ownership changes and therefore our annual utilization of our NOLs is not limited. However, should we experience additional ownership changes, our NOL carry forwards may be limited.

We are subject to governmental export and import controls that could subject us to liability or impair our ability to compete in international markets. Such controls have recently increased for companies in China under the US government’s “control list”, and may further limit or impair our ability to use certain sub-contractors or to sell directly to companies on the list

We are subject to export and import control laws, trade regulations and other trade requirements that limit which raw materials and technology we can import or export and which products we sell and where and to whom we sell our products. Specifically, the Bureau of Industry and Security of the U.S. Department of Commerce is responsible for regulating the export of most commercial items that are so called dual-use goods that may have both commercial and military applications. A limited number of our products are exported by license under certain classifications. Export Control Classification requirements are dependent upon an item’s technical characteristics, the destination, the end-use, and the end-user, and other activities of the end-user. Should the regulations applicable to our products change, or the restrictions applicable to countries to which we ship our products change, then the export of our products to such countries could be restricted. As a result, our ability to export or sell our products to certain countries could be restricted, which could adversely affect our business, financial condition and results of operations. Changes in our products or any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations, or change in the countries, persons or technologies targeted by such regulations, could result in delayed or decreased sales of our products to existing or potential customers. In such event, our business and results of operations could be adversely affected.

Our manufacturing operations are subject to environmental regulation that could limit our growth or impose substantial costs, adversely affecting our financial condition and results of operations.

Our properties, operations and products are subject to the environmental laws and regulations of the jurisdictions in which we operate and sell products. These laws and regulations govern, among other things, air emissions, wastewater discharges, the management and disposal of hazardous materials, the contamination of soil and groundwater, employee health and safety and the content, performance, packaging and disposal of products. Our failure to comply with current and future environmental laws and regulations, or the identification of contamination for which we are liable, could subject us to substantial costs, including fines, cleanup costs, third-party property damages or personal injury claims, and make significant investments to upgrade our facilities or curtail our operations. Identification of presently unidentified environmental conditions, more vigorous enforcement by a governmental authority, enactment of more stringent legal requirements or other unanticipated events could give rise to adverse publicity, restrict our operations, affect the design or marketability of our products or otherwise cause us to incur material environmental costs, adversely affecting our financial condition and results of operations.

We are exposed to risks and increased expenses and business risk as a result of Restriction on Hazardous Substances, or RoHS directives, which have been amended but are still in effect.

Following the lead of the European Union, or EU, various governmental agencies have either already put into place or are planning to introduce regulations that regulate the permissible levels of hazardous substances in products sold in various regions of the world. For example, the RoHS directive for EU took effect on July 1, 2006. The labeling provisions of similar legislation in China went into effect on March 1, 2007 and is still in effect, as amended. Consequently, many suppliers of products sold into the EU have required their suppliers to be compliant with the new directive. We anticipate that our customers may adopt this approach and will require our full compliance, which will require a significant amount of resources and effort in planning and executing our RoHS program, it is possible that some of our products might be incompatible with such regulations. In such events, we could experience the following consequences: loss of revenue, damages reputation, diversion of resources, monetary penalties, and legal action.

Failure to comply with the U.S. Foreign Corrupt Practices Act could subject us to penalties and other adverse consequences.

We are subject to the U.S. Foreign Corrupt Practices Act, which generally prohibits companies operating in the U.S. from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. In addition, we are required to maintain records that accurately and fairly represent our transactions and have an adequate system of internal accounting controls. Non-U.S. companies, including some that may compete with us, may not be subject to these prohibitions, and therefore may have a competitive advantage over us. If we are not successful in implementing and maintaining adequate preventative measures, we may be responsible for acts of our employees or other agents engaging in such conduct. We could suffer severe penalties and other consequences that may have a material adverse effect on our financial condition and results of operations.

Natural disasters or other catastrophic events could harm our operations.

Our operations in the U.S., Canada, Singapore and China could be subject to significant risk of natural disasters, including earthquakes, hurricanes, typhoons, flooding and tornadoes, as well as other catastrophic events, such as epidemics, terrorist attacks or wars. For example, our testing facility in Singapore is in an area that is susceptible to hurricanes. Any disruption in our facilities or those of our contractors and suppliers arising from these and other natural disasters or other catastrophic events could cause significant delays in the production or shipment of our products until we are able to arrange for third parties to manufacture our products. We may not be able to obtain alternate capacity on favorable terms or at all. Our property insurance coverage with respect to natural disaster is limited and is subject to deductible and coverage limits. Such coverage may not be adequate or continue to be available at commercially reasonable rates and terms. The occurrence of any of these circumstances may adversely affect our financial condition and results of operation.

We may be subject to disruptions or failures in information technology systems and network infrastructures that could have a material adverse effect on our business and financial condition.

We rely on the efficient and uninterrupted operation of complex information technology systems and network infrastructures to operate our business. A disruption, infiltration or failure of our information technology systems as a result of software or hardware malfunctions, system implementations or upgrades, computer viruses, third-party security breaches, employee error, theft or misuse, malfeasance, power disruptions, natural disasters or accidents could cause a breach of data security, loss of intellectual property and critical data and the release and misappropriation of sensitive competitive information and partner, customer, and employee personal data. Any of these events could harm our competitive position, result in a loss of customer confidence, cause us to incur significant costs to remedy any damages and ultimately materially adversely affect our business and financial condition.

A significant disruption in, or breach in security of, our information technology systems or violations of data protection laws could materially adversely affect our business and reputation.

In the ordinary course of business, we collect and store confidential information, including proprietary business information belonging to us, our customers, suppliers, business partners and other third parties and personally identifiable information of our employees. We rely on information technology systems to protect this information and to keep financial records, process orders, manage inventory, coordinate shipments to customers, and operate other critical functions. Our information technology systems may be susceptible to damage, disruptions or shutdowns due to power outages, hardware failures, telecommunication failures and user errors. If we experience a disruption in our information technology systems, it could result in the loss of sales and customers and significant incremental costs, which could materially adversely affect our business. We may also be subject to security breaches caused by computer viruses, illegal break-ins or hacking, sabotage, or acts of vandalism by disgruntled employees or third parties. The risk of a security breach or disruption, particularly through cyberattack or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Our information technology network and systems have been and, we believe, continue to be under constant attack. Accordingly, despite our security measures or those of our third-party service providers, a security breach may occur, including breaches that we may not be able to detect. Security breaches of our information technology systems could result in the misappropriation or unauthorized disclosure of confidential information. Such breaches could also result in legal action against us by third parties.

The COVID-19 outbreak could delay our development activities and adversely affect our results of operations.

The global outbreak of COVID-19 has resulted in Canada, the United States, Singapore, China and other countries halting or sharply curtailing the movement of people, goods and services. The curtailed activity has negatively affected many businesses, including the Company and other businesses that operate in our sector. The prolonged economic impact of COVID-19 remains uncertain. At this point, we believe the conditions may have a material adverse impact on our business, as our suppliers are experiencing major delays resulting from high backlogs of orders and an inability to operate at full capacity. Such delays have resulted in a four to six months delay or longer in the Company achieving certain development objectives. Given the rapidly changing developments we cannot accurately predict what effects these developments will have on our business going forward, which will depend on, among other factors, the ultimate geographic spread of the virus, governmental limitations, the duration of the outbreak, travel restrictions and business closures.

The Company may experience these factors in the future and these factors may have a material adverse effect on the Company's business, operating results and financial condition.

Risks Related to Our Common Stock

In order to qualify for listing on the Nasdaq, we recently consolidated our common shares on a 10-for-1 basis, thereby reducing the total number of our common shares which are outstanding on a post-consolidation basis. We cannot guarantee that the reduction in the number of our outstanding common shares as a result of the consolidation will not adversely affect the liquidity of our common shares or decrease the overall value of the Company in the future.

On February 28, 2022, the Company completed a 10-for-1 consolidation of our outstanding common shares, resulting in a total of 36,496,456 common shares of the Company outstanding on a post-consolidation basis. The reduced number of outstanding shares may reduce market liquidity of our common shares and/or affect investor perception of the value of the Company, and as a result shareholders may not be able to sell their shares on a timely basis, or at all. In-order to attract a wider investor audience for our shares and thereby to achieve a higher market value, we have listed on the Nasdaq Capital Market.

In order to attract a wider investor audience for our shares and thereby to achieve a higher market value, we have listed on the Nasdaq.

Our participation in this new market for our shares involves several levels of uncertainty and additional costs, in both capital and management time and attention. In addition, our Directors and Officers (D&O) liability insurance expense will increase dramatically, reflecting an increased prevalence of derivative shareholder lawsuits in the United States versus Canada. We cannot guarantee that listing on the Nasdaq will improve our stock price or liquidity, or attract a wider investor audience for our shares.

Our stock price has been and may continue to be volatile.

The trading price for our common stock on the TSX Venture Exchange ("TSXV") has been and is likely to continue to be highly volatile. Although we have registered our stock with the SEC, the U.S. market for our shares has been slow to develop, and if and as such a market develops, prices on that market are also likely to be highly volatile. The market prices for securities of early-stage technology companies have historically been highly volatile.

Factors that could adversely affect our stock price include:

- fluctuations in our operating results and our financial condition;
- announcements of new products, partnerships or technological collaborations and announcements of the results or further actions in respect of any products, partnerships or collaborations, including termination of same;
- innovations by us or our competitors;
- governmental regulation;
- developments in patent or other proprietary rights;
- the results of technology and product development testing by us, our partners or our competitors;
- litigation;
- general stock market and economic conditions;
- number of shares available for trading (float); and
- inclusion in or dropping from stock indexes.

As of April 14, 2022, our 52-week high and low closing market prices for our common stock on the TSXV were CA\$15.80 and CA\$7.10. In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation has often been brought against that company. We may become involved in this type of litigation in the future. Litigation of this type may be expensive to defend and may divert our management's attention and resources from the operation of our business

The listing of our common shares on multiple exchanges may adversely affect the liquidity and value of our common shares.

Currently, our common shares are traded on the TSXV and the Nasdaq. We cannot predict the effect of listing our common shares on multiple exchanges on the market price of our common shares, and listing on multiple exchanges may dilute the liquidity of these securities in one or more markets and may also adversely affect the development of an active trading market for our common stock in the United States.

We have historically obtained, and expect to continue to obtain, additional financing primarily by way of sales of equity, which may result in significant dilution to existing shareholders.

We have not earned profits, so the Company's ability to finance operations is chiefly dependent on equity financings. Funds raised through equity public offerings, financing through private placements or the exercise of stock options and warrants and the conversion of convertible debt into common shares in support of the Company's business has resulted in significant shareholder dilution. Further equity financings will also result in dilution to existing shareholders, and such dilution could be significant.

Future sales of common stock, or the prospect of future sales, may depress our stock price. The exercise of share purchase options and warrants will create dilution which could adversely affect the Company's shareholders.

Sales of a substantial number of shares of common stock, or the perception that sales could occur, could adversely affect the market price of our common stock. Additionally, as of April 14, 2022, there were outstanding options to purchase up to 4,969,306 shares of our common stock. As of April 14, 2022, there were outstanding warrants to purchase 3,051,353 shares of our stock. The holders of these options and warrants have an opportunity to profit from a rise in the market price of our common stock with a resulting dilution in the interests of the other shareholders. The existence of these options and warrants may adversely affect the terms on which we may be able to obtain additional financing. The weighted average exercise price of issued and outstanding options is CAD\$5.39, the weighted average exercise price of warrants is CAD\$8.88, which compares to the CAD\$7.58 market price at closing on April 14, 2022. If all of these securities were exercised, an additional 8,020,659 common shares would become issued and outstanding. This represents an increase of 21.98% in the number of shares issued and outstanding and would result in significant dilution to current shareholders

The rights of our shareholders may differ from the rights typically afforded to shareholders of a U.S. corporation.

We are incorporated under the Business Corporations Act (Ontario) (the “OBCA”). The rights of holders of our common shares are governed by the laws of the Province of Ontario, including the OBCA, by the applicable laws of Canada, and by our Articles of Continuance and all amendments thereto (collectively, the “Articles”), and our by-laws (the “By-laws”). These rights differ in certain respects from the rights of shareholders in typical U.S. corporations. The principal differences include without limitation the following:

Under the OBCA, we have a lien on any common share registered in the name of a shareholder or the shareholder’s legal representative for any debt owed by the shareholder to us. Under U.S. state law, corporations generally are not entitled to any such statutory liens in respect of debts owed by shareholders.

With regard to certain matters, we must obtain approval of our shareholders by way of at least 66 2/3% of the votes cast at a meeting of shareholders duly called for such purpose being cast in favor of the proposed matter. Such matters include without limitation: (a) the sale, lease or exchange of all or substantially all of our assets out of the ordinary course of our business; and (b) any amendments to our Articles including, but not limited to, amendments affecting our capital structure such as the creation of new classes of shares, changing any rights, privileges, restrictions or conditions in respect of our shares, or changing the number of issued or authorized shares, as well as amendments changing the minimum or maximum number of directors set forth in the Articles. Under U.S. state law, the sale, lease, exchange or other disposition of all or substantially all of the assets of a corporation generally requires approval by a majority of the outstanding shares, although in some cases approval by a higher percentage of the outstanding shares may be required. In addition, under U.S. state law the vote of a majority of the shares is generally sufficient to amend a company’s certificate of incorporation, including amendments affecting capital structure or the number of directors.

Pursuant to our By-laws, two persons present in person or represented by proxy and each entitled to vote thereat shall constitute a quorum for the transaction of business at any meeting of shareholders. Under U.S. state law, a quorum generally requires the presence in person or by proxy of a specified percentage of the shares entitled to vote at a meeting, and such percentage is generally not less than one-third of the number of shares entitled to vote.

Under rules of the Ontario Securities Commission, a meeting of shareholders must be called for consideration and approval of certain transactions between a corporation and any “related party” (as defined in such rules). A “related party” is defined to include, among other parties, directors and senior officers of a corporation, holders of more than 10% of the voting securities of a corporation, persons owning a block of securities that is otherwise sufficient to affect materially the control of the corporation, and other persons that manage or direct, to a substantial degree, the affairs or operations of the corporation. At such shareholders’ meeting, votes cast by any related party who holds common shares and has an interest in the transaction may not be counted for the purposes of determining whether the minimum number of required votes have been cast in favor of the transaction. Under U.S. state law, a transaction between a corporation and one or more of its officers or directors can generally be approved either by the shareholders or a by majority of the directors who do not have an interest in the transaction.

Neither Canadian law nor our Articles or By-laws limit the right of a non-resident to hold or vote common shares of the Company, other than as provided in the Investment Canada Act (the “Investment Act”), as amended by the World Trade Organization Agreement Implementation Act (the “WTOA Act”). The Investment Act generally prohibits implementation of a direct reviewable investment by an individual, government or agency thereof, corporation, partnership, trust or joint venture that is not a “Canadian,” as defined in the Investment Act (a “non-Canadian”), unless, after review, the minister responsible for the Investment Act is satisfied that the investment is likely to be of net benefit to Canada. An investment in the common shares of the Company by a non-Canadian (other than a “WTO Investor,” as defined below) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company, and the value of the assets of the Company were CA\$5.0 million or more (provided that immediately prior to the implementation of the investment the Company was not controlled by WTO Investors). An investment in common shares of the Company by a WTO Investor (or by a non-Canadian other than a WTO Investor if, immediately prior to the implementation of the investment the Company was controlled by WTO Investors) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company and the value of the assets of the Company equaled or exceeded certain threshold amounts determined on an annual basis. The threshold for a pre-closing net benefit review depends on whether the purchaser is: (a) controlled by a person or entity from a member of the WTO; (b) a state-owned enterprise (SOE); or (c) from a country considered a “Trade Agreement Investor” under the Investment Act. A different threshold also applies if the Canadian business carries on a cultural business. The 2022 threshold for WTO investors that are SOEs will be CA\$454 million based on the book value of the Canadian business’ assets, up from CA\$416 million in 2021. The 2021 thresholds for review for direct acquisitions of control of Canadian businesses by private sector investor WTO investors (\$1 billion) and private sector trade-agreement investors (\$1.5 billion) remain the same and are both based on the “enterprise value” of the Canadian business being acquired.

A non-Canadian, whether a WTO Investor or otherwise, would be deemed to acquire control of the Company for purposes of the Investment Act if he or she acquired a majority of the common shares of the Company. The acquisition of less than a majority, but at least one-third of the shares, would be presumed to be an acquisition of control of the Company, unless it could be established that the Company is not controlled in fact by the acquirer through the ownership of the shares. In general, an individual is a WTO Investor if he or she is a “national” of a country (other than Canada) that is a member of the WTO (“WTO Member”) or has a right of permanent residence in a WTO Member. A corporation or other entity will be a “WTO Investor” if it is a “WTO Investor-controlled entity,” pursuant to detailed rules set out in the Investment Act. The U.S. is a WTO Member. Certain transactions involving our common shares would be exempt from the Investment Act, including:

- an acquisition of our common shares if the acquisition were made in connection with the person’s business as a trader or dealer in securities;
- an acquisition of control of the Company in connection with the realization of a security interest granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Act; and
- an acquisition of control of the Company by reason of an amalgamation, merger, consolidation or corporate reorganization, following which the ultimate direct or indirect control of the Company, through the ownership of voting interests, remains unchanged. Under U.S. law, except in limited circumstances, restrictions generally are not imposed on the ability of non-residents to hold a controlling interest in a U.S. corporation.

As a “foreign private issuer”, the Company is exempt from certain sections of the Exchange Act which results in shareholders having less complete and timely data than if the Company were a domestic U.S. issuer.

As a “foreign private issuer,” as defined under the U.S. securities laws, we are exempt from certain sections of the Exchange Act. In particular, we are exempt from Section 14 proxy rules that are applicable to domestic U.S. issuers. The submission of proxy and annual meeting of shareholder information (prepared to Canadian standards) on Form 6-K has typically been more limited than the submissions required of U.S. issuers and results in shareholders having less complete and timely data, including, among others, with respect to disclosure of: (i) personal and corporate relationships and age of directors and officers; (ii) material legal proceedings involving the Company, affiliates of the Company, and directors, officers promoters and control persons; (iii) the identity of principal shareholders and certain significant employees; (iv) related party transactions; (v) audit fees and change of auditors; (vi) voting policies and procedures; (vii) executive compensation; and (viii) composition of the Compensation Committee. In addition, due to the Company’s status as a foreign private issuer, the officers, directors and principal shareholders of the Company are exempt from the short-swing insider disclosure and profit recovery provisions of Section 16 of the Exchange Act. The foregoing exemption results in shareholders having less data in this regard than is available with respect to U.S. issuers.

As a foreign private issuer, we are permitted to adopt certain home country practices in relation to corporate governance matters that differ significantly from Nasdaq corporate governance listing standards. These practices may afford less protection to shareholders than they would enjoy if we complied fully with Nasdaq’s corporate governance listing standards.

As a foreign private issuer listed on Nasdaq, we are subject to Nasdaq’s corporate governance listing standards. However, pursuant to Nasdaq rules, foreign private issuers are permitted to follow the corporate governance practices of their home country in certain instances, provided that disclosure regarding which requirements have not been complied with and confirmation regarding applicable Canadian corporate governance practices which are being followed has been provided. The Company has availed itself of the ability to follow applicable corporate governance standards of its home country in certain instances, and provided such disclosures and confirmations in applicable periodic reports filed with the Securities and Exchange Commission. Certain corporate governance practices in Canada, which is our home country, may differ significantly from Nasdaq corporate governance listing standards. Therefore, our shareholders may be afforded less protection than they otherwise would have in certain instances as a result of following such Canadian corporate governance practices.

The Company may lose its foreign private issuer status, which would then require us to comply with the Exchange Act’s domestic reporting regime and cause us to incur significant legal, accounting and other expenses.

We are a foreign private issuer, and therefore, we are not required to comply with all of the periodic disclosure and current reporting requirements of the Exchange Act applicable to U.S. domestic issuers. The determination of foreign private issuer status is made annually on the last business day of an issuer’s most recently completed second fiscal quarter, and, accordingly, the next determination will be made with respect to us on June 30, 2022. In order to maintain our current status as a foreign private issuer, either (a) a majority of our common shares must be either directly or indirectly owned of record by non-residents of the United States or (b)(i) a majority of our executive officers or directors cannot be U.S. citizens or residents, (ii) more than 50 percent of our assets must be located outside the United States and (iii) our business must be administered principally outside the United States. If we lose our status as a foreign private issuer, we would be required to comply with the Exchange Act reporting and other requirements applicable to U.S. domestic issuers, including the requirement to prepare our financial statements in accordance with U.S. generally accepted accounting principles, which are more detailed and extensive than the requirements for foreign private issuers. We may also be required to make changes in our corporate governance practices in accordance with various SEC and Nasdaq rules. The regulatory and compliance costs to us under U.S. securities laws if we are required to comply with the reporting requirements applicable to a U.S. domestic issuer may be significantly higher than the cost we would incur as a foreign private issuer. As a result, we expect that a loss of foreign private issuer status would increase our legal and financial compliance costs and would make some activities highly time consuming and costly. If we lose foreign private issuer status and are unable to comply with the reporting requirements applicable to a U.S. domestic issuer by the applicable deadlines, we would not be in compliance with applicable SEC rules or the rules of the Nasdaq, which could cause investors could lose confidence in our public reports and could have a material adverse effect on the trading price of our common shares.

Additionally, we are currently eligible to use the multijurisdictional disclosure system (“MJDS”), which, among other things, allows eligible Canadian issuers to make registered public offerings in the United States using a prospectus prepared and reviewed in Canada that is mainly, although not exclusively, in accordance with Canadian disclosure requirements. If the Company no longer qualifies as a foreign private issuer, it would not be eligible to use the MJDS, or other foreign issuer forms for certain securities offerings. The regulatory and compliance costs under U.S. federal securities laws as a U.S. domestic issuer may be significantly more than the costs incurred as a Canadian foreign private issuer eligible for MJDS.

If the Company is characterized as a passive foreign investment company, our U.S. shareholders may suffer adverse tax consequences.

As more fully described below in ITEM 10.E. “Taxation” — United States Federal Income Tax Considerations — Passive Foreign Investment Company Status”, if for any taxable year our passive income, or the value of our assets that produce (or are held for the production of) passive income, exceed specified levels, we may be characterized as a passive foreign investment company (“PFIC”) for U.S. federal income tax purposes. This characterization could result in adverse U.S. tax consequences to our U.S. shareholders, including gain on the disposition of our common shares being treated as ordinary income and any resulting U.S. federal income tax being increased by an interest charge. Rules similar to those applicable to dispositions generally will apply to certain “excess distributions” in respect of our common shares.

The actual allocation of proceeds from any financing undertaken may differ from the Company's initial or current intentions.

The Company has discretion in the use of the net proceeds from any offering of equity securities. The Company may elect to allocate proceeds differently from its initial or current intentions. The failure by the Company's management to apply these funds effectively could have a material adverse effect on its business.

Warrants included with financings

Warrants offered with financings are not listed on any exchange. Investors may be unable to sell the warrants at the prices desired or at all. There is no existing trading market for the warrants and there can be no assurance that a liquid market will develop or be maintained for the warrants, or that an investor will be able to sell any of the warrants at a particular time (if at all). The liquidity of the trading market in the warrants, and the market price quoted for the warrants, may be adversely affected by, among other things:

- changes in the overall market for the warrants;
- changes in the Corporation's financial performance or prospects;
- changes or perceived changes in the Corporation's creditworthiness;
- the prospects for companies in the industry generally;
- the number of holders of the warrants;
- the interest of securities dealers in making a market for the warrants; and
- prevailing interest rates.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of the Company

The legal and commercial name of the Company is POET Technologies Inc. The Company was originally incorporated under the British Columbia Company Act on February 9, 1972 as Tandem Resources Ltd. On November 14, 1985, Tandem Resources Ltd. amalgamated with Stanmar Resources Ltd. and Keezic Resources Ltd., to continue as one company under the name Tandem Resources Ltd. under the British Columbia Company Act. By Articles of Continuance dated January 3, 1997, Tandem Resources Ltd. was continued under the OBCA. By Articles of Amendment dated September 26, 2006, Tandem Resources Ltd. changed its name to OPEL International Inc. By Certificate of Continuance dated January 30, 2007, OPEL International Inc. was continued under the New Brunswick Business Corporations Act. By Articles of Continuance dated November 30, 2010, OPEL International Inc. was continued under the OBCA and changed its name to OPEL Solar International Inc. By Articles of Amendment dated August 25, 2011, OPEL Solar International Inc. changed its name to OPEL Technologies Inc. By Articles of Amendment dated July 23, 2013, OPEL Technologies Inc. changed its name to POET Technologies Inc.

On May 11, 2016, in an all-stock transaction, the Company acquired all the issued and outstanding shares of DenseLight Semiconductor Pte. Ltd., a privately held Singapore company that provides optical solutions. DenseLight designs, manufactures and sells optical light source products. DenseLight was acquired for \$10,500,000 of the Company's stock. The Company issued 1,361,115 common shares to the former shareholders of DenseLight.

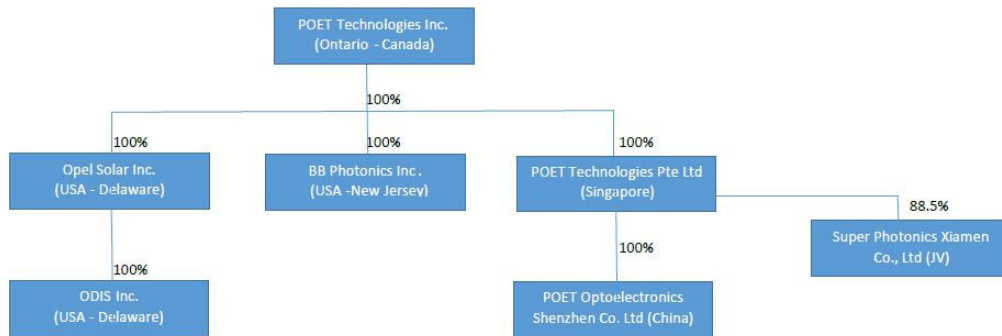
On November 8, 2019, the Company sold 100% of the issued and outstanding shares of DenseLight for \$26,000,000. The Company recognized a gain on the sale of \$8,707,280.

On June 22, 2016, in an all-stock transaction, the Company acquired all the issued and outstanding shares of BB Photonics Inc., a privately held US Company with a wholly owned subsidiary, BB Photonics UK Ltd. Both companies design integrated photonics solutions for the data communications market. BB Photonics and its subsidiary were acquired for consideration of \$1,550,000. The acquisition was settled with the issuance of 199,609 common shares of the Company to the former shareholders of BB Photonics. The Company dissolved BB Photonics UK Ltd. on October 6, 2020.

On May 17, 2019, the Company established POET Technologies Pte. Ltd. (“PTS”), a wholly owned subsidiary in Singapore. On August 4, 2020, PTS established POET Optoelectronics Shenzhen Co., Ltd (“POET SZ”), a wholly owned subsidiary in Shenzhen, China.

On October 22, 2020, the Company signed a Joint Venture Agreement establishing a joint venture company, Super Photonics Xiamen Co., Ltd with Xiamen Sanan Integrated Circuit Co. Ltd. Super Photonics Xiamen Co., Ltd was formed on March 12, 2021.

The following is a graphic description of the Company and its subsidiaries:



OPEL Solar Inc. and ODIS Inc.

OPEL Solar, Inc. (OPEL)

OPEL is a wholly-owned subsidiary of POET Technologies and is the assignee for all patents and patent applications filed by the Company prior to 2019.

ODIS Inc. (“ODIS”)

ODIS is a wholly owned subsidiary of OPEL Solar, Inc. and is the developer of the POET platform semiconductor process IP for fabrication of integrated circuit devices containing both electronic and optical elements in a single package (“hybrid integration”).

BB Photonics Inc.

BB Photonics developed photonic integrated components for the datacom and telecom markets utilizing embedded dielectric technology that enables the low-cost integration of active and passive devices into photonic integrated circuits. BB Photonics’ operation is currently dormant.

POET Technologies Pte Ltd. (“PTS”)

PTS is a wholly owned subsidiary of POET Technologies Inc. Situated in Singapore, PTS tests and validates the designs of ODIS.

POET Optoelectronics Shenzhen Co., Ltd (“POET SZ”)

POET SZ is a wholly owned subsidiary of PTS. Situated in Shenzhen, China, PTS develops optoelectronic products based on the designs of ODIS.

Super Photonics Xiamen Co., Ltd, (“SPX”)

SPX is a joint venture, situated in Shenzhen, China. SPX was established with Sanan IC with a sole purpose to assemble, test, package and sell cost-effective, high-performance optical engines based on POET’s proprietary Optical Interposer platform technology.

The Company operates geographically in the United States, Canada, Singapore and China.

Capital Expenditures

Our capital expenditures for the last three years, which principally consist of purchases of research and development equipment and instrumentation and patents are as follows:

Period	Capital Expenditure	Purpose
Fiscal 2021	\$ 930,882	Instruments, equipment and patents
Fiscal 2020	\$ 1,573,863	Instruments, equipment and patents
Fiscal 2019 ⁽¹⁾	\$ 2,121,987	Instruments, equipment and patents

(1) Prior to the sale of DenseLight, the Company spent \$1,610,503 in capital expenditures at DenseLight and \$511,484 on capital expenditures at POET. The capital items acquired at DenseLight were sold as part of the sale.

The Company’s registered office is located at Suite 1107, 120 Eglinton Avenue East, Toronto, Ontario, Canada M4P 1E2 and its phone number is (416) 368-9411. The Company has operations at Suite 308, 1605 N. Cedar Crest Boulevard, Allentown, PA, 18104, 21 Changi North Way, #04-06, Singapore, 498774 and Unit 02, 10th Floor, A4 Building, Kexing Science Park, No.15 Keyuan Road, Science Park Middle District, Nanshan District, Shenzhen, 518057

B. Business Overview

Corporate Overview

Overview

POET Technologies is a design and development company offering photonic integration solutions based on the POET Optical Interposer™, a novel platform that allows the seamless integration of electronic and photonic devices into a single multi-chip module using advanced wafer-level semiconductor manufacturing techniques and packaging methods. POET's Optical Interposer eliminates costly components and labor-intensive assembly, alignment, burn-in and testing methods employed in conventional photonics. We believe the cost-efficient integration scheme and scalability of the POET Optical Interposer brings value to devices or systems that integrate electronics and photonics, including high-growth areas of communications and computing, such as high-speed networking for cloud service providers and data centers, 5G networks, machine-to-machine communication, sometimes referred to as the "Internet of Things" (IoT), self-contained "Edge" computing applications, such as inference engines for Artificial Intelligence (AI) systems and sensing applications, such as LIDAR systems for autonomous vehicles and point-of-use health care products.

POET targeted as the first application of the Optical Interposer the development of optical engines for transceivers used in data centers. Transceivers are used to convert digital electronic signals into light signals and vice versa, and to transmit and receive those light signals via fiber optic cables within datacenters and between datacenters and metropolitan centers in a vast data and tele-communications network.

During 2019 and early 2020, the Company was engaged with a large North American-based systems company in proving out various aspects of the optical engine technology. Following the successful completion of the project, POET transitioned from technology development to product design and development to deliver prototypes of optical engines for qualification and testing to several customers. These included designs for 100G/200G and 400G optical engines and sub-assemblies based on the POET Optical Interposer in design projects that are ongoing. POET has delivered initial prototypes, including pre-alpha and alpha samples to customers in 2021. Beta samples are expected to be delivered in 2022. The samples will be used by customers to confirm that the uniquely designed optical engines meet specifications and can pass rigorous reliability testing required by the data communications industry. The Company expects that its devices will pass such testing and be included in the production plans of several major customers in 2022.

In its initial target market of optical transceiver modules, the Corporation believes that, because of its ability to produce, test and burn-in optical engines fully at wafer-scale, that it can deliver devices that are: a) lower in cost by a factor of 25% to 40% than competitive assemblies; and b) that those sub-assemblies can be produced at a capital cost that is 90% lower than conventional approaches. In addition, because of its fundamental design and architecture, the POET Optical Interposer platform can be used for multiple product designs, multiple generations of the same product and multiple product extensions. The Company anticipates entering other related markets for the POET Optical Interposer following its initial focus on optical engines for transceivers, such as 5G communications and the areas of co-packaged optics, which includes stand-alone applications such as optical AI accelerator chips, and high-value sensing applications, such as LIDAR for autonomous vehicles and spectrometry and other sensing devices for use in point-of-care diagnostic and consumer products.

In order to address the challenge of producing devices in the large quantities that are needed by customers in the high-volume data communications industry, POET entered into an agreement in late 2020 with Xiamen Sanan Integrated Circuit Co. Ltd. ("Sanan IC"), a subsidiary of Sanan Optoelectronics Xiamen Co. Ltd. to form a joint venture to assemble, test and sell optical engines in high volumes. Sanan is the world's largest manufacturer of compound semiconductor devices, producing over 25 million eight-inch wafers per year across a variety of substrate types and applications. The objective of the joint venture company, which is named "Super Photonics Xiamen" ("SPX") is to assemble, test and sell optical engines based on the POET Optical Interposer, along with devices procured from various suppliers, including Sanan IC, into finished products. Optical engines for 100G and 200G applications will be sold exclusively world-wide by SPX. 400G optical engines will be sold by SPX in the China territory while the Company will sell 400G optical engines to customers in the United States, Europe and elsewhere outside the China territory. Until SPX is in full operation, prototypes and samples are currently being fabricated by POET using both internal resources and external suppliers, foundries and vendors. As designs are completed and the prototypes are delivered to customers, the Company will begin to benefit from revenues associated with Non-Recurring Engineering (NRE), along with expense reimbursements for delivered prototypes. Volume production of optical engines designed for specific customers is expected to begin in 2022, with high volumes expected to ramp later that year and into 2023. The Company expects that as alpha and beta samples of generic POET optical engines (i.e., those produced to what is referred to as a "reference design") become available, that additional design opportunities will emerge with customers that have seen the potential benefit of POET's platform approach to optical engine design and development.

Research & Development

Prior to the announcement of its invention of the POET Optical Interposer in January of 2018, the Company had focused its efforts on the integration of multiple functions into a single chip or multiple devices into a single multi-chip package. The acquisition in 2015 and subsequent operation of DenseLight Semiconductors Pte (“DenseLight”), a Singapore-based company that owns and operates a compound semiconductor fabrication facility, anticipated a trend in the market away from the use of Gallium Arsenide (GaAs), favoring the frequencies generated by Indium Phosphide (InP) lasers for use within datacenter, datacenter to datacenter, and datacenter to metro communications. Beginning as early as 2017, POET directed DenseLight to focus on the development of lasers in those frequencies used for data communications applications in addition to its traditional focus on lasers used for sensing devices. Beginning in 2018, those efforts were further focused on the production of devices that would be compatible for use with the Optical Interposer platform. Once sufficient development work had been performed to demonstrate that those lasers could be built reliably to POET’s specifications, the Company decided to adopt a “fab light” strategy, common among semiconductor companies, and divest its physical fabrication operations through the sale of DenseLight, which it completed in November of 2019. Since the announcement of the invention of the Optical Interposer, virtually all the R&D spending in the Company has been dedicated to development of the Optical Interposer as a platform technology, suitable for the design of multiple products, product generations, applications and extensions. This included the development of multiple features embedded in the Optical Interposer that enhance its utility, and the design and development of compatible active devices that are unique to the Optical Interposer platform.

As it transitioned from technology to product development in the second half of 2021, the Company committed to investing approximately \$2 million in development and engineering programs to produce prototype samples of 100G and 200G optical engines in several configurations, including customized designs for specific customers or applications. The Company will invest approximately \$7.5 million in development and engineering programs in 2022 related to its 400/800G optical engine designs, co-packaged optics designs and fabrication technologies.

Photonics Markets

As a supplier of integrated photonics components, POET operates within a market that is large and rapidly growing. Within the data- and tele-communications segments, the ever-present need for higher speed and lower cost switching and transmission is driving the conversion away from copper to light-based systems that are far more efficient and cost effective to operate and maintain. Light-based sensing devices find uses across a broad expanse of applications, from autonomous vehicles to medical devices and consumer products.

The overall Photonics Market (the market for LEDs, lasers, sensors, detectors, optical components and systems) is currently \$576.8 billion and is projected to grow to \$1,214.5 billion over the 10-year period of 2020 through 2030, which is the equivalent of a 6.9% CAGR¹. Much of this growth is being driven by the explosion in demand for data storage and information distribution and the corresponding growth in internet traffic and cloud services.

The global data center market is expected to post a CAGR of more than 17% during the period 2019-2023². A key factor driving the growth of the global data center market size is the rise in adoption of multi-cloud and network upgrades to support 5G. The implementation of 5G is expected to significantly increase data traffic, which will increase the demand for upgrading the existing data centers and construction of new data centers.

Data center market growth drives the most immediate demand for POET's products that are key components to Optical Transceivers. In revenue terms, the global market for such transceivers was estimated at \$5.5 billion in 2020 and projected to reach a \$9.9 billion by 2027, growing at a CAGR of 8.7% over the period.³ Specifically relevant to POET is the growth of single-mode transmission, which is projected by ResearchAndMarkets.com to record 8.4% CAGR and reach US\$6.5 billion by the end of the analysis period. Growth in China is forecast to be 13.1% over the period, with significantly lower growth in other parts of the world.

Other markets for POET's integrated photonics solutions include co-packaged optics (CPO) which merge ASICs with photonics in the same package), optically-integrated Artificial Intelligence accelerator chips, 5G interconnect markets, such as PON and GPON, edge computing for machine-to-machine communications, and selected sensing markets, including LIDAR, Optical Coherence Tomography for medical devices, and certain consumer products, such as virtual reality systems.

Our Strategy

Our vision for the Company is to become a global leader in chip-scale photonic solutions by deploying our Optical Interposer technology to enable the seamless integration of electronics and photonics for a broad range of vertical market applications. Our Mission for the Company is to establish an industry leadership position in chip-scale integrated photonics with validated disruptive, IP protected, Optical Interposer platform components.

As we near production of our first Optical Interposer-based products, we have refined our strategy to reflect our current thinking about how best to achieve our vision and mission for the Company:

· *Support Super Photonics Xiamen (SPX), a joint venture between POET and Sanan IC, as an independent company to drive growth in optical transceivers and deliver maximum cash flow to partners.* As our designs for Optical Engines are realized in the form of Alpha samples that provide performance data to potential customers and Beta samples that those customers can test, demonstrating an ability to supply devices in volume is a challenge that must be met. The Company has done so through the formation of Super Photonics Xiamen (SPX), a joint venture between POET and Sanan IC, a leading manufacturer of compound semiconductor-based components in China. In addition to providing the required investment and ability to rapidly scale manufacturing capacity, as a JV partner, Sanan IC also offers the benefits of being a qualified supplier of lasers for Optical Engines, a company with an outstanding reputation within the industry, and one with a direct presence in the largest market for the Company's products. POET's immediate path to commercial success and its ability to generate profits over the longer term are directly influenced by the level of support that it can provide to the joint venture. Delivery of samples and subsequent sales of Optical Engines to customers in China, where virtually all optical transceiver module manufacturers are located, will demonstrate the technological viability and market acceptance of POET's designs. As large volumes of Optical Engines are produced by SPX, the expectation for rapid scaling of manufacturing to meet customer demand will be confirmed.

¹Prescient & Strategic Intelligence, *Photonics Market Research Report, 2019*

²Technavio, *Global Data Center Market 2019-2023 Research Report, 2019*

³ResearchAndMarkets.com, *Global Optical Transceivers Market Trajectory Analytics Report, 2021*

· *Continue to engage with industry leaders and incumbents to design, develop and sell devices based on the Optical Interposer.* The POET Optical Interposer is designed to be a flexible platform for the combination or integration of various photonic and electronic components. The low cost makes it suitable for applications like transceivers and automotive LIDAR. The compatibility of the Optical Interposer manufacturing process with standard silicon CMOS processing and the ability to construct architectures with substantially lower energy consumption opens up large and critical data processing applications where super high-speed processing is essential, such as integration with next generation switches and artificial intelligence. The small size and form factor of the Optical Engines that have been developed by the Company are bound to open new applications and markets where miniaturization is a key element, such as point-of-care medical devices and consumer products.

· *Exploit “localization” imperative in China to expand scope of existing operations and to seek both organic and inorganic growth opportunities and exit strategies.* China as a nation has increased its efforts to “localize” supplies of key resources and technologies. As a result, there is strong interest from both government and private financial interests in investing in local companies. As an independent operating company, Super Photonics Xiamen is in a strong position to attract capital from outside sources to grow its presence in China and to build a franchise in assembly and test operations all linked to the POET Optical Interposer.

· *Form additional partnerships in target sectors to establish fabrication and sales operations globally.* Currently, the focus of SPX is the data and telecommunications market, specifically limited to building Optical Engines for 100/200G and 400G optical transceivers. The market for 5G interconnect applications is a closely related market, but one which necessitates further planning regarding how best to both enter and supply. As a platform technology that is applicable to many vertical market applications outside of optical transceivers and 5G interconnects, our strategy must include the ability to identify and exploit a variety of different applications. To do so, the Company needs to form additional partnerships in those market segments and to design appropriate strategies for the fabrication of devices whose functions will be materially different from those of transceivers and with correspondingly different distribution and sales. The form of such partnerships may also be different than what was established for transceivers.

· *Pursue complementary strategic alliance or acquisition opportunities for inorganic growth.* We intend to evaluate and selectively pursue strategic alliances or acquisition opportunities that we believe will accelerate our penetration of specific applications or vertical markets with our technology or products.

· *Explore technology licensing opportunities for growth in non-target sectors.* It is not possible for the Company to pursue all potential applications for the POET Optical Interposer. We will consider carefully opportunities to license our technology to others when and if appropriate.

Our Products

During 2021, the Company announced several product lines that have been in development including:

- POET's 100/200G CWDM4/FR4 product lines for data center operations, including fully validated receive (RX), transmit (TX) and integrated (TXRX) Optical Engines. Samples mounted on evaluation boards were deployed to selected customers;
- POET's 100G LR4 product line for high performance Optical Engines meeting the demanding specifications for long-range (10km) communications on the client side of long-haul networks with a monolithic 4-channel multiplexing and demultiplexing functionality built directly into the Optical Interposer waveguides;
- POET's 400G DR4/FR4 product line being demonstrated in pre-alpha stage integrated with a 400G Silicon Photonics (SiPh)-based high speed modulator and/or Thin Film Lithium Niobate (TFLN)-based modulator; and
- LightBar™ and LightBar-C™ products as fully aligned, multiplexed light source products operating in the "O-band" for data communications applications and the "C-band" for sensing and computing applications. Both LightBar products come fully assembled with fiber attached for easy adaptation to existing transceiver module, CPO and optical computing applications.

Competition

The photonics market is intensely competitive and we expect experience intense competition from a number of manufacturers with alternative technologies. Many of our competitors will be larger than we are and have significantly greater financial, marketing and other resources.

In addition, several of our competitors, especially in the datacom markets, have large market capitalizations or cash reserves and are much better positioned to acquire other companies to gain new technologies or products that may displace our products. Data center equipment providers, who we expect to become our customers, and data center service providers, who are supplied by our customers, may decide to manufacture the optical subsystems that we plan to provide. We may also encounter potential customers that, because of existing relationships, are committed to the products offered by these competitors.

We believe the principal competitive factors in our target markets include the following:

- use of internally manufactured components;
- product breadth and functionality;

- timing and pace of new product development;
- breadth of customer base;
- technological expertise;
- reliability of products;
- product pricing; and
- manufacturing efficiency.

We believe that we can compete favorably with respect to the above factors based on processes, the projected performance, anticipated inherent reliability of our products, our technical expertise in photonic engine design and manufacture and cost.

Intellectual Property

We have 70 issued patents and 21 patent applications pending, including four provisional patent applications. Of the 70 issued patents, 17 are directly related to the Optical Interposer and include fundamental design and process patents. All 21 applications pending are Optical Interposer-related. Multiple additional applications are in various stages of preparation. The patents cover device structures, underlying technology related to the Optical Interposer, applications of the technology, and fabrication processes. We intend to continue to apply for additional patents in the future. We believe these patents provide a significant barrier to entry against competition along with company trade secrets and know-how. Currently, we are working on the design of integrated devices, manufacturing processes, assembly and packaging processes, and products for data communication applications in the data center market.

Sale of DenseLight Subsidiary

On November 8, 2019, the Company closed on the sale of its wholly owned subsidiary, DenseLight Semiconductors Pte. Ltd., to a consortium of investors organized under DenseLight Semiconductor Technology (Shanghai) Ltd. (“DL Shanghai”) for \$26,000,000. POET shareholders approved the sale with 99% of votes submitted at a Special Meeting held on October 24, 2019, ratifying the Share Sale Agreement (“SSA”) signed by the Company on August 20, 2019. The buyer assumed control of DenseLight upon closing. The sale proceeds were paid over multiple tranches. The first tranche payment was received on November 8, 2019 in the amount of US\$8 million. Shares of DenseLight were placed in escrow in the Buyer’s name, to be released by the escrow agent to the Buyer upon receipt of the remaining payments. The second tranche payment was made in two installments, with the first paid on February 19, 2020 consisting of \$4,750,000 and the second on March 30, 2020 of \$8,250,000.

The Company received payments of \$1,500,000 and \$1,000,000 on June 29, 2020 and July 3, 2020 respectively. After taking into consideration the length of time it had taken the Buyer to make the foregoing payments and the Company’s expectations regarding the likelihood of receiving an additional payment, the Company determined that it was in its best interest to accept partial payments as final payment on the Company’s receivable. As a result, the Company recognized a credit loss of \$2,500,000 during the year ended December 31, 2020 (nil - 2019).

Upon closing the transaction in November 2019, the Company recognized a gain on the sale of \$8,707,280. The Company received an additional \$2,000,000 in excess of the sale proceeds which was immediately paid to Oak Capital on behalf of the Buyer for due diligence, legal and other expenses.

Although it continued to operate as a single entity until the sale was closed, to meet financial reporting standards, the Company was required to report DenseLight as “discontinued operations” separate from the remainder of the Company through and until November 8, 2019.

Since the acquisition of DenseLight in mid-2016, all of the Company’s revenues had been derived from its activities in Singapore. The majority of sales since the acquisition were in light source products developed, marketed and sold by DenseLight to customers globally. In addition, the Company accepted contracts from various customers for Non-Recurring Engineering (NRE) work that also formed a portion of its reported sales. During 2019, a significant portion of the Company’s revenues derived from a Non-Recurring Engineering (NRE) contract with a major customer for work directly related to the Optical Interposer. Purchase Orders (“PO’s”) received and accepted by POET were issued to DenseLight, on the basis that the bulk of the contracted development work was performed at the DenseLight facility by DenseLight employees. During the sale process, it was agreed between POET, DenseLight and the Buyer that DenseLight would retain those PO’s already issued and conclude the work, while retaining all of the associated costs. Only newly issued PO’s for additional development work on the Optical Interposer and related components would be issued to POET, with POET contracting with DenseLight and other third parties to perform portions of those projects.

The Share Sale Agreement included an Earn-Out provision which provided for additional consideration in the amount of \$4,000,000 to be paid to the Company in the event that the audited revenues of DenseLight for the year ending December 31, 2019 were at least US\$9 million with gross margins comparable to prior periods. DenseLight did not meet this revenue target. For more information about the details of the SSA and the Buyer, please refer to the Management Information Circular, which can be found on SEDAR (www.sedar.com) and the TMX Trust website (www.tmxtrust.com).

Until November 8, 2019, majority of the Company’s R&D activities were conducted at DenseLight or with third parties under the direction of POET. Upon the sale of DenseLight, the Company retained sole ownership and all intellectual property and rights to its principal invention, the POET Optical Interposer™. The Optical Interposer will form the basis for the Company’s future growth and is therefore the focus of the Business Overview.

Geographic Distribution of Revenue

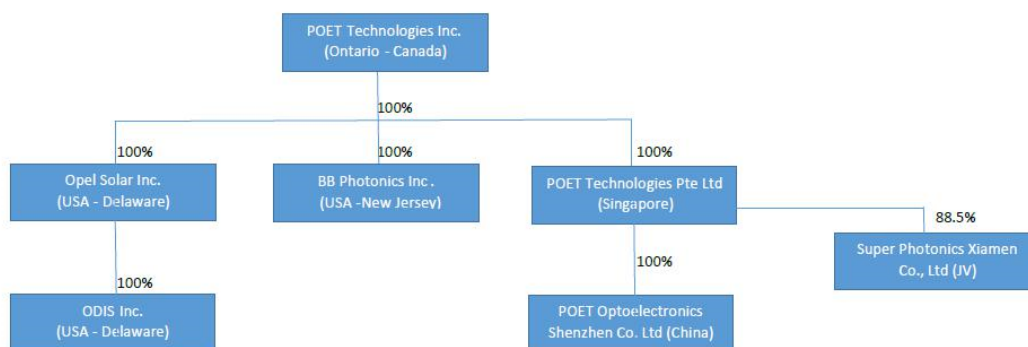
Revenue and geographic markets in DenseLight for 2021, 2020 and 2019 were approximately as follows:

Region	2021	2020	2019
Asia – Pacific	\$ -	\$ -	1,271,000
Europe	\$ -	\$ -	744,000
North & South America	\$ -	\$ -	2,411,000

“Fab-light” does not mean “fab-less”, as significant portions of our Intellectual Property are embedded in the processes that we have developed that are themselves integral to the equipment and functioning of the Optical Interposer. By purchasing our own equipment and placing the equipment in a foundry, for example, we are able to preserve confidentiality and ownership of such critical IP. As a result, even with a “fab-light” strategy, we expect to continue to invest in capital equipment, but not at the same level as owning and supporting an entire InP wafer fabrication facility.

C. Organizational Structure

The following graphically displays the organizational structure of the Company:



- (1) There are 28,374,000 Class A Common Shares of OPEL Solar, Inc. issued and outstanding, all of which are held by the Company. There are no other outstanding securities of OPEL Solar, Inc. other than the Class A Common Shares.
- (2) There are 5 Common Shares of ODIS Inc. issued and outstanding, held by OPEL Solar, Inc.
- (3) There is 1 Ordinary share of POET Technologies Pte Ltd. issued and outstanding, held by POET Technologies Inc.
- (4) There are 1,000,000 Preferred Shares and 1,050,100 Common shares of BB Photonics Inc. issued and outstanding, all of which are held by the Company. There are no other outstanding securities of BB Photonics Inc.
- (5) POET Optoelectronics Co, Ltd. is a wholly owned subsidiary of POET Technologies Pte. Ltd with a registered capital of RMB1,168,833.
- (5) Super Photonics Xiamen Co., Ltd is joint venture located in Xiamen, China. The Company currently has an 88.5% interest in the joint venture with Sanan Integrated Circuit Co., Ltd, the other joint venturer, holding the remaining 11.5% interest in the joint venture.

D. Property, Plants and Equipment

The Company's head Canadian office is located in a 400 sq. ft. leased office space in Toronto, Ontario, Canada. The US based operations are in a leased 3,883 sq. ft. space in Allentown, Pennsylvania. Our testing operations are located in a 4,669 sq. ft leased facility in Singapore. Our product development operation is located in a 2,830 sq. ft leased facility in Shenzhen, China.

ITEM 4A. UNRESOLVED STAFF COMMENTS

Not Required.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion should be read in conjunction with the audited consolidated financial statements of the Company and the related notes for the years ended December 31, 2021, 2020 and 2019 and the accompanying notes thereto included elsewhere in this Annual Report. This discussion contains forward-looking statements that involve risks and uncertainties. Actual results could differ materially from those anticipated by forward-looking information due to factors discussed under “ITEM 3.D. Risk Factors” and “ITEM 4.B. Business Overview.”

A. Operating Results

Critical Accounting Estimates

Property and equipment

Property and equipment are recorded at cost. Depreciation is calculated based on the estimated useful life of the asset using the following method and useful lives:

Machinery and equipment	Straight Line, 5 years
Leasehold improvements	Straight Line, 5 years or life of the lease, whichever is less
Office equipment	Straight Line, 3 – 5 years

Patents and licenses

Patents and licenses are recorded at cost and amortized on a straight-line basis over 12 years. Ongoing maintenance costs are expensed as incurred.

Stock-based Compensation

Stock options and warrants awarded to non-employees are accounted for using the fair value of the instrument awarded or service provided, whichever is considered more reliable. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option-pricing model with assumptions applicable at the date of grant.

Other stock-based payments

The Company accounts for other stock-based payments based on the fair value of the equity instruments issued or service provided, whichever is more reliable.

Cumulative Translation Adjustment

IFRS requires certain gains and losses such as certain exchange gains and losses arising from the translation of the financial statements of a self-sustaining foreign operation to be included in comprehensive income.

Critical Accounting Policies

The Company prepares its audited consolidated financial statements in accordance with IFRS as issued by the IASB, which differs from U.S. GAAP. The preparation of financial statements in accordance with IFRS requires the use of certain critical accounting assumptions and estimates. These assumptions are limited by the availability of reliable comparable data and the uncertainty of predictions concerning future events. It also requires management to exercise judgment in applying the Company’s accounting policies. The Company believes that the estimates and assumptions upon which it relies are reasonable based upon information available at the time that these estimates and assumptions are made. Actual results could differ from these estimates. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed below.

Basis of presentation

These consolidated financial statements include the accounts of POET Technologies Inc. and its subsidiaries. All intercompany balances and transactions have been eliminated on consolidation.

The Company’s financial instruments consist of cash and cash equivalents, accounts receivable, receivable from the sale of discontinued operations, convertible debentures, covid-19 government support loans and accounts payable and accrued liabilities. Unless otherwise noted, it is management’s opinion that the Company is not exposed to significant interest risk arising from these financial instruments. The Company estimates that the fair value of these instruments approximates fair value due to their short-term nature

The following table outlines the classification of financial instruments under IFRS 9:

Financial Assets	
Cash and cash equivalents	Amortized cost
Short-term investments	Amortized cost
Accounts receivable	Amortized cost
Financial Liabilities	
Accounts payable and accrued liabilities	Amortized cost
Convertible debentures	Amortized cost
Covid-19 government support loans	Amortized cost

Convertible debentures are accounted for as a compound financial instrument with a debt component and a separate equity component. The debt component of these compound financial instruments is measured at fair value on initial recognition by discounting the stream of future interest and principal payments at the rate of interest prevailing at the date of issue for instruments of similar term and risk. The debt component is subsequently deducted from the total carrying value of the compound instrument to derive the equity component. The debt component is subsequently measured at amortized cost using the effective interest rate method. Interest expense based on the coupon rate of the debenture and the accretion of the liability component to the amount that will be payable on redemption are recognized through profit or loss as a finance cost.

Cash and cash equivalents

Cash and cash equivalents consist of cash in current accounts of \$4,216,911 (2020 - \$722,894, 2019 - \$1,278,129) and funds invested in US and Canadian Term Deposits of \$10,724,864 (2020 - \$6,150,000, 2019 - \$150,000) earning interest at rates ranging from 0.20% - 0.25% and maturing in less than 90 days.

Cash and cash equivalents include restricted funds of nil (2020 - \$184,569, 2019 - \$93,800) which serves as a bank guarantee for the purchase of certain equipment. A bank guarantee was discharged in 2020 and a new bank guarantee was put in place. The new bank guarantee was discharged in 2021. The bank guarantee was reduced on a monthly basis by \$14,197 (2020 - \$14,197, 2019 - \$10,424) which is the amount paid monthly in settlement of the outstanding balance on the equipment.

Short-term investments

The short-term investments of \$6,366,828 consist of guaranteed investment certificates (GICs) held with one Canadian chartered bank and earn interest at rates ranging from 0.75 to 1.44%. The GICs have maturity dates between June 2022 and July 2022. Investments are carried at fair value.

Joint Venture

A joint arrangement is an arrangement among two or more parties where the parties are bound by a contractual arrangement and the contractual arrangement gives the parties joint control of the arrangement. A joint venture is a form of joint arrangement where an entity is independently formed and the parties jointly have rights to the net assets of the arrangement and therefore account for their interests under the equity method.

Share Consolidation

On February 24, 2022, the Company filed Articles of Amendment to consolidate its common shares on a ten-for-one basis. For further clarity, for every ten (10) pre-consolidated common shares, shareholders received one (1) post-consolidated common share. On February 28, 2022 the Company's common shares began trading on the TSX Venture Exchange on a post consolidation basis. The Company's name and trading symbol remained unchanged. All references to share and per share amounts in these consolidated financial statements and accompanying notes to the consolidated financial statements have been retroactively restated to reflect the ten-for-one share consolidation.

Property and equipment

Property and equipment are recorded at cost. Depreciation is calculated based on the estimated useful life of the asset using the following method and useful lives:

Machinery and equipment	Straight Line, 5 years
Leasehold improvements	Straight Line, 5 years or life of the lease, whichever is less
Office equipment	Straight Line, 3 - 5 years

Patents and licenses

Patents and licenses are recorded at cost and amortized on a straight-line basis over 12 years. Ongoing maintenance costs are expensed as incurred.

Impairment of long-lived assets

The Company's tangible and intangible assets are reviewed for indications of impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. An assessment is made at each reporting date whether there is any indication that an asset may be impaired.

An impairment loss is recognized when the carrying amount of an asset exceeds its recoverable amount. Impairment losses are recognized in profit and loss for the year. The recoverable amount is the greater of the asset's fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit ("CGU") to which the asset belongs.

An impairment loss is reversed if there is an indication that there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized. The Company reported no impairment loss for the year ended December 31, 2021 (2020 - nil, 2019 - \$714,000) (Note 22).

Goodwill

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable assets acquired net of liabilities assumed. Goodwill is measured at cost less accumulated impairment losses and is not amortized. Goodwill is tested for impairment on an annual basis or whenever facts or circumstances indicate that the carrying amount may exceed its recoverable amount.

The Company performs its annual test for goodwill impairment annually in the fourth quarter. The Company utilized a five-year cash flow forecast using the annual budget approved by the Board of Directors as a basis for such forecasts. Cash flow forecasts beyond that of the budget were prepared using a stable growth rate for future periods. These forecasts were based on historical data and future trends expected by the Company. The Company's valuation model also takes into account working capital and capital investments required to maintain the condition of the assets. Forecasted cash flows were discounted using an after-tax rate of 30%.

Based on the impairment tests, the value in-use of the CGU to which goodwill is applicable is less than the carrying amount. As a result goodwill of \$1,050,459 was impaired in 2019. No provision for impairment of goodwill was made in 2021 or 2020 (Note 22).

Income taxes

The Company follows the liability method of accounting for income taxes. Under this method, deferred income taxes are provided on differences between the financial reporting and income tax bases of assets and liabilities and on income tax losses available to be carried forward to future years for tax purposes. Deferred income taxes are measured using the substantively enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. Deferred tax assets are only recognized if the amount is expected to be realized in the future.

Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Company recognizes revenue when it transfers control over a product or service to a customer.

Sale of goods

Revenue from the sale of goods is recognized, net of discounts and customer rebates, at the point in time the transfer of control of the related products has taken place as specified in the sales contract and collectability is reasonably assured.

Service revenue

The Company provides contract services, primarily in the form of non-recurring revenue (“NRE”) where control is passed to the customer over time. The contracts generally provide agreed upon milestones for customer payment which include but are not limited to the delivery of sample products, design reports and test reports. The customer makes payment when it has approved the delivery of the milestone. The Company must determine if the contract is made up of a series of independent performance obligations or a single performance obligation. Where NRE contracts contain multiple performance obligations for which a standalone transaction price can be assessed, revenue is recognized as each performance obligation is satisfied. Where NRE contracts contain a single performance obligation to be settled over time, revenue is recognized progressively based on the output method.

Other income

Interest income

Interest income on cash is recognized as earned using the effective interest method.

Government Grants

Loans received exclusively from governmental agencies to support the Company throughout the COVID-19 pandemic qualify to be forgiven if certain conditions are met. Forgiveness of COVID-19 related loans will be recognized as other income on the consolidated statements of operations and deficit.

Wage subsidies

Wages subsidies received from the Singaporean government are netted against R&D related wages and benefits on the consolidated statements of operations and deficit.

Intangible assets

Research and development costs

Research costs are expensed in the year incurred. Development costs are also expensed in the year incurred unless the Company believes a development project meets IFRS criteria as set out in IAS 38, *Intangible Assets*, for deferral and amortization. IAS 38 requires all research costs be charged to expense while development costs are capitalised only after technical and commercial feasibility of the asset for sale or use have been established. This means that the entity must intend and be able to complete the intangible asset and either use it or sell it and be able to demonstrate how the asset will generate future economic benefits. Development costs are tested for impairment whenever events or changes indicate that its carrying amount may not be recoverable.

In-Process Research and Development

Under IFRS, in-process research and development (“IPR&D”) acquired in a business combination that meets the definition of an intangible asset is capitalized with amortization commencing when the asset is ready for use (i.e., when development is complete). The Company acquired \$714,000 of IPR&D when it acquired BB Photonics Inc. in 2016. During 2020, management observed indicators that suggested that IPR&D may be impaired. IPR&D acquired with BB Photonics was no longer useable with the novel POET Interposer platform. BB Photonics IPR&D would not generate sufficient cash flow to support its value in use. Management completed an impairment assessment of IPR&D and determined that the amount of \$714,000 was impaired. An impairment loss of \$714,000 was recorded in 2019. No impairment was recorded in 2021 or 2020 (Note 22).

Stock-based compensation

Stock options and warrants awarded to non-employees are measured using the fair value of the goods or services received unless that fair value cannot be estimated reliably, in which case measurement is based on the fair value of the stock options. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option pricing model with assumptions applicable at the date of grant.

Income (loss) per share

Basic income (loss) per share is calculated by dividing net income (loss) by the weighted average number of common shares outstanding during the year. Diluted income (loss) per share is calculated by dividing net income (loss) by the weighted average number of common shares outstanding during the year after giving effect to potentially dilutive financial instruments. The dilutive effect of stock options and warrants is determined using the treasury stock method.

Selected Annual Data

The selected financial data of the Company for the years ended December 31, 2021, 2020 and 2019 was derived from the audited annual consolidated financial statements of the Company, which have been audited by Marcum LLP, independent registered public accounting firm, as described in their report which is included in this Annual Report.

The information contained in the selected financial data for the 2021, 2020 and 2019 years is qualified in its entirety by reference to the Company's consolidated financial statements and related notes included under the heading ITEM 17. "Financial Statements" and should be read in conjunction with such financial statements and with the information appearing under the heading ITEM 5 "Operating and Financial Review and Prospects". Except where otherwise indicated, all amounts are presented in accordance with IFRS as issued by IASB.

The following table relates to the operating results of the Company.

Consolidated Statements of Operations Under International Financial Reporting Standards
(US\$)

Years Ended December 31,	2021	2020	2019
Revenue	\$ 209,100		
Operating Expenses			
Selling, marketing and administrative	\$ 9,055,528	\$ 8,137,998	\$ 6,697,387
Research and development	8,165,128	6,634,317	2,083,815
Operating Expenses	17,220,656	14,772,315	8,781,202
Impairment loss	-	-	1,764,459
Interest expense	364,619	937,903	819,911
Amortization of debt issuance costs	-	-	372,340
Other income, including interest	(75,084)	(41,148)	(10,540)
Credit loss on receivable from the sale of discontinued operations	-	2,500,000	
Forgiveness of Covid-19 government support loans	(186,747)		-
Gain on contribution of intellectual property to joint venture	(2,587,500)		
Share of loss in joint venture	1,142,249		
Net loss from continuing operations	15,669,093	18,169,070	11,727,372
Income tax recovery	-	-	(292,740)
Net loss from continuing operations, net of taxes	(15,669,093)	(18,169,070)	(11,434,632)
Income (loss) from discontinued operations, net of taxes	-	-	5,481,757
Net loss	(15,669,093)	(18,169,070)	(5,952,875)
Deficit, beginning of year	(157,317,877)	(139,148,807)	(133,195,932)
Deficit, end of year	\$ (172,986,970)	\$ (157,317,877)	\$ (139,148,807)
Basic and diluted loss per share, continuing operations	\$ (0.45)	\$ (0.62)	\$ (0.40)
Basic and diluted income (loss) per share, discontinued operations	-	-	\$ 0.20
Basic and diluted loss per share	\$ (0.45)	\$ (0.62)	\$ (0.20)

(1) Discontinued operations Under International Financial Reporting Standards

Years Ended December 31,

For the Period from
January 1, 2019 to
November 8,

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Revenue	-	-	\$ 4,426,355
Cost of Revenue	-	-	1,201,373
Gross Margin	-	-	3,224,982
Operating Expenses			
Selling, marketing and administrative	-	-	1,950,526
Research and development	-	-	5,677,222
Operating Expenses	-	-	7,627,748
Interest expense	-	-	74,494
Other income	-	-	(1,251,737)
Expenses	-	-	6,450,505
Net loss from operations	-	-	(3,225,523)
Change in fair value contingent consideration	-	-	-
Gain on sale of discontinued operations, net of taxes	-	-	8,707,280
Net income (loss) from discontinued operations	-	-	5,481,757
Income tax recovery	-	-	-
Income (loss) from discontinued operations, net of income taxes	-	-	\$ 5,481,757

The selected annual information for continuing operations for 2021, 2020 and 2019 can be further analyzed as follows:

Research and development can be analysed as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Wages and benefits	\$ 3,270,528	\$ 1,586,900	\$ 874,673
Subcontract fees	1,516,343	3,802,919	834,598
Stock-based compensation	1,769,951	567,859	237,311
Supplies	1,608,306	676,639	137,233
	<u>\$ 8,165,128</u>	<u>\$ 6,634,317</u>	<u>\$ 2,083,815</u>

Selling, marketing and administration costs can be analysed as follows:

Stock-based compensation	\$ 2,764,419	\$ 3,045,086	\$ 2,650,830
Wages and benefits	2,643,451	2,233,449	1,619,719
Professional fees	1,155,316	800,551	1,120,805
General expenses	1,304,690	1,188,712	813,951
Depreciation and amortization	1,100,522	813,103	243,674
Management and consulting fees	-	-	154,357
Rent and facility costs	87,130	57,097	94,051
	<u>\$ 9,055,528</u>	<u>\$ 8,137,998</u>	<u>\$ 6,697,387</u>

Factors Affecting Our Results of Operations

Analysis of Continuing Operations

Year Ended December 31, 2021 compared to Year Ended December 31, 2020

Net loss from continuing operations for the period was \$15,669,093 compared to a net loss of \$18,169,070 in 2020, a decrease of \$2,499,977 (14%). The following discusses the significant variances between the period and 2020.

During the year, the Company reported non-recurring revenue of \$209,100. No revenue was reported in 2020. The revenue reported related to a unique project that was addressed utilizing the capabilities of the POET Optical Interposer.

Total R&D increased by \$1,530,811 (23%) from \$6,634,317 in 2020 to \$8,165,128 in 2021. For the purposes of the following analysis, non-cash stock-based compensation of \$1,769,951 (2020 - \$567,859) has been excluded and is included with the analysis of non-cash stock-based compensation below.

R&D, excluding non-cash stock-based compensation, increased by \$328,719 (6%) to \$6,395,177 in the period from \$6,066,458 in 2020.

Interest expense was \$364,619 in the period as compared to \$937,903 in 2020, a decrease of \$573,284 (61%). The Company raised \$3,729,921 in convertible debentures between April 2019 and September 2019 with two-year maturities. The Company was required to pay monthly interest on the convertible debentures. As the convertible debentures reached maturity during the period, interest cost was reduced. During the period, convertible debenture holders converted \$3,571,342 of convertible debentures that were converted in 1,119,750 units of the Company. The Company's interest obligation related to the convertible debentures has been eliminated as the convertible debentures were converted or matured. The interest incurred, includes non-cash interest cost of \$213,843.

Depreciation and amortization increased by \$287,849 (35%) to \$1,100,522 in the period from \$813,103 in 2020. With the sale of DenseLight, the Company embarked on a “fab-light” strategy with a required test facility situated in Singapore and product development facility in China. The increase in depreciation and amortization was a result of assets acquired for these new facilities.

Wages and benefits increased by \$461,284 (21%) to \$2,643,451 in the period from \$2,182,167 in 2020. The increase was a result of three primary factors during the period; 1) the Company paid a bonus of \$250,000 to certain employees, 2) the Company hired two new senior administrative employees, and 3) the compensation for certain employees was adjusted to be more aligned with the compensation of employees in similar roles in comparatively sized companies within the industry.

Professional fees increased by \$354,765 (44%) to \$1,155,316 in the period from \$800,551 in 2020. The increase in the period is a result of professional fees paid for multiple projects in the period that required professional guidance. These projects included the special meeting held in February 2021, filing of a new base shelf prospectus in April 2021 and the related responses to queries from the various regulatory authorities, the analysis associated with ensuring the Company’s compliance to international regulations and standards associated with operating as a multinational corporation and ancillary professional fees related to the private placement financing, warrant and stock option exercises.

General expenses and rent increased by \$146,011 (12%) to \$1,391,820 in the period from \$1,245,809 in 2020. During the period, the Company incurred regulatory and filing fees related to its shelf prospectus filing. Exchange membership fees were also higher than 2020 due to the Company’s stock price in 2021. The easing of travel restrictions also allowed certain employees to travel internationally during 2021. There was no international travel in 2020.

Impairment and other loss was nil in the period compared to \$2,500,000 in 2020. Impairment and other loss consisted of a credit loss of \$2,500,000 relating to the receivable from the sale of discontinued operations in 2020. In 2020, after taking into consideration the length of time it took the Buyer of DenseLight to make the required payments and the Company’s expectations regarding the likelihood of receiving the balance that was due at the time, the Company determined, and the Buyer accepted, that it was in the Company’s best interest to accept partial payments as final payment on the outstanding balance. The Company used the opportunity to restructure its relationship with DenseLight to better accommodate the Company’s current supply needs.

Non-cash stock-based compensation increased by \$921,425 (26%) to \$4,534,370 in the period from \$3,612,945 in 2020. The valuation of stock options is driven by a number of factors including the number of options granted, the strike price and the volatility of the Company’s stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest. The stock options vest in accordance with the policies determined by the Board of Directors at the time of the grant consistent with the provisions of the Plan.

Impact of joint venture in the period was \$1,445,251 which represents a net gain on the Company’s activity related to its investment in SPX. During the period, the Company recognized a partial gain of \$2,587,500 related to its contribution of intellectual property to SPX in accordance with IAS 28. The Company only recognized a gain on the contribution of the intellectual property equivalent to the SAIC’s interest in SPX. Additionally, the Company recognized its share of SPX’s losses using the equity method. The Company recognized 94.2% or \$1,142,249 of the net operating loss of SPX from March 12, 2021 to December 31, 2021. The Company’s current share of the operating loss is a result of the high value of the Company’s initial contribution.

Other (income), including interest increased by \$220,683 (536%) to \$261,831 in the period from \$41,148 in 2020. During the period, the Company received notice from the Small Business Administration of Washington, DC that its Covid related PPP loan of \$186,747 was forgiven in full. The Company did not have a similar event in 2020. Additionally, the company had higher investment balances during 2021 invested consist to the Company investment policy and earned higher interest income.

Year Ended December 31, 2020 compared to Year Ended December 31, 2019

Net loss from continuing operations before taxes for the period was \$18,169,070 compared to a net loss of \$11,727,372 in 2019, an increase of \$6,441,698 (55%). The following discusses the significant variances between the period and 2019.

Total R&D increased by \$4,550,502 from \$2,083,815 in 2019 to \$6,634,317 in 2020. For the purposes of the following R&D analysis, non-cash stock-based compensation of \$567,859 (2019 - \$237,311) has been excluded and is included with the analysis of non-cash stock-based compensation below.

R&D, excluding non-cash stock-based compensation, increased by \$4,219,954 (228%) to \$6,066,458 in the period from \$1,846,504 in 2019. The increase is a result of a redistribution of R&D activities and costs that were typically accounted for by DenseLight and reflected in discontinued operations which are now being accounted for by the Company. Additionally, the Company established a new test and design facilities in Singapore and Allentown, Pennsylvania which became fully operational in late 2019 and early 2020. All such test activities and related costs were incurred at DenseLight in 2019.

Interest expense increased by \$117,992 (14%) to \$937,903 in the period as compared to \$819,911 in 2019. The Company raised \$6,805,772 in short-term loans and convertible debentures between April 2019 and September 2019. The Company is required to pay monthly interest on the convertible debentures at a rate of 12%. Interest on short-term loans ranged from 15% - 19.25%. The short-term loans were only outstanding for a brief period in 2019, additionally interest incurred on convertible debentures were for the nine months from April 2019 to December 2019. Conversely, interest expense during the period on convertible debentures is for the twelve months of 2020. Interest expense includes non-cash interest of \$524,095 in the period and \$280,829 in 2019.

Related to the issuance of other debt in 2019 is the amortization of debt issuance cost. The amortized debt issuance cost in 2019 was directly related to the debt that was repaid in Q4 2019, as a result amortized debt issuance cost in the period was nil compared to \$372,340 in 2019.

Depreciation and amortization increased by \$569,429 (234%) to \$813,103 in the period from \$243,674 in 2019. With the sale of DenseLight, the Company embarked on a “fab-light” strategy with a required test facility situated in Singapore. The increase in depreciation and amortization was a result of assets acquired for this new facility. Depreciation of assets within the DenseLight subsidiary were previously reflected in discontinued operations in 2019.

Wages and benefits increased by \$562,448 (35%) to \$2,182,167 in the period from \$1,619,719 in 2019. In late 2019, the Company recruited and hired three senior individuals for roles for which there was a need. These roles included a President & General Manager of the Company, a Vice President & General Manager for the new Singapore operation and a Vice President of Product Marketing & Business Development. Wages and benefits for the year include the wages and benefits of these three new hires. 2019 only included similar costs for two months of the year.

General expenses and rent and facility increased by \$337,807 (37%) to \$1,245,809 in the period from \$908,002 in 2019. On June 30, 2020, the Company announced the signing of a \$50 million joint venture. General expenses include a one-time cost of \$328,000 paid to a firm instrumental in introducing the joint venture parties and assisting with negotiations.

Impairment and other loss was \$2,500,000 in the period compared to \$1,764,459 in 2019. Impairment and other loss in 2020 consisted of a credit loss of \$2,500,000 relating to the receivable from the sale of discontinued operations. In Q2 2020, after taking into consideration the length of time it took the Buyer of DenseLight to make the required payments and the Company’s expectations regarding the likelihood of receiving the balance that was due at the time, the Company determined, that it was in the Company’s best interest to accept partial payments as final payment on the outstanding balance. In Q4 2019, the Company performed an impairment analysis on its goodwill and intangible assets related to the acquisition of BB Photonics in 2016. The Company determined that these assets were impaired and consequently recognized an impairment loss of \$1,764,459.

Non-cash stock-based compensation increased by \$724,804 (25%) to \$3,612,945 in the period from \$2,888,141. The valuation of stock options is driven by a number of factors including the number of options granted, the strike price and the volatility of the Company’s stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest. The stock options vest in accordance with the policies determined by the Board of Directors at the time of the grant consistent with the provisions of the Plan

Management and consulting fees were nil in 2020 compared to \$154,357 in 2019. Before becoming employees of the Company, certain employees provided services on a consulting basis in 2019. The Company did not incur such consulting services in 2020.

The Company earned \$41,148 of interest income in 2020 compared to \$10,540 in 2019. The increase of \$30,608 (290%) was a result of having lump sum cash payments from the sale of DenseLight that the Company was able to invest in low risk interest bearing investments throughout 2020.

Exchange Rate Risk

The functional currency of each of the entities included in the accompanying consolidated financial statements is the local currency where the entity is domiciled. Functional currencies include the Chinese Yuan, US, Singapore and Canadian dollar. Most transactions within the entities are conducted in functional currencies. As such, none of the entities included in the consolidated financial statements engage in hedging activities. The Company is exposed to a foreign currency risk when its subsidiaries hold current assets or current liabilities in currencies other than its functional currency. A 10% change in foreign currencies held would increase or decrease other comprehensive loss by \$1,000,422.

Liquidity Risk

The Company currently does not maintain credit facilities. The Company's existing cash and cash resources are considered sufficient to fund operating and investing activities beyond one year from the issuance of these consolidated financial statements. The Company may, however, need to seek additional financing in the future.

Analysis of Discontinued Operations

The selected annual information for discontinued operations for 2021, 2020 and 2019 can be further analyzed as follows:

	2021	2020	For the Period from January 1, 2019 to November 8, 2019
Revenue	-	-	4,426,355
Cost of revenue	-	-	1,201,373
Gross margin	-	-	3,224,982
	%	%	73%
	2021	2020	2019

Research and development can be analysed as follows:

	2021	2020	2019
Wages and benefits	\$ -	\$ -	\$ 3,565,076
Supplies	-	-	1,412,572
Subcontract fees	-	-	728,457
Stock-based compensation	-	-	(28,883)
	\$ -	\$ -	\$ 5,677,222

Selling, marketing and administration costs can be analysed as follows:

Wages and benefits	\$ -	\$ -	\$ 887,860
Rent and facility costs	-	-	604,442
General expenses	-	-	458,465
Stock-based compensation	-	-	(46,725)
Interest expense	-	-	-
Professional fees	-	-	46,484
Depreciation and amortization	-	-	-
	\$ -	\$ -	\$ 1,950,526

The Company's discontinued operations were last reported on November 8, 2019. No operations or comparative analysis is provided.

B. Liquidity and Capital Resources

The Company had working capital of \$19,865,170 on December 31, 2021 compared to \$2,099,214 on December 31, 2020. The Company's statement of financial position as of December 31, 2021 reflects assets with a book value of \$27,153,977 compared to \$11,636,728 as of December 31, 2020. Eighty percent (80%) of the book value at December 31, 2021 was in current assets consisting primarily of cash, cash equivalents and short-term investments of \$21,308,603 compared to sixty-four percent (64%) of the book value as of December 31, 2020, which consisted primarily of cash of \$6,872,894.

On February 11, 2021, the Company completed a brokered private placement offering of 1,764,720 units at a price of \$6.70 (CAD\$8.50) per unit for gross proceeds of \$11,815,595 (CAD\$15,000,120). Each unit consists of one common share and one common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$9.00 (CAD\$11.50) per share until February 11, 2023. At any time after June 12, 2021, the Company reserves the right to accelerate the expiry of the warrants if the Company's average stock price exceeds \$18.10 (CAD\$23.00) for a period of 10 consecutive trading days. The broker was paid a cash commission of \$708,667 (CAD\$900,007) equating to 6% of the gross proceeds and received 1,058,832 broker warrants. Each broker warrant is exercisable into one common share of the Company at a price of \$6.70 (CAD\$8.50) per broker warrant until February 11, 2023. The Company incurred additional share issuance costs of \$434,367 directly related to the private placement and fees to induce certain warrant holders to exercise their warrants.

In addition to funds received from the brokered private placement, the Company received \$16,118,750 from the exercise of stock options and warrants. The Company also improved its liquidity by \$3,571,342 through the conversion of convertible debentures into units of the Company.

The Company is satisfied that it has sufficient working capital to meet its operating requirements over the next 12 months.

The following is a summary of Company's cash flows and working capital:

	2021	2020	2019
	\$	\$	\$
Net cash used in operating activities	(11,233,293)	(9,437,964)	(9,394,221)
Net cash from investing activities	(7,297,710)	13,926,137	5,385,908
Net cash from financing activities	26,553,677	1,162,459	3,135,255
Effect of exchange rate changes on cash	46,207	(205,867)	(266,681)
Change in cash	8,068,881	5,444,765	(1,139,739)
Opening cash	6,872,894	1,428,129	2,567,868
Ending cash	14,941,775	6,872,894	1,428,129

Operating Activities

During 2021, the Company had consolidated losses of \$15,669,093 (2020 - \$18,169,070, 2019 - \$5,952,875). Included in the consolidated loss was income from discontinued operations of nil (2020 – nil, 2019 - \$5,481,757).

The operating activities of the continuing operation included the following non-cash items: non-cash stock-based compensation of \$4,534,370 (2020 - \$3,612,945, 2019 - \$2,888,141), depreciation and amortization of \$1,100,522 (2020 - \$813,103, 2019 - \$243,674), impairment of long lived assets and goodwill of nil in 2021 (2020 – nil, 2019 - \$1,764,459), amortization of debt issuance cost of nil (2020 – nil, 2019 - \$372,340), accretion of debt discount on convertible debentures and non-cash interest of \$213,843 (2020 - \$524,095, 2019 - \$280,829), credit loss on receivable from the sale of discontinued operations of nil (2020 - \$2,500,000, 2019 – nil). Gain on contribution of intellectual property to joint venture was \$2,587,500 (2020 – nil, 2019 – nil) while the Company had a share of loss in joint venture of \$1,142,249 (2020 – nil, 2019 – nil). Other non-cash operating costs (income) was \$(172,933) (2020 - \$1,070,970, 2019 - nil).

The Company will regularly have high non-cash stock-based compensation as it uses stock options as method of attracting, retaining and motivating directors, employees and consultants of the Company and any of its subsidiaries and to closely align the personal interests of such directors, employees and consultants with those of the shareholders by providing them with the opportunity, through options, to acquire common shares in the capital of the Company while managing compensation through cash.

With the sale of DenseLight, the Company embarked on a “fab-light” strategy with a required test facility situated in Singapore and product development facility in China. The increase in depreciation and amortization was a result of assets acquired for these new facilities.

The Company raised \$7,729,921 of debt financing from various lenders at varying times throughout 2019, net of directly related issue costs. The issuance cost of debt in 2019 was amortized over the life of the related debt resulting in the amortization of debt issuance cost of \$372,340. The related debt was settled in 2019, as a result there was no debt amortization cost in 2020 or 2021.

Included in the debt raised in 2019 were convertible debentures issued at a discount. The discount on the convertible debentures is accreted over the life of the convertible debentures. This non-cash cost of accretion of debt discount on convertible debentures was \$213,843 (2020 - \$524,095, 2019 - 280,829). During 2021, convertible debenture holders converted \$3,571,342 of convertible debentures 1,119,750 units of the Company. Other non-cash interest cost related to the amortization of the lease liabilities.

During the year, the Company recognized a gain of \$2,587,500 related to its contribution of intellectual property to SPX in accordance with IAS 28. The Company only recognized a gain on the contribution of the intellectual property equivalent to SAIC's interest in SPX. Additionally, the Company recognized its share of SPX's losses using the equity method. The Company recognized 94.2% or \$1,142,249 of the net operating loss of SPX from March 12, 2021 to December 31, 2021. The Company's current share of the operating loss is a result of the high value of the Company's initial contribution.

Consolidated negative cash flow from operations was \$11,233,293 in 2021 compared to \$9,437,964 in 2020 and \$9,394,221 in 2019.

Investing Activities

In 2021, the Company had consolidated cash flow from investing activities of \$(7,297,710) compared to \$13,926,137 in 2020 and \$5,385,908 in 2019. The Company purchased \$6,366,828 of short-term investments in 2021 due to the excess cash it had on hand. The funds are invested in interest bearing facilities in accordance with the Company's investment policy. \$930,882 was used to purchase new equipment and patents compared to \$1,573,863 in 2020 and \$511,484 in 2019. Investing activities in 2019 included \$5,908,623 from the activities of DenseLight.

In 2020, the Company collected \$15,500,000 (2019 - \$8,000,000) on its receivable from the sale of DenseLight. After taking into consideration the length of time it had taken the Buyer to make the foregoing payments and the Company's expectations regarding the likelihood of receiving an additional payment, the Company determined that it was in its best interest to accept partial payments as final payment on the Company's receivable. As a result, the Company recognized a credit loss of \$2,500,000 during the year ended December 31, 2020.

Financing Activities

On February 11, 2021, the Company completed a brokered private placement offering of 1,764,720 units at a price of \$6.70 (CAD\$8.50) per unit for gross proceeds of \$11,815,595 (CAD\$15,000,120). Each unit consists of one common share and one common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$9.00 (CAD\$11.50) per share until February 11, 2023. At any time after June 12, 2021, the Company reserves the right to accelerate the expiry of the warrants if the Company's average stock price exceeds \$18.10 (CAD\$23.00) for a period of 10 consecutive trading days. The broker was paid a cash commission of \$708,667 (CAD\$900,007) equating to 6% of the gross proceeds and received 1,058,832 broker warrants. Each broker warrant is exercisable into one common share of the Company at a price of \$6.70 (CAD\$8.50) per broker warrant until February 11, 2023. The Company incurred additional share issuance costs of \$434,367 directly related to the private placement and fees to induce certain warrant holders to exercise their warrants.

In addition to funds received from the brokered private placement, the Company received \$16,118,750 from the exercise of stock options and warrants. The Company also improved its liquidity by \$3,571,342 through the conversion of convertible debentures into units of the Company.

During 2020, the Company received \$1,088,450 from the exercise of warrants and stock options (2019 - \$60,028).

In March and April 2020, the Company received a cumulative \$218,151 of covid-19 government support loans from the US and Canadian governments. The loans are repayable based on various criteria in May 2022 and December 2022. During 2021, the Company received notice from the Small Business Administration of Washington, DC that its Covid related PPP loan of \$186,747 was forgiven in full.

In 2019, the Management approved the issuance of up to \$10.5 million of unsecured convertible debentures (the "Convertible Debentures") of the Company. The Convertible Debentures were sold in multiple tranches, on a brokered private placement basis through the Company's financial advisors, IBK Capital. In 2019, the Company closed five tranches of the private placement of the Convertible Debentures that raised gross proceeds of \$3,729,921. The Convertible Debentures, bore interest at 12% per annum, compounded annually with 1% paid at the beginning of each month and matured two years from the date of issue. The Company paid \$377,072 in brokerage fees and other costs related to the closing of these five tranches.

The Convertible Debentures were convertible at the option of the holders thereof into units at any time after October 31, 2019 at a conversion price of CAD\$4.00 per unit for a total 1,245,750 units of the Company. Each unit consisted of one common share and one common share purchase warrant. Each common share purchase warrant entitled the holder to purchase one common share of the Company at a price of CAD\$5.00 per share for a period of four years from the date upon which the convertible debenture was issued. Upon completing the sale of DenseLight and receiving the full sale proceeds, holders of Convertible Debentures had the right to cause the Company to repurchase the Convertible Debentures at face value, subject to certain restrictions. The Convertible Debentures were governed by a trust indenture between the Company and TSX Trust Company as trustee. The Company notified the trustee and the holders of the debentures that the sale of DenseLight had been completed and holders may, at their discretion, cause the Company to repurchase the Convertible debentures within the established repurchasing parameters.

Insiders of the Company subscribed for 14.3% or \$535,000 of the Convertible Debentures, including the Company's board of directors and senior management team. Insiders of IBK Capital subscribed for 4% or \$146,000 of the Convertible Debentures.

The debt components of the Convertible Debentures were fair valued using effective discount rates ranging from 28.74% to 29.71% which the Company determined would be the interest rate of the debts without a conversion feature. The difference between the fair value of the debt component and the loan is allocated to the equity component and is included in shareholders' equity.

During 2021, holders of certain convertible debentures converted \$3,571,342 (2020 - \$369,545) worth of convertible debentures into 1,119,750 (2020 - 123,500) units of the Company. On September 19, 2021, \$7,886 of convertible debentures matured and was repaid to the holder of the convertible debenture. As of December 31, 2021 all convertible debentures were either exercised or matured and repaid.

Capital Expenditures

The Company has an approved capital budget of \$2,750,000 for the 2022 fiscal year related to research and development equipment, manufacturing equipment and patent registration. In 2021, \$930,882 (2020 - \$1,573,863) was either spent in cash or accrued for acquiring development and manufacturing equipment and new patents.

C. Research and Development

Virtually all of POET's R&D expenditures in recent years have been in some way connected to the Optical Interposer. We expect to continue to spend the majority of our R&D resources for the foreseeable future on Optical Interposer-based components across a variety of potential applications.

As a platform technology, Optical Interposer development does not have a specific end point. Each application of the Optical Interposer requires design and development specific to that application. POET's product roadmap is currently focused on the development of Optical Engines for optical transceivers. Optical Engines include all of the photonics-related components of a transceiver but do not include several of the electronic devices needed for a functioning transceiver module. Nor does it include the external packaging and optical fibers. Nevertheless, Optical Engines represent a significant portion of the cost and value of most optical transceivers.

The success of the Optical Interposer is derived from the unique and proprietary integration of "active" and "passive" components at the chip level, with all of the processing, assembly, packaging and test done at wafer-level. Wafer-level processing eliminates the complex, high-cost individual alignment steps required in conventional and silicon photonics-based assembly following placement of each photonic device in the package. In addition to eliminating the alignment steps, wafer-level processing also eliminates the capital expense of the equipment typically used to measure the alignment. The Optical Interposer platform allows the use of known-good device components, eliminates multiple points of potential failure in alternative processing methods, and eliminates much of the labor associated with fabrication of photonics devices.

The "active" components that are included in a POET Optical Engine include lasers, detectors and modulators fabricated on InP or Silicon substrate and specifically designed to be integrated into the Optical Interposer fabric. We have supplemented our active component device development with co-development partners and license agreements, including for certain types of lasers and modulators. This not only reduces the risk to internal development and accelerates time to market, but it also ensures second sources of Optical Interposer-compatible active components, a critical part of our strategy going forward.

In parallel to these activities, POET has also been engaged in development programs in two other areas for the Optical Interposer platform, namely Passive Component design and development and Core Integration development. Passive devices include filters, mux-demux devices, waveguides and spot size converters, all designed and fabricated using POET's proprietary materials and processes. The Optical Interposer devices are fabricated at a third-party foundry. We transferred the basic processes for producing our Optical Interposers to our foundry partner in 2018 and since then we have continued to improve those processes in order to make them suitable for high volume manufacturing.

Core Integration development relates primarily to advanced packaging methods that, combined with the unique design of the Optical Interposer, allows true wafer-scale assembly and test. We do not believe that such true wafer-scale integration has yet been demonstrated by any other approach in the photonics industry. We are able to achieve chip-level integration and wafer-scale assembly, test and packaging because all of the active devices are designed to be placed and “matched” to passive device interfaces on the foundational Optical Interposer wafer using pick-and-place assembly techniques. We eliminate the high cost and cumbersome process of testing each component following placement. Once placed and tested at wafer scale, each Optical Interposer device is sealed, the wafer is separated into hundreds of individual die, and the final Optical Engine is ready for shipment to the customer. Each of these process steps, from flip-chipping of devices onto the Optical Interposer, pick and place assembly, hermetic sealing and singulation required substantial innovation and development, including several techniques that are unique in the photonics and compound semiconductor industries. Core Integration development became a top priority once POET entered the product development stage with customers and became critical with the signing of the JVA for the creation of SPX.

We are also working with leading industry partners on Optical Engines and other components for 400/800G transceivers, which is the next generation of transceiver modules that are expected to be introduced into data centers in the coming months and years. We believe that the Optical Interposer platform is very relevant to markets beyond data communications, such as telecommunications, automotive LIDAR, and in “Co-Packaged Optics,” which is the integration of optics with Application Specific Integrated Circuits (ASICs), including switches and graphics generators, for both data center application and more self-contained applications of optical computing, which is relevant for artificial intelligence.

Internally generated research costs, including the costs of developing intellectual property and maintaining patents are expensed as incurred. Internal development costs are expensed as incurred unless such costs meet the criteria for capitalization and amortization under IFRS, which to date has not occurred.

We incurred a cumulative \$8,165,128, 6,634,317, \$2,083,815 of research and development expenses in 2021, 2020 and 2019, which includes non-cash stock-based compensation of \$1,769,951, \$567,859 and \$237,311 respectively. Other expenses related to research and development expenditures in the semiconductor business include costs associated with salaries, material costs, license fees, consulting services and third-party contract manufacturing. The expenses in all years presented can be analyzed for continuing and discontinuing operations as follows:

R&D for Continuing Operations

	For the Years Ended December 31,		
	2021	2020	2019
Wages and benefits	\$ 3,270,528	\$ 1,586,900	\$ 874,673
Subcontract fees	1,516,343	3,802,919	834,598
Stock-based compensation	1,769,951	567,859	237,311
Supplies	1,608,306	676,639	137,233
	<u>\$ 8,165,128</u>	<u>\$ 6,634,317</u>	<u>\$ 2,083,815</u>

R&D for Discontinued Operations

	2021	2020	2019 ⁽¹⁾
Wages and benefits	\$ -	\$ -	\$ 3,565,076
Supplies	-	-	1,412,572
Subcontract fees	-	-	728,457
Stock-based compensation	-	-	(28,883)
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5,677,222</u>

(1) For the Period from January 1, 2019 to November 8, 2019

D. Trend Information

Other than as may be disclosed elsewhere in this annual report and specifically in ITEM 4.B. “Business Overview,” we are not aware of any trends, uncertainties, demands, commitments or events that are reasonably likely to have a material effect on our net revenues, income from operations, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial condition.

E. Off-Balance Sheet Arrangements

The Company has no material off-balance sheet arrangements in place at this time.

F. Tabular Disclosures of Contractual Obligations

The following table sets forth our contractual obligations and commercial commitments as of December 31, 2021:

Contractual Obligations	Payments due by period (US\$)				
	Total	<1 year	1-3 years	3-5 years	>5 years
Lease Obligations	\$ 441,061	\$ 182,787	\$ 258,274	\$ -	\$ -

(1) Refer to Item 3(b) for details

G. Safe Harbor

See “Forward Looking Statements” on page 1 of this Annual Report.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Senior Management

The following table sets forth information regarding our Directors and Officers for the most recent financial year.

Name	Positions	Age	Date First Elected or Appointed a Director or Officer
Jean-Louis Malinge (1)(3)	Director Corporate Governance and Nominating Committee	68	September 5, 2017
Peter Charbonneau (1)(3)	Chair and Director	68	March 28, 2018
Dr. Suresh Venkatesan	Chief Executive Officer and Chairman	55	June 11, 2015
Kevin Barnes	Corporate Controller and Treasurer	50	December 1, 2012
Thomas R. Mika	Chief Financial Officer	70	November 2, 2016
Vivek Rajgarhia	President and General Manager	54	November 4, 2019
Chris Tsiofas (1)(2)	Audit Committee Chair and Director	54	August 21, 2012
Yong Meng (James) Lee	General Manager – POET Technologies Pte Ltd.	50	September 2, 2019
Glen Riley (2)(3)	Director	59	December 7, 2020
Mohandas Warrior (2)	Compensation Committee Chair and Director	61	June 15, 2015
Don Listwin (4)	Director	62	January 22, 2018

(1) Member of Audit Committee

(2) Member of Compensation Committee

(3) Member of Corporate Governance and Nominating Committee

(4) Don Listwin resigned from the Board on July 8, 2021

Dr. Suresh Venkatesan as CEO. Dr. Venkatesan was most recently Senior Vice President, Technology Development at Global Foundries and was responsible for the Company's Technology Research and Development. Dr. Venkatesan joined Global Foundries in 2009, where he led the development and ramp up of the 28nm node and was instrumental in the technology transfer and qualification of 14nm. In addition, he was responsible for the qualification and ramp up of multiple mainstream value-added technology nodes.

Vivek Rajgarhia serves as President and General Manager. Before joining POET, Mr. Rajgarhia served as Senior Vice President & General Manager of the Lightwave Business Unit of MACOM (NASDAQ: MTSI). Mr. Rajgarhia joined MACOM through the acquisition of Optomai Inc., where he was the Co-Founder and CEO, to start MACOM's first optical business. He was then instrumental in identifying and leading several strategic acquisitions to build an extensive portfolio of optical and photonic businesses, which formed MACOM's Lightwave Business Unit. Mr. Rajgarhia has held several senior management positions during his 30 years in the optical communications industry. He was Director of Sales & Marketing (Asia) for Lucent Technologies' (now Nokia) optical components, where he started Lucent's Asia business; Vice President of Product Marketing and Business Development for OpNext (formerly Hitachi's Fiber Optics Division), now Lumentum, where he was part of the team to spin-off the optical business from Hitachi; Director of Product Management & Marketing for JDS Uniphase (now Lumentum), and VP of Global Sales for GigOptix. Mr. Rajgarhia has been a successful entrepreneur, founding two optical companies, and has held international assignments in Hong Kong, Germany and India. He holds a Bachelor of Engineering (Electrical) degree from Stevens Institute of Technology in New Jersey.

Mr. Thomas Mika serves as EVP & CFO. Prior to joining POET, Mika served for one year as the Executive Chairman of Rennova Health, Inc., the successor company to CollabRx and its predecessor, Tegal Corporation, a semiconductor capital equipment company (NASDAQ: TGAL). On the Board of Directors of Tegal since its spin-out from Motorola in 1989, Mika assumed the roles of Chief Financial Officer in 2002, CEO in 2005 and Chairman & CEO in 2006, positions which he held until 2015. In 2015, Tegal merged with Rennova Health with Mika retaining the position of Chairman until joining POET in November 2016. In 1980, Mika co-founded IMTEC, a boutique M&A, investment and consulting firm, serving clients in the U.S., Europe and Japan over a period of 20 years, taking on the role of CEO in several ventures. Earlier in his career, Mika was a managing consultant with Cresap, McCormick & Paget and a policy analyst for the National Science Foundation. He holds a Bachelor of Science in Microbiology from the University of Illinois at Urbana-Champaign and a Master of Business Administration from the Harvard Graduate School of Business.

Mr. Kevin Barnes has been serving as Corporate Controller and Treasurer since 2008 and briefly as Chief Financial Officer (2012 – 2016). Mr. Barnes holds a Master of Business Administration and is a member of the Institute of the Certified Management Accountants of Australia and an Accredited Chartered Secretary. Mr. Barnes served as a Corporate Controller and Business Performance Manager for EC English, one of the world's largest language training institutes between 2006 and 2014. Mr. Barnes also serves as Chief Financial Officer of VVC Exploration Corporation, a minerals exploration company since 2006. From 2000 to 2006, he was a reporting manager with Duguay and Ringler Corporate Services, which specializes in financial reporting for publicly traded companies.

Mr. Chris Tsiofas, CA, CPA, Director of the Company, earned a Bachelor's of Commerce Degree from the University of Toronto and is a member of the Chartered Professional Accountants of Canada and the Canadian Tax Foundation. He has been on the Board of Directors since August of 2012. He is the president of MTN Chartered Professional Accountant Professional Corporation, a public accountancy firm. He sits on various private company boards. He has also served in a principal capacity in various entrepreneurial ventures resulting in successful divestitures. Mr. Tsiofas is currently Chair of the Company's Audit Committee and member of its Compensation Committee.

Mr. Mohan Warrior has been an Angel Investor for early-stage technology companies since Jan 2017 and serves as an Adviser to many of them. Mr. Warrior was president and chief executive officer (CEO) of Alfalight Inc. ("Alfalight") from 2004 to 2016. Alfalight is a GaAs based high power diode laser manufacturing company with headquarters in Madison, Wisconsin. Alfalight serves military, telecom and industrial customers. Mr. Warrior established Alfalight as a leading provider of high-powered laser diode solutions in both commercial and defense segments. Alfalight was sold to Gooch and Housego in 2016. Prior to joining Alfalight, Mr. Warrior's career included 15 years at Motorola Semiconductors (now Freescale) where he led the test and assembly operations, a group of 3500 employees, in the US, Scotland and Korea. Mr. Warrior earned his Bachelor's degree in Chemical Engineering from Indian Institute of Technology, Delhi, a Master's degree in Chemical Engineering from Syracuse University, New York and an MBA from the Kellogg School of Management at Northwestern University. Mr. Warrior is currently Chair of the Company's Compensation Committee and member of its Audit Committee.

Mr. Jean-Louis Malinge recently retired as partner with ARCH Venture Partners, an early-stage venture capital firm with nearly \$2 billion under management. Additionally, he is a board member of EGIDE SA, CAILabs and Aeponyx. EGIDE SA is a public French company which designs, manufactures and sells hermetic packages for the protection and interconnection of several types of electronic and photonic chips. CAILabs is a venture-backed French innovative start-up founded in 2013 which has developed a unique spatial multiplexing platform. Aeponyx is a venture-backed Canadian innovative start-up which develops a platform combining Silicon Nitride waveguides with planar MEMS for photonics components. From 2004 to 2013 Mr. Malinge was President and CEO of Kotura, a Silicon Photonics pioneer which was acquired in 2013 by Mellanox Technologies. Prior to Kotura Mr. Malinge was an executive with Corning Inc for 15 years. He holds an Executive M.B.A. from MIT Sloan School in Boston, Massachusetts. He also holds an engineering degree from the Institut National des Sciences Appliquées in Rennes, France. Mr. Malinge currently serves member of the Company's Audit and Corporate Governance & Nominating Committees.

Mr. Peter Charbonneau was a general partner at Skypoint Capital Corporation for almost 15 years, where he was jointly responsible for the placement of \$100 million of capital in early-stage telecommunications and data communication companies. Mr. Charbonneau currently serves on the board of Surgical Safety Technologies Inc. an early stage start up that uses clinically trained deep learning systems to perform advanced analytics on hospital data. He recently served on the Board of Mitel Networks Corporation, a leading global provider of cloud and on-site business communications until November 2018 when it was sold to a private equity firm. He previously served as Chairman of the Board of Trustees for the CBC Pension Board and a director on the board of the Canadian Broadcasting Corporation as well as many technology and networking companies, including March Networks Corporation, TELUS Corporation, Breconridge Corporation and Dragonwave Incorporated. Mr. Charbonneau currently serves as Lead Independent Director of the Company and Chair of its Nominating & Corporate Governance Committee.

Mr. Yong Meng (James) is General Manager of the Company's Singapore subsidiary. Prior to his appointment in 2019, Mr. Lee was Vice President of Logic Technology at IMEC where he was responsible for defining the logic roadmap and developing the technology elements necessary to extend scaling with ultra-scaled FinFET, GAA devices, advanced metallization as well novel materials for emerging devices and quantum computing. Mr. Lee joined IMEC in 2015 where he was instrumental in driving collaborations with the foundries in China and was responsible for bringing in >100M euros of research partnership. Prior to IMEC, Mr. Lee had a 19-year career with GLOBALFOUNDRIES where he held various technical and management positions spanning the US and Singapore focused on developing, qualifying and ramping leading edge CMOS technology in the foundry. He has over 60 patents and holds a Bachelor of Engineering degree from the University of Illinois at Champaign-Urbana.

Mr. Glen Riley was appointed as a director of POET's board in December 2020, bringing extensive and pertinent experience from a broad career in the semiconductor and optoelectronics industry spanning over 32 years. His most recent full-time role was General Manager of the Filter Solutions Business Unit in Qorvo responsible for developing highly integrated RF modules used in flagship mobile phones. Prior roles included managing director of the international headquarters for TriQuint in Singapore, general manager of TriQuint's GaAs foundry business, general manager of TriQuint's optoelectronics business, CEO of optical component start-up Opticalis, vice-president responsible for Agere's high-speed/long-haul optoelectronics business, and Asia sales president of Lucent Technologies' Microelectronics Group based in Tokyo. He has successfully led many global teams developing new products and growing profits in the RF wireless, GaAs foundry, optical components, and storage semiconductor markets.

Mr. Riley completed The General Management Program from the Harvard Business School in 1998 and graduated as valedictorian from the School of Engineering at the University of Maine with a B.S. degree in Electrical Engineering in 1985. Mr. Riley currently serves as member of the Company's Compensation and Corporate Governance & Nominating Committees.

The Directors, unless otherwise noted above, have served in their respective capacities since their election and/or appointment, and will serve until the next Company's annual general meeting or until a successor is duly elected, unless the office is vacated in accordance with the Articles of Continuance.

The Board has adopted a written Code of Business Conduct and Ethics to promote a culture of ethical business conduct and relies upon the selection of persons as directors, senior management and employees who they consider to meet the highest ethical standards. The Company's Code of Business Ethics can be found on the Company's web site at: www.poet-technologies.com.

There are no family relationships between any of our Directors or senior management. There are no arrangements or understandings with major shareholders, customers, suppliers or others, pursuant to which any person referred to above was selected as a Director or member of senior management.

B. Compensation

Fixed Stock Option Plan

On September 21, 2007, the Directors approved a fixed 20% vesting Stock Option Plan (the "Plan") to replace the Rolling Stock Option Plan that had been in effect since May 4, 2005. The Plan was approved by the disinterested shareholders of the Company at the Shareholders' Meeting of June 19, 2008 and accepted for filing by the TSXV. Under the Plan, the maximum number of shares (the "Maximum Number") which may be issued pursuant to options granted under the Plan or otherwise granted cannot exceed 20% of the issued and outstanding shares. The shareholders fixed the Maximum Number at 1,193,000. Thereafter, the Plan has been amended by the Directors, and such amendments have been approved by the shareholders in 2009, 2011, 2013, 2014, 2015, 2016, 2018, 2020 and 2021. The Maximum Number is currently 7,090,518 shares.

The purpose of the Plan is to assist the Company in attracting, retaining and motivating directors, employees and consultants of the Company and any of its subsidiaries and to closely align the personal interests of such directors, employees and consultants with those of the shareholders by providing them with the opportunity, through options, to acquire common shares in the capital of the Company.

The Plan provides that the number of common shares issuable pursuant to options granted under the Plan and pursuant to other previously granted options is limited to the Maximum Number, currently fixed at 7,090,518. Any subsequent increase in the Maximum Number must be approved by shareholders of the Company and cannot exceed 20% of the issued and outstanding shares of the Company at the time of the shareholders' approval. There is no other limit to the number of options granted to any individual, except for:

- (i) 2% on a yearly basis to any one consultant and (ii) 2% on a yearly basis to any employee providing "Investor Relations Activities."

The following paragraphs summarize some of the terms of the Plan:

Eligibility. Options may be granted under the Plan to directors, employees, consultants and consultant companies of the Company and any of its subsidiaries. Options may also be granted to individuals referred to as "Management Company Employees" which are employed by a company providing management services to the Company, except for services involving "Investor Relations Activities."

Plan Administration. The Board of Directors is the plan administrator, subject to the advice and recommendations of our Compensation Committee. The plan administrator will determine the provisions and terms and conditions of each grant.

Exercise Price. The exercise price subject to an option shall be determined by the Board and set forth in the option agreement, but shall be either (i) not less than the last closing price of the Company's common shares as traded on the TSXV, unless discounted by the Board or (ii) such other price agreed by the Board and accepted by the TSXV. Except in certain circumstance, the Company can amend the other terms of a stock option only where prior TSXV acceptance is obtained and where the following requirements are met:

- (i) if the amendment is in respect of an option held by an insider of the Company, but excluding amendments to extend the length of the stock option term, the Company obtains disinterested shareholder approval;
- (ii) if the option exercise price is amended, at least six months have elapsed since the later of the date of commencement of the term, the date the Company's shares commenced trading, or the date the option exercise price was last amended;
- (iii) if the option price is amended to the discounted market price, the exchange hold period is applied from the date of the amendment (and for more certainty where the option price is amended to the market price, the exchange hold period will not apply); and
- (iv) if the length of the stock option term is amended, any extension of the length of the term of the stock option is treated as a grant of a new option, and therefore the amended option must comply with the pricing and other requirements of the policy as if it were a newly granted option. The term of an option cannot be extended so that the effective term of the option exceeds 10 years in total. An option must be outstanding for at least one year before the Company can extend its term.

The TSXV must accept a proposed amendment before the option may be exercised as amended. If the Company cancels a stock option and within one year grants new options to the same individual, the new options will be subject to the requirements in sections (i) to (iv) above.

Option Agreement. Options granted under the plan are evidenced by an option agreement that sets forth the terms, conditions and limitations for each grant.

Term of the Awards. At the meeting of the Board of Directors held on February 25, 2016, based on the report of Compensia, it was determined that stock options should generally have a term of 10 years.

Vesting Schedule. In general, options granted under the Plan vest 25% immediately and 25% every six months from the date of issue, until fully vested. The directors may, at their discretion, specify a different vesting period, provided that options granted to consultants performing "Investor Relations Activities" must vest in stages over 12 months with no more than 25% of the options vesting in any three-month period. At the meeting of the Board of Directors held on February 25, 2016, based on the report of Compensia, it was determined that stock options should vest 25% at the end of one year from the date of issue with the remaining 75% vesting equally on a quarterly basis over the remaining 3 years for a total vesting period of 4 years. At a meeting of the Board of Directors held on March 30, 2017, the board approved a revised one-year vesting schedule for options granted for service on the board to conform to the term for which a director is elected. Such options will vest 25% at the end of each quarter served in office.

Transfer Restrictions. Options granted under the Plan may not be transferred in any manner by the option holder other than by will or the laws of succession and may be exercised during the lifetime of the option holder only by the option holder. Securities that are subject to restrictions may not be transferred during the period of restriction.

Change of Control and Alteration of Capital. The Plan provides that if a Change of Control, as defined herein, occurs, the shares subject to option shall immediately become vested and may thereupon be exercised in whole or in part by the option holder. The Plan also provides for automatic adjustments in the number of optioned shares and/or the exercised price, in the event of an alteration in the share capital of the Company.

Termination of Options. In the event that the award recipient ceases employment with us or ceases to provide services to us, the options will terminate after a period of time following the termination of employment. Our Board of Directors has the authority to amend or terminate the plan subject to shareholder approval with respect to certain amendments. However, no such action may adversely affect in any material way any awards previously granted unless agreed upon by the recipient.

Officer Compensation

Total cash compensation accrued and/or paid (directly and/or indirectly) to all of our Officers during fiscal year 2021 was \$1,782,297 (refer to ITEM 7. "Major Shareholders and Related Party Transactions" for information regarding indirect payments)

In order to assist the Board of Directors in fulfilling its oversight responsibilities with respect to human resources matters, the Board established a Compensation Committee. The Compensation Committee reviews and makes determinations with respect to senior officer compensation on a regular basis with any discretionary compensation used only for extraordinary projects or significant milestone results that advance the Company's growth potential. When determining Executive Officers' compensation, the Compensation Committee receives input and guidance from the Executive Chairman of the Board and the Chief Executive Officer of the Company. In the past, the Compensation Committee has engaged an outside consultant to conduct a peer group review to provide guidance to the Compensation Committee with respect to appropriate comparative terms for executive compensation and stock option grants. The Company also utilizes peer group comparisons from subsidiary locations to assist in its salary review of various positions in those locations. The Compensation Committee utilizes such comparative reviews to assist it in making appropriate recommendations to the Board.

In addition to his or her fixed base salary, each officer may be eligible to receive variable pay compensation or bonus meant to motivate him or her to achieve short-term goals. Currently, the Company does not have in place established procedures for determining variable pay compensation. Stock options are an important element of the variable pay compensation and do not require cash disbursement from the Company. Stock options are also generally awarded to officers, qualifying employees and consultants at the time of hire and are used as a recruitment tool to attract highly qualified and experienced executives, employees and consultants to the Company. Stock options are also granted at other times during the year. As the Company is continuing to develop its Optical Interposer technology, it must conserve its limited financial resources and control costs to ensure that funds are available when needed to complete its scheduled developments. As a result, the Compensation Committee generally considers not only the financial situation of the Company at the time of the determination of the compensation, but also the estimated financial situation in the mid- and long-term. The use of stock options encourages and rewards performance by aligning an increase in each officer's compensation with increases in the Company's performance and in shareholder value.

The following table sets forth all annual and long-term compensation for services in all capacities to the Company for fiscal year 2021 of the Company.

Name and Principal Position	Fiscal Year	Salary (2)	Share-Based Awards (1) (2)	Options Based Awards (1)(2)		Annual Incentive Plans	Non-Equity Incentive Plan Compensation		All other Comp.	Total Comp.
				No. of Options	Value of Options (1) (2)		Long-term Incentive Plans	Pension Value		
Dr. Suresh Venkatesan	2021	456,500	-	65,000	-	70,000	-	-	-	526,500
Kevin Barnes	2021	180,000	-	25,000	-	35,000	-	-	-	215,000
Thomas Mika	2021	322,500	-	45,000	-	60,000	-	-	-	382,500
Vivek Rajgarhia	2021	378,687	-	45,000	-	60,000	-	-	-	438,687
James Lee	2021	220,000	-	25,000	-	-	-	-	-	220,000

(1) The Company used the Black-Scholes model as the methodology to calculate the grant date fair value. The fair value will be recorded as an operating expense as the options vest based on the stock options vesting schedule from the date of grant.

(2) The exchange rate used in these calculations to convert CAD to USD is based on the exchange rate applicable at the date of grant.

The following table sets forth information concerning all awards outstanding under a stock option plan to each of the current officers, as of December 31, 2021:

First Name	Last Name	Option-based Awards				Share-based Awards		
		Number of Securities Underlying Unexercised Options	Option Exercise Price	Option Expiration Date	Value of Unexercised in-the-money Options	Number of Shares or Units that have not Vested	Market or Payout Value of Shares or Units of Shares that have not Vested	Market or Payout Value of Vested Shares or Units of Shares that have not Paid Out or Distributed
Kevin	Barnes	2,500	\$2.30 CAD	16-Feb-2022	\$13,258 USD	N/A	N/A	N/A
Kevin	Barnes	22,000	\$2.80 CAD	13-Jul-2027	\$107,961 USD	N/A	N/A	N/A
Kevin	Barnes	50,000	\$3.70 CAD	15-Jan-2030	\$209,748 USD	N/A	N/A	N/A
Kevin	Barnes	50,000	\$3.80 CAD	29-May-2029	\$205,790 USD	N/A	N/A	N/A
Kevin	Barnes	8,000	\$5.20 CAD	28-Mar-2028	\$24,062 USD	N/A	N/A	N/A
Kevin	Barnes	30,000	\$5.30 CAD	11-Jun-2030	\$87,857 USD	N/A	N/A	N/A
Kevin	Barnes	25,000	\$11.90 CAD	06-Apr-2031	\$0 USD	N/A	N/A	N/A
Yong Meng	Lee	100,000	\$3.30 CAD	04-Nov-2029	\$451,155 USD	N/A	N/A	N/A
Yong Meng	Lee	20,000	\$5.30 CAD	11-Jun-2030	\$58,571 USD	N/A	N/A	N/A
Yong Meng	Lee	25,000	\$11.90 CAD	06-Apr-2031	\$0 USD	N/A	N/A	N/A
Thomas	Mika	80,000	\$2.80 CAD	13-Jul-2027	\$392,584 USD	N/A	N/A	N/A
Thomas	Mika	100,000	\$3.80 CAD	29-May-2029	\$411,580 USD	N/A	N/A	N/A
Thomas	Mika	50,000	\$3.85 CAD	16-Jan-2027	\$203,811 USD	N/A	N/A	N/A
Thomas	Mika	95,000	\$5.20 CAD	28-Mar-2028	\$285,732 USD	N/A	N/A	N/A
Thomas	Mika	60,000	\$5.30 CAD	11-Jun-2030	\$175,713 USD	N/A	N/A	N/A
Thomas	Mika	100,000	\$6.20 CAD	02-Nov-2026	\$221,620 USD	N/A	N/A	N/A
Thomas	Mika	45,000	\$11.90 CAD	06-Apr-2031	\$0 USD	N/A	N/A	N/A
Vivek	Rajgarhia	315,000	\$3.30 CAD	04-Nov-2029	\$1,421,138 USD	N/A	N/A	N/A
Vivek	Rajgarhia	115,000	\$5.30 CAD	11-Jun-2030	\$336,783 USD	N/A	N/A	N/A
Vivek	Rajgarhia	45,000	\$11.90 CAD	06-Apr-2031	\$0 USD	N/A	N/A	N/A
Suresh	Venkatesan	280,000	\$2.80 CAD	13-Jul-2027	\$1,374,044 USD	N/A	N/A	N/A
Suresh	Venkatesan	450,000	\$3.80 CAD	29-May-2029	\$1,852,110 USD	N/A	N/A	N/A
Suresh	Venkatesan	390,000	\$5.20 CAD	28-Mar-2028	\$1,173,003 USD	N/A	N/A	N/A
Suresh	Venkatesan	250,000	\$5.30 CAD	11-Jun-2030	\$732,138 USD	N/A	N/A	N/A
Suresh	Venkatesan	30,000	\$8.60 CAD	07-Jul-2026	\$9,498 USD	N/A	N/A	N/A
Suresh	Venkatesan	65,000	\$11.90 CAD	06-Apr-2031	\$0 USD	N/A	N/A	N/A

(1) This amount is calculated based on the difference between the market value of the shares underlying the options as of December 31, 2021, being CAD \$9.00 (US\$7.12), and the exercise or base price of the option. The exchange rate used in these calculations to convert CAD to USD was 0.7915, being the closing exchange rate at December 31, 2021.

The value vested or earned during fiscal year 2021 of incentive plan awards granted to NEOs are as follows:

First Name	Last Name	Option-based Awards		Share-based Awards		Non-equity Incentive Plan Compensation - Value Earned During The Year
		Number of Securities Underlying Options Vested	Value Vested During the Year	Number of Shares or Units of Shares Vested	Value Vested During the Year	
Kevin	Barnes	63,438	\$301,842.64 USD	N/A	N/A	N/A
Yong Meng	Lee	32,500	\$183,593.73 USD	N/A	N/A	N/A
Thomas	Mika	93,125	\$429,690.09 USD	N/A	N/A	N/A
Vivek	Rajgarhia	128,125	\$683,739.53 USD	N/A	N/A	N/A
Suresh	Venkatesan	360,000	\$1,658,327.03 USD	N/A	N/A	N/A
		677,188	\$3,257,193.02 CAD			

- (1) This amount is the dollar value that would have been realized and is computed by obtaining the difference between the market price of the underlying securities on the vesting date and the exercise or base price of the options under the option-based award. For the named executive officers to realize this value, they would have had to exercise their options and sell the shares on the day of vesting. The exchange rates used in these calculations to convert CAD to USD were the rates applicable on the vesting dates.

Director Compensation

The following table details compensation paid/accrued for fiscal year 2021 for each director who is not also an officer.

Name and Principal Position	Fiscal Year	Salary (2)	Share-based Awards (1)(2)		Options Based Awards (1)(2)		Non-Equity Incentive Plan Compensation			All other Comp.	Total Comp.
			Based Awards (1)(2)	No. of Options	Value of Options (1)(2)	Annual Incentive Plans	Long-term Incentive Plans	Pension Value			
Chris Tsiofas	2021	38,087	-	12,500	-	-	-	-	-	-	38,087
Peter Charbonneau	2021	52,370	-	14,375	-	-	-	-	-	-	52,370
Mohandas Warrior	2021	35,000	-	11,250	-	-	-	-	-	-	35,000
Jean-Louis Malinge	2021	30,000	-	11,250	-	-	-	-	-	-	30,000
Don Listwin ⁽³⁾	2021	20,000	-	12,500	-	-	-	-	-	-	20,000
Glen Riley	2021	30,000	-	11,250	-	-	-	-	-	-	30,000

- (1) The Company used the Black-Scholes model as the methodology to calculate the grant date fair value. The fair value will be recorded as an operating expense as the stock options vest from the date of grant.

- (2) The exchange rate used in these calculations to convert CAD to USD was the rate of exchange applicable on the date of grant.

- (3) Don Listwin resigned from the Board of Directors on July 8, 2021

The following table sets forth information concerning all awards outstanding under the stock option plans to each of the current Directors who are not also named executive officers as of December 31, 2021:

First Name	Last Name	Option-based Awards				Share-based Awards			Market or Payout Value of Vested Shares or Units of Shares that have not Paid Out or Distributed
		Number of Securities Underlying Unexercised Options	Option Exercise Price	Option Expiration Date	Value of Unexercised in-the-money Options	Number of Shares or Units of Shares that have not Vested	Market or Payout Value of Shares or Units of Shares that have not Vested		
Peter	Charbonneau	39,900	\$3.30 CAD	21-Jun-2028	\$180,010.85 USD	N/A	N/A	N/A	
Peter	Charbonneau	40,059	\$3.80 CAD	29-May-2029	\$164,876.07 USD	N/A	N/A	N/A	
Peter	Charbonneau	3,549	\$4.20 CAD	06-Feb-2030	\$13,482.60 USD	N/A	N/A	N/A	
Peter	Charbonneau	15,473	\$5.20 CAD	28-Mar-2028	\$46,538.14 USD	N/A	N/A	N/A	
Peter	Charbonneau	33,711	\$5.30 CAD	11-Jun-2030	\$98,722.88 USD	N/A	N/A	N/A	
Peter	Charbonneau	14,375	\$11.90 CAD	06-Apr-2031	\$0.00 USD	N/A	N/A	N/A	
Jean-Louis	Malinge	52,500	\$3.00 CAD	05-Sep-2027	\$249,322.50 USD	N/A	N/A	N/A	
Jean-Louis	Malinge	39,900	\$3.30 CAD	21-Jun-2028	\$180,010.85 USD	N/A	N/A	N/A	
Jean-Louis	Malinge	36,053	\$3.80 CAD	29-May-2029	\$148,388.58 USD	N/A	N/A	N/A	
Jean-Louis	Malinge	26,382	\$5.30 CAD	11-Jun-2030	\$77,261.30 USD	N/A	N/A	N/A	
Jean-Louis	Malinge	11,250	\$11.90 CAD	06-Apr-2031	\$0.00 USD	N/A	N/A	N/A	
Glen	Riley	22,460	\$5.00 CAD	04-Dec-2030	\$71,108.36 USD	N/A	N/A	N/A	
Glen	Riley	11,250	\$11.90 CAD	06-Apr-2031	\$0.00 USD	N/A	N/A	N/A	
Chris	Tsiofas	68,750	\$2.80 CAD	13-Jul-2027	\$337,376.88 USD	N/A	N/A	N/A	
Chris	Tsiofas	48,767	\$3.30 CAD	21-Jun-2028	\$220,012.95 USD	N/A	N/A	N/A	
Chris	Tsiofas	44,065	\$3.80 CAD	29-May-2029	\$181,363.96 USD	N/A	N/A	N/A	
Chris	Tsiofas	29,314	\$5.30 CAD	11-Jun-2030	\$85,846.05 USD	N/A	N/A	N/A	
Chris	Tsiofas	15,000	\$8.60 CAD	07-Jul-2026	\$4,749.00 USD	N/A	N/A	N/A	
Chris	Tsiofas	12,500	\$11.90 CAD	06-Apr-2031	\$0.00 USD	N/A	N/A	N/A	
Mohandas	Warrior	20,000	\$2.80 CAD	13-Jul-2027	\$98,146.00 USD	N/A	N/A	N/A	
Mohandas	Warrior	39,900	\$3.30 CAD	21-Jun-2028		N/A	N/A	N/A	

					\$180,010.85 USD			
Mohandas	Warrior	36,053	\$3.80 CAD	29-May-2029	\$148,388.58 USD	N/A	N/A	N/A
Mohandas	Warrior	26,382	\$5.30 CAD	11-Jun-2030	\$77,261.30 USD	N/A	N/A	N/A
Mohandas	Warrior	15,000	\$8.60 CAD	07-Jul-2026	\$4,749.00 USD	N/A	N/A	N/A
Mohandas	Warrior	11,250	\$11.90 CAD	06-Apr-2031	\$0.00 USD	N/A	N/A	N/A

- (1) This amount is calculated based on the difference between the market value of the shares underlying the options as of December 31, 2021, being CAD \$9.00 (US\$7.12), and the exercise or base price of the option. The exchange rate used in these calculations to convert CAD to USD was 0.7915, being the closing exchange rate at December 31, 2021.

The value vested or earned during fiscal year 2021 of incentive plan awards granted to Directors who are not also named executive officers are as follows:

First Name	Last Name	Option-based Awards		Share-based Awards		Non-equity Incentive Plan Compensation - Value Earned During The Year
		Number of Securities Underlying Options Vested	Value Vested During the Year	Number of Shares or Units of Shares Vested	Value Vested During the Year	
Peter	Charbonneau	24,930	\$79,527.35 USD	N/A	N/A	N/A
Don	Listwin	17,782	\$63,293.18 USD	N/A	N/A	N/A
Jean-Louis	Malinge	18,816	\$56,963.75 USD	N/A	N/A	N/A
Glen	Riley	28,085	\$90,704.37 USD	N/A	N/A	N/A
Chris	Tsiofas	20,907	\$63,293.18 USD	N/A	N/A	N/A
Mohandas	Warrior	18,816	\$56,963.75 USD	N/A	N/A	N/A
		1,293,353	\$513,624.60 USD	N/A	N/A	N/A

(1) This amount is the dollar value that would have been realized and is computed by obtaining the difference between the market price of the underlying securities on the vesting date and the exercise or base price of the options under the option-based award.

Termination and Change of Control Benefits

Other than as described in their individual management agreements, the Company has no plans or arrangements in respect of remuneration received or that may be received by the Officers the Company to compensate such Officers, in the event of termination of employment (as a result of resignation, retirement, change of control) or a change of responsibilities following a change of control.

Pension Plan Benefits

The Company does not provide a defined benefit plan to the Officers or any of its employees.

The Company offers a defined contribution plan that is a 401k Plan but does not contribute toward such plan. The Company does not have any deferred compensation plans other than that described above.

The following individuals were executives of the Company in 2020:

Name	Title
Suresh Venkatesan	CEO
Vivek Rajgarhia	President & General Manager
Thomas Mika	Executive Vice President and CFO
Yong Meng (James) Lee	General Manager, POET Technologies Pte Ltd
Kevin Barnes	VP Finance and Administration and Treasurer

C. Board Practices

Our Board of Directors currently consists of six (6) directors including the CEO, of which, five (5) are independent directors. Each director holds office until the next annual general meeting of the Company or until his successor is elected or appointed, unless his office is earlier vacated in accordance with the Articles of Amalgamation and all amendments thereto (the “Articles”), or with the provisions of the OBCA. The Company’s Officers are appointed to serve at the discretion of the Board, subject to the terms of the employment agreements described above.

Lead independent director

Our independent directors have selected Peter Charbonneau to serve as the lead independent director. The lead independent director’s primary role is to facilitate the functioning of the board, and to maintain and enhance the quality of our corporate governance practices. The lead independent director presides over the private sessions of our independent directors that take place following each meeting of the board and conveys the results of these meetings to the chair of the board.

The Board and committees of the Board schedule regular meetings over the course of the year.

During fiscal 2021, the Board held 17 regularly scheduled meetings, including committee meetings. If for various reasons, Board members may not be able to attend a Board meeting, all Board members are provided information related to each of the agenda items before each meeting, and, therefore, can provide counsel outside the confines of regularly scheduled meetings.

The Board has adopted standards for determining whether a director is independent from management. The Board reviews, consistent with the Company’s corporate governance guidelines, whether a director has any material relationship with the Company that would impair the director’s independent judgment. The Board has affirmatively determined, that as of the filing of this Form 20-F, based on its standards, that Messrs. Tsiofas, Malinge, Charbonneau, Listwin, Riley and Warrior are independent.

Directors’ Service Contracts

Mr. Venkatesan has an employment contract with the Company.

Audit and Compensation Committees of the Board of Directors

We currently have four board committees; (1) an Audit Committee; (2) a Compensation Committee, (3) a Corporate Governance & Nominating Committee, and (4) an Ad Hoc Strategy Committee. Committee charters for the Audit, Compensation and Corporate Governance & Nominating Committees can be found on the Company’s website (poet-technologies.com). The Strategy Committee is an ad-hoc committee and therefore does not have a charter. The names of the members and a summary of the terms of the charter for each the Audit Committee and the Compensation Committee is provided below.

Audit Committee

The Audit Committee is currently comprised of three members: Chris Tsiofas (Chair), Peter Charbonneau and Jean-Louis Malinge. All three members are independent directors of the Company. Mr. Tsiofas was appointed chair of the Audit Committee on August 21, 2012. The Board has determined that Mr. Tsiofas satisfies the criteria of “audit committee financial expert” within the meaning of Item 401(h) of Regulation S-K and is independent in accordance with Rule 4200 of the NASDAQ Marketplace Rules. All members of the audit committee are financially literate, meaning they have the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company’s financial statements.

The Audit Committee is responsible for reviewing the Company's financial reporting procedures, internal controls and the performance of the Company's external auditors. The Audit Committee is also responsible for reviewing the annual and quarterly financial statements and accompanying Management's Discussion and Analysis prior to their approval by the full Board. The Audit Committee also reviews the Company's financial controls with the auditors of the Company on an annual basis.

The Company's independent auditor is accountable to the Board and to the Audit Committee. The Board, through the Audit Committee, has the ultimate responsibility to evaluate the performance of the independent auditor, and through the shareholders, to appoint, replace and compensate the independent auditor. Any non-audit services must be pre-approved by the Audit Committee.

Compensation Committee

The Compensation Committee is currently comprised of three members: Mohandas Warrior (Chair), Chris Tsiofas and Glen Riley. Mr. Warrior was appointed chair of the Compensation Committee on June 23, 2021. All three members are independent directors. The Board has determined that all members of the Compensation Committee are qualified as members based on the following:

Mr. Mohan Warrior has been an Angel Investor for early-stage technology companies since Jan 2017 and serves as an Adviser to many of them. Mr. Warrior was president and chief executive officer (CEO) of Alfalight Inc. ("Alfalight") from 2004 to 2016. Alfalight is a GaAs based high power diode laser manufacturing company with headquarters in Madison, Wisconsin. Alfalight serves military, telecom and industrial customers. Mr. Warrior established Alfalight as a leading provider of high-powered laser diode solutions in both commercial and defense segments. Alfalight was sold to Gooch and Housego in 2016. Prior to joining Alfalight, Mr. Warrior's career included 15 years at Motorola Semiconductors (now Freescale) where he led the test and assembly operations, a group of 3500 employees, in the US, Scotland and Korea. Mr. Warrior earned his Bachelor's degree in Chemical Engineering from Indian Institute of Technology, Delhi, a Master's degree in Chemical Engineering from Syracuse University, New York and an MBA from the Kellogg School of Management at Northwestern University.

Mr. Chris Tsiofas, CA, CPA, earned a Bachelor's of Commerce Degree from the University of Toronto and is a member of the Institute of Chartered Accountants of Canada and the Canadian Tax Foundation. He has been on the Board of Directors of the Company since August of 2012. Mr. Tsiofas is the president of MTN Chartered Professional Accountant Professional Corporation, a public accountancy firm. He sits on various private company boards. He has also served in a principal capacity in various entrepreneurial ventures resulting in successful divestitures. Tsiofas formerly served as Chairman of the Company's Compensation Committee and has directed past engagements with the Company's outside executive compensation consultants. Mr. Tsiofas is also the Chairman of the Audit Committee of the Board of Directors. He brings to the Compensation Committee specialized knowledge regarding the tax impact of certain compensation policies and practices on individuals and on the Company.

Mr. Glen Riley has more than 30 years' experience in leadership roles spanning both the semiconductor and optoelectronics industries. He most recently served as General Manager of the Filter Solutions Business Unit at Qorvo, where he was responsible for developing highly integrated RF modules used in flagship smartphones. Prior to the merger of RFMD and TriQuint that formed Qorvo, he held multiple leadership roles at TriQuint, including Managing Director of international headquarters in Singapore, General Manager of the GaAs foundry business, and General Manager of Optoelectronics. Mr. Riley was previously the Chief Executive Officer of Opticalis, an early stage optoelectronics company focused on the development of high-density wavelength division multiplexing products. He also held prior roles as Vice President and General Manager of the Optoelectronic business at Agere Systems, and President of Asia-Pacific Sales and Marketing at Lucent Technologies Microelectronics Group. He graduated as valedictorian with a B.S. degree in Electrical Engineering from the School of Engineering at the University of Maine and completed The General Manager Program at Harvard Business School. Mr. Riley has extensive direct experience with executive compensation from these prior senior level executive roles with these companies in technology industries related to the Company.

The Compensation Committee has extensive direct relevant experience in determining executive compensation policies and practices on behalf of the Company. In addition to being supported by outside compensation consultants on a periodic basis for peer group review, the members of the Committee are professional executives familiar with best practices associated with executive compensation, are knowledgeable about the tax implications to the Company and its executive officers of changes in the tax laws pertaining to executive compensation and have direct relevant experience with the incentives used throughout the Company's industry to align the interests of executive management with company and shareholder interests. This gives these individuals strong insight as to the incentive structures and programs appropriate for companies of a comparable size. The seniority, experience and level of achievement of the three current members of the Compensation Committee speak to the independent judgement exercised in making decisions about the suitability of the Company's compensation policies and practices.

The Compensation Committee discusses and makes recommendations to the Board for approval of compensation issues that pertain to the senior executives of the Company, and on issues involving employment company-wide compensation policies and practices. In general, the compensation programs of the Company are designed to reward performance and to be competitive with the compensation agreements of other comparable semiconductor companies. The Compensation Committee is responsible for evaluating the compensation of the senior management of the Company and assuring that they are compensated effectively in a manner consistent with the Company's business, stage of development, financial condition and prospects, and the competitive environment. Specifically, the Compensation Committee is responsible for: (i) reviewing the compensation practices and policies of the Company to ensure that they are competitive and that they provide appropriate motivation for corporate performance and increased shareholder value; (ii) overseeing the administration of the Company's compensation programs, and reviewing and approving the employees who receive compensation and the nature of the compensation provided under such programs, and ensuring that all management compensation programs are linked to meaningful and measurable performance targets; (iii) making recommendations to the Board regarding the adoption, amendment or termination of compensation programs and the approval of the adoption, amendment and termination of compensation programs of the Company, including for greater certainty, ensuring that if any equity-based compensation plan is subject to shareholder approval, and that such approval is sought; (iv) periodically surveying the executive compensation practices of other comparable companies; (v) establishing and ensuring the satisfaction of performance goals for performance-based compensation; (vi) annually reviewing and approving the annual base salary and bonus targets for the senior executives of the Company, other than the Chief Executive Officer (the "CEO"); (vii) reviewing and approving annual corporate goals and objectives for the CEO and evaluating the CEO's performance against such goals and objectives; (viii) annually reviewing and approving, based on the Compensation Committee's evaluation of the CEO, the CEO's annual base salary, the CEO's bonus, and any stock option grants and other awards to the CEO under the Company's compensation programs (in determining the CEO's compensation, the Compensation Committee will consider the Company's performance and relative shareholder return, the compensation of CEOs at other companies, and the CEO's compensation in past years); and (ix) reviewing the annual report on executive compensation required to be prepared under applicable corporate and securities legislation and regulation including the disclosure concerning members of the Compensation Committee and settling the reports required to be made by the Compensation Committee in any document required to be filed with a regulatory authority and/or distributed to shareholders.

Code of Ethics

The Board has adopted a written code of business conduct and ethics. All transgressions of the code of business conduct and ethics are required to be promptly reported to the Chair of the Board or of any committee, who in turn, reports them to the Corporate Governance and Nominating Committee. The Corporate Governance and Nominating Committee is charged with investigating alleged violations of the code of business conduct and ethics. Any findings of the Corporate Governance and Nominating Committee are then reported to the full Board, which will take such action as it deems appropriate. The Company's Code of Ethics may be inspected on the Company's website (poet-technologies.com) and is filed as an Exhibit to this Annual Report.

D. Employees

As of December 31, 2021, the Company had forty-six (46) full-time employees and five (5) consultants. Fourteen (14) employees and three (3) consultants work at our lab facility either as support staff or are engaged in research and development initiatives; four (4) employees and one (1) consultant are employed at the Canadian office; twenty (20) employees are employed at our fabrication facility in Singapore; eight (8) employees are employed at our product development facility in China; one (1) consultant is located in Italy. None of the Company's employees are covered by collective bargaining agreements.

As of December 31, 2020, the Company had twenty-five (25) full-time employees and four (4) consultants, Eight (8) employees and one (1) consultant work at our lab facility either as support staff or are engaged in research and development initiatives; two (2) employees and one (1) consultant are employed at the Canadian office; Thirteen (13) employees are employed at our fabrication facility in Singapore; Two (2) employees are employed at our product development facility in China; One (1) consultant is located in Italy; and One (1) consultant is located in Japan. None of the Company's employees are covered by collective bargaining agreements.

As of December 31, 2019, the Company had sixteen (16) full-time employees, one (1) part-time employee and three (3) consultants, including one (1) in a senior management position. Eight (8) employees and one (1) consultant work at our lab facility either as support staff or are engaged in research and development initiatives; two (2) employees and one (1) consultant are employed at the Canadian office; Seven (7) employees are employed at our fabrication facility in Singapore. one (1) consultant is located in Italy. None of the Company's employees are covered by collective bargaining agreements.

E. Share Ownership and Other Securities

The following table sets forth certain information regarding the beneficial ownership of our outstanding common shares for: (i) each of our Directors and Officers individually; (ii) all of our Directors and Officers as a group; and (iii) each other person known to us to own beneficially more than 5% of our common shares as of April 14, 2022. Beneficial ownership of shares is determined under rules of the SEC and generally includes any shares over which a person exercises sole or shared voting or investment power. The table also includes the number of shares underlying options that are exercisable within sixty (60) days of April 14, 2022. Ordinary shares subject to these options are deemed to be outstanding for the purpose of computing the ownership percentage of the person holding these options, but are not deemed to be outstanding for the purpose of computing the ownership percentage of any other person.

The shareholders listed below do not have any different voting rights from our other shareholders.

	Number of Shares Beneficially Owned (1)	Percent of Class
Directors and Officers:		
Chris Tsiofas	17,500	0%
Thomas Mika	20,000	0%
Kevin Barnes	11,746	0%
Suresh Venkatesan	32,500	0%
Mohandas Warrior	43,750	0%
Peter Charbonneau	25,000	0%
Jean-Louis Malinge	17,500	0%
Vivek Rajgarhia	1,500	0%
Directors and Officers Subtotal	169,496	0.46%

Major Shareholders:

None that we are aware of.

- (1) The number of shares set forth for each Director, Officer and Major Shareholder is determined in accordance with Rule 13d-3 of the General Rules and Regulations under the Exchange Act.

See "ITEM 6.B. Compensation" for the exercise prices of options.

	Number of options exercisable within 60 days	Percent of class
Glen Riley	33,710	1%
James Lee	78,750	2%
Kevin Barnes	113,750	2%
Vivek Rajgarhia	256,875	5%
Peter Charbonneau	147,067	3%
Mohandas Warrior	148,586	3%
Jean-Louis Malinge	166,086	3%
Chris Tsiofas	218,395	4%
Thomas Mika	441,250	9%
Suresh Venkatesan	1,178,750	23%
	<u>2,783,219</u>	<u>55%</u>

	Number of Warrants exercisable within 60 days	Exercise price CA\$	Percent of class
Suresh Venkatesan	28,750	5.00	1%
Kevin Barnes	5,000	5.00	0%
Peter Charbonneau	25,000	5.00	1%
Mohandas Warrior	17,500	5.00	1%
Jean-Louis Malinge	17,500	5.00	1%
Chris Tsiofas	25,000	5.00	1%
Thomas Mika	7,500	5.00	0%
	<u>126,250</u>		<u>4%</u>

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

Holdings by Major Shareholders

Please refer to ITEM 6.E. “Share Ownership” for details regarding securities held by Directors, Officers and Major Shareholders. The Company’s major shareholders do not have any different or special voting rights.

U.S. Share Ownership

As of April 14, 2022, there were a total of 445 holders of record of our common shares with addresses in the U.S. We believe that the number of U.S. beneficial owners is substantially greater than the number of U.S. record holders, because a large portion of our common shares are held in broker “street names.” As of April 14, 2022, U.S. holders of record held approximately 0.65% of our outstanding common shares.

Control of Company

The Company is a publicly owned Ontario corporation, the shares of which are owned by Canadian residents, U.S. residents and other foreign residents. The Company is not controlled by any foreign government or other person(s) except as described in ITEM 4.A. “History and Progress of the Company” and ITEM 6.E. “Share Ownership.”

Change of Control of Company Arrangements

None

B. Major Shareholders and Related Party Transactions

No shareholder beneficially owns 5% or more of the Company’s common shares.

Compensation to key management personnel (CEO, CFO, President, GM POET Technologies Pte Ltd, VP Finance and Treasurer) was as follows:

	<u>2021</u>	<u>2020</u>	<u>2019</u>
Salaries	\$ 1,782,297	\$ 1,501,058	\$ 1,251,277
Share-based payments (1)	2,077,333	2,144,930	2,135,579
Total	\$ 3,859,630	\$ 3,645,988	\$ 3,386,856

(1) Share-based payments are the fair value of options granted to key management personnel and expensed during the various years as calculated using the Black-Scholes model.

C. Interests of Experts and Counsel

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements and Other Financial Information

The Company’s financial statements are stated in U.S. dollars and are prepared in accordance with IFRS as issued by the IASB.

The financial statements as required under “ITEM 17. Financial Statements” are attached hereto and found immediately following the text of this Annual Report. The audit report of Marcum LLP, independent registered public accounting firm, is included herein immediately preceding the consolidated financial statements.

Legal Proceedings

The directors and the senior management of the Company do not know of any material, either active or pending, legal proceedings against them, nor is the Company involved as a plaintiff in any material proceeding or pending litigation.

The directors and the senior management of the Company know of no active or pending proceedings against anyone that might materially adversely affect an interest in the Company.

Dividend Policy

The Company has not paid, and has no current plans to pay, dividends on its common shares. We currently intend to retain future earnings, if any, to finance the development of our business. Any future dividend policy will be determined by the Board, and will depend upon, among other factors, our earnings, if any, financial condition, capital requirements, any contractual restrictions with respect to the payment of dividends, the impact of the distribution of dividends on our financial condition, tax liabilities, and such economic and other conditions as the Board may deem relevant.

B. Significant Changes

On February 24, 2022, the Company filed Articles of Amendment to consolidate its common shares on a ten-for-one basis. For further clarity, for every ten (10) pre-consolidated common shares, shareholders received one (1) post-consolidated common share. On February 28, 2022 the Company’s common shares began trading on the TSX Venture Exchange on a post consolidation basis. The Company’s name and trading symbol remained unchanged. All references to share and per share amounts in these consolidated financial statements and accompanying notes to the consolidated financial statements have been retroactively restated to reflect the ten-for-one share consolidation.

On March 14, 2022 the Company’s common shares began trading on the NASDAQ under the trading symbol “POET”.

ITEM 9. THE OFFER AND LISTING

A. Offer and Listing Details

The Company’s common shares began trading on the TSXV in Toronto, Ontario, Canada, on June 25, 2007. The current Stock symbol is “PTK”. The CUSIP/ISN numbers are 73044W104 / 73044W1041. The Company received new CUSIP/ISN numbers on the consolidation of the common shares on February 24, 2022. The new CUSIP/ISN numbers are 73044W302/73044W3021.

The following table lists the high and low sales price on the TSXV for the Company’s common shares for: the last six months; the last ten fiscal quarters; and the last five fiscal years.

MONTHLY			
	31-Mar-22	13.65	8.60
	28-Feb-22	11.25	7.60
	31-Jan-22	9.30	7.30
	31-Dec-21	9.70	7.80
	30-Nov-21	11.00	7.70
	31-Oct-21	12.90	10.00
QUARTERLY			
	28-Feb-22	11.25	7.60
	30-Nov-21	12.90	7.70
	31-Aug-21	15.80	9.80
	31-May-21	13.90	8.40
	28-Feb-21	1.49	0.46
	30-Nov-20	0.64	0.46
	31-Aug-20	0.71	0.48
	31-May-20	0.62	0.22
	28-Feb-20	0.55	0.34
	30-Nov-19	0.43	0.3
YEARLY			
	31-Dec-21	15.80	7.10
	31-Dec-20	7.10	2.20
	31-Dec-19	4.60	2.70
	31-Dec-18	7.90	1.90
	31-Dec-17	5.10	1.70

B. Plan of Distribution

Not Required.

C. Markets

The Company's common shares trade on (i) the TSXV in Canada under the symbol "PTK" and (ii) the Nasdaq in the United States under the symbol "POET" (since March 14, 2022). Prior to March 14, 2022, the Company's common shares traded in the United States on the OTCQX International Market.

D. Selling Shareholders

Not Required.

E. Dilution

Not Required.

F. Expenses of the Issue

Not Required.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not Required.

B. Memorandum and articles of association

The Company was originally formed under the British Columbia Company Act on February 9, 1972 as Tandem Resources Ltd. ("Tandem"). The Company took its current form after Tandem amalgamated with Stanmar Resources Ltd. and Keezic Resources Ltd. pursuant to Articles of Amalgamation on November 14, 1985. Tandem moved to Ontario by Articles of Continuance on January 3, 1997. Tandem changed its name to OPEL International Inc. by Articles of Amendment on September 26, 2006. OPEL International Inc. was continued under the New Brunswick Business Corporations Act on January 30, 2007, then back to Ontario by Articles of Continuance on November 30, 2010, changing its name to OPEL Solar International Inc. By Articles of Amendment on August 25, 2011, OPEL Solar International Inc. changed its name to OPEL Technologies, Inc. By Articles of Amendment on July 23, 2013, OPEL Technologies Inc. changed its name to POET Technologies Inc. Today, the Company is an Ontario corporation governed by the OBCA. The following are summaries of material provisions of our Articles of Continuance, as amended from time to time (the "Articles"), in effect as of the date of this Annual Report insofar as they relate to the material terms of our ordinary shares.

Register, Entry Number and Purposes

Our Articles of Continuance became effective on November 30, 2010. Our corporation number in Ontario is 641402. The Articles of Continuance do not contain a statement of the Company's objects and purposes. However, the Articles of Continuance provide that there are no restrictions on business that the Company may carry on or the powers the Company may exercise as permitted under the OBCA.

Board of Directors

Pursuant to our By-laws and the OBCA, a director or officer who is a party to, or who is a director or officer of, or has a material interest in, any person who is a party to, a material contract or proposed material contract with the Company, shall disclose the nature and extent of his interest at the time and in the manner provided by the OBCA. Any such contract or proposed contract shall be referred to the Board or shareholders for approval even if such contract is one that in the ordinary course of the Company's business would not require approval by the Board or shareholders, and a director interested in a contract so referred to the Board shall not vote on any resolution to approve the same unless the contract or transaction: (i) relates primarily to his or her remuneration as a director of the Company or an affiliate; (ii) is for indemnity or insurance of or for the director or officer as permitted by the OBCA; or (iii) is with an affiliate.

Directors shall be paid such remuneration for their services as the Board may determine by resolution from time to time, and will be entitled to reimbursement for traveling and other expenses properly incurred by them in attending meetings of the Board or any committee thereof. Neither the Company's Articles nor By-laws require an independent quorum for voting on director compensation. Directors are not precluded from serving the Company in any other capacity and receiving remuneration therefor. A director is not required to hold shares of the Company. There is no age limit requirement respecting the retirement or non-retirement of directors.

The directors may sign the name and on behalf of the Company, or appoint any officer or officers or any other person or persons on behalf of the Corporation either to sign on behalf of the Company, all instruments in writing and any instruments in writing so signed shall be binding upon the Company without further authorization or formality. The term "instruments in writing" includes contracts, documents, powers of attorney, deeds, mortgages, hypothecs, charges, conveyances, transfers and assignments of property (real or personal, immovable or movable), agreements, tenders, releases, receipts and discharges for the payment of money or other obligations, conveyances, transfers and assignments of shares, stocks, bonds, debentures or other securities, instruments of proxy and all paper writing.

Nothing in the Company's By-laws limits or restricts the borrowing of money by the Company on bills of exchange or promissory notes made, drawn, accepted or endorsed by or on behalf of the Company.

Rights, Preferences and Restrictions Attaching to Common Shares

The holders of common shares are entitled to vote at all meetings of the shareholders, except meetings at which only holders of a specified class of shares are entitled to vote. Each common share carries with it the right to one vote. Subject to the rights, privileges, restrictions and conditions attaching to any other class or series of shares of the Company, the holders of the common shares are entitled to receive any dividends declared and payable by the Company on the common shares. Dividends may be paid in money or property or by issuing fully paid shares of the Company. Subject to the rights, privileges, restrictions and conditions attaching to any other class or series of shares of the Company, the holders of the common shares are entitled to receive the remaining property of the Company upon dissolution.

No shares have been issued subject to call or assessment. There are no pre-emptive or conversion rights and no provisions for redemption or purchase for cancellation, surrender, or sinking or purchase funds. The common shares must be issued as fully-paid and non-assessable, and are not subject to further capital calls by the Company. The common shares are without par value. All of the common shares rank equally as to voting rights, participation in a distribution of the assets of the Company on a liquidation, dissolution or winding-up of the Company and the entitlement to dividends.

The Company does not currently have any preferred shares outstanding.

Ordinary and Special Shareholders' Meetings

The OBCA provides that the directors of a corporation shall call an annual meeting of shareholders not later than 15 months after holding the last preceding annual meeting. The OBCA also provides that, in the case of an offering corporation, the directors shall place before each annual meeting of shareholders, the financial statements required to be filed under the Ontario Securities Act and the regulation thereunder relating to the period that began immediately after the end of the last completed financial year and ended not more than six months before the annual meeting and the immediately preceding financial year, if any.

The Board has the power to call a special meeting of shareholders at any time.

Notice of the date, time and location of each meeting of shareholders must be given not less than 21 days or more than 50 days before the date of each meeting to each director, to the auditor of the Company and to each shareholder who at the close of business on the record date for notice is entered in the securities register as the holder of one or more shares carrying the right to vote at the meeting.

Notice of a meeting of shareholders called for any other purpose other than consideration of the minutes of an earlier meeting, financial statements, reports of the directors or auditor, setting or changing the number of directors, the election of directors and reappointment of the incumbent auditor, must state the general nature of the special business in sufficient detail to permit the shareholder to form a reasoned judgment on such business, must state the text of any special resolution to be submitted to the meeting, and must, if the special business includes considering, approving, ratifying, adopting or authorizing any document or the signing of or giving of effect to any document, have attached to it, a copy of the document or state that a copy of the document will be available for inspection by shareholders at the Company's records office or another accessible location.

The only persons entitled to be present at a meeting of shareholders are those entitled to vote, the directors of the Company and the auditor of the Company. Any other person may be admitted only on the invitation of the chairman of the meeting or with the consent of the meeting. In circumstances where a court orders a meeting of shareholders, the court may direct how the meeting may be held, including who may attend the meeting.

Limitations on Rights to Own Securities

No share may be issued until it is fully paid.

Neither Canadian law nor our Articles or By-laws limit the right of a non-resident to hold or vote common shares of the Company, other than as provided in the Investment Canada Act (the "Investment Act"), as amended by the World Trade Organization Agreement Implementation Act (the "WTOA Act"). The Investment Act generally prohibits implementation of a direct reviewable investment by an individual, government or agency thereof, corporation, partnership, trust or joint venture that is not a "Canadian," as defined in the Investment Act (a "non-Canadian"), unless, after review, the minister responsible for the Investment Act is satisfied that the investment is likely to be of net benefit to Canada. An investment in the common shares of the Company by a non-Canadian (other than a "WTO Investor," as defined below) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company, and the value of the assets of the Company were CA\$5.0 million or more (provided that immediately prior to the implementation of the investment the Company was not controlled by WTO Investors). An investment in common shares of the Company by a WTO Investor (or by a non-Canadian other than a WTO Investor if, immediately prior to the implementation of the investment the Company was controlled by WTO Investors) would be reviewable under the Investment Act if it were an investment to acquire direct control of the Company and the value of the assets of the Company equaled or exceeded certain threshold amounts determined on an annual basis.

The threshold for a pre-closing net benefit review depends on whether the purchaser is: (a) controlled by a person or entity from a member of the WTO; (b) a state-owned enterprise (SOE); or (c) from a country considered a “Trade Agreement Investor” under the Investment Act. A different threshold also applies if the Canadian business carries on a cultural business. The 2022 threshold for WTO investors that are SOEs will be \$454 million based on the book value of the Canadian business’ assets, up from \$416 million in 2021. The 2022 thresholds for review for direct acquisitions of control of Canadian businesses by private sector investor WTO investors (\$1 billion) and private sector trade-agreement investors (\$1.5 billion) remain the same and are both based on the “enterprise value” of the Canadian business being acquired.

A non-Canadian, whether a WTO Investor or otherwise, would be deemed to acquire control of the Company for purposes of the Investment Act if he or she acquired a majority of the common shares of the Company. The acquisition of less than a majority, but at least one-third of the shares, would be presumed to be an acquisition of control of the Company, unless it could be established that the Company is not controlled in fact by the acquirer through the ownership of the shares. In general, an individual is a WTO Investor if he or she is a “national” of a country (other than Canada) that is a member of the WTO (“WTO Member”) or has a right of permanent residence in a WTO Member. A corporation or other entity will be a “WTO Investor” if it is a “WTO Investor-controlled entity,” pursuant to detailed rules set out in the Investment Act. The U.S. is a WTO Member. Certain transactions involving our common shares would be exempt from the Investment Act, including:

- an acquisition of the shares if the acquisition were made in the ordinary course of that person’s business as a trader or dealer in securities;
- an acquisition of control of the Company in connection with the realization of a security interest granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Act; and
- an acquisition of control of the Company by reason of an amalgamation, merger, consolidation or corporate reorganization, following which the ultimate direct or indirect control in fact of the Company, through the ownership of voting interests, remains unchanged.

Procedures to Change the Rights of Shareholders

In order to change the rights of our shareholders with respect to certain fundamental changes as described in Section 168 of the OBCA, the Company would need to amend our Articles to effect the change. Such an amendment would require the approval of holders of two-thirds of the votes of the Company’s common shares, and any other shares carrying the right to vote at any general meeting of the shareholders of the Company, cast at a duly called special meeting. The OBCA also provides that a sale, lease or exchange of all or substantially all of the property of a corporation other than in the ordinary course of business of the corporation likewise requires the approval of the shareholders at a duly called special meeting. For such fundamental changes and sale, lease and exchange, a shareholder is entitled under the OBCA to dissent in respect of such a resolution amending the Articles and, if the resolution is adopted and the Company implements such changes, demand payment of the fair value of the shareholder’s common shares.

Impediments to Change of Control

In 2016, the Canadian Securities Administrators (the “CSA”) enacted amendments (the “Bid Amendments”) to the Take-Over Bid Regime. The Bid Amendments, which are very significant, are contained in National Instrument (NI) 62-104.

The Bid Amendments were intended to enhance the quality and integrity of the take-over bid regime and rebalance the current dynamics among offerors, offeree issuer boards of directors (“Offeree Boards”), and offeree issuer security holders by (i) facilitating the ability of offeree issuer security holders to make voluntary, informed and coordinated tender decisions, and (ii) providing the Offeree Board with additional time and discretion when responding to a take-over bid.

Specifically, the Bid Amendments require that all non-exempt take-over bids

- (1) receive tenders of more than 50% of the outstanding securities of the class that are subject to the bid, excluding securities beneficially owned, or over which control or direction is exercised, by the offeror or by any person acting jointly or in concert with the offeror (the Minimum Tender Requirement);
- (2) be extended by the offeror for an additional 10 days after the Minimum Tender Requirement has been achieved and all other terms and conditions of the bid have been complied with or waived (the 10 Day Extension Requirement); and
- (3) remain open for a minimum deposit period of 105 days (the Minimum 105 Day Bid Period) unless
 - (a) the offeree board states in a news release a shorter deposit period for the bid of not less than 35 days, in which case all contemporaneous take-over bids must remain open for at least the stated shorter deposit period, or
 - (b) the issuer issues a news release that it intends to effect, pursuant to an agreement or otherwise, a specified alternative transaction, in which case all contemporaneous take-over bids must remain open for a deposit period of at least 35 days.

The Bid Amendments involved fundamental changes to the bid regime to establish a majority acceptance standard for all non-exempt take-over bids, a mandatory extension period to alleviate offeree security holder coercion concerns, and a 105 day minimum deposit period to address concerns that offeree boards did not have enough time to respond to an unsolicited take-over bid. The CSA determined not to amend National Policy 62-202 Defensive Tactics (NP 62-202) in connection with these amendments. They reminded participants in the capital markets of the continued applicability of NP 62-202, which means that securities regulators will be prepared to examine the actions of offeree boards in specific cases, and in light of the amended bid regime, to determine whether they are abusive of security holder rights.

After canvassing several commentaries concerning the new regime, we have concluded that:

- It will be much more difficult for hostile bidders as a result of target issuers having a much longer period of time to respond, concurrent with the added risk and cost to such bidders.
- There is good reason to expect that, except in unusual circumstances, regulators will not permit SRPs to remain in effect after a 105 day bidding period.
- A significant number of reporting issuers have not sought re-approval of their SRPs since the amendments were introduced and those that have sought to renew their SRPs have been required to amend the plans to comply with the new rules.
- A large part of the traditional rationale for adopting SRPs has now been eliminated.

We believe that the amended take-over bid rules provide adequate protection against hostile bids. Having said that, it has been suggested that the new rules do not protect against creeping take-over bids for control which are exempt from the rules (such as the accumulation of 20% or more of the issuer's shares through market transactions or the acquisition of a control block through private agreements with a few large shareholders). These activities would however be identifiable through the early warning filing requirements. If, prior to making a determination that the Company ought to adopt a "strategic" SRP at an annual or special meeting of shareholders, the Company were faced with a hostile bid that we believed was not in the best interests of the Company and its shareholders, the directors could adopt a "tactical" plan which we could take to the shareholders for approval. Nevertheless, at this point in time, we are of the opinion that such action is not necessary and the shareholders should be the best arbiters of when "the pill must go".

Stockholder Ownership Disclosure Threshold in Bylaws

Neither our Articles nor By-laws contain a provision governing the ownership threshold above which shareholder ownership must be disclosed. Pursuant to securities legislation, an Early Warning Report and an Insider Report must be filed if a shareholder obtains ownership on a partially diluted basis of 10% or greater of the Company.

Special Conditions for Changes in Capital

The conditions imposed by the Company's Articles are not more stringent than required under the OBCA.

C. Material Contracts

In addition to any contracts described in "ITEM 7.B. Related Party Transactions" or "ITEM 4. Business Overview", below is a summary of material contracts, other than those entered into by the Company in the ordinary course of business, to which we are or have been a party during the two years immediately preceding the date of this document. Other than contracts entered into in the ordinary course of business, we have not been a party to any other material contract within such two-year period.

1. On April 18, 2019, the Company signed loan and security agreements for a senior secured credit facility (the "Bridge Loan") to be provided by Espresso Capital Ltd which grants the Company access to a maximum US\$5,000,000. On April 23, 2019 the Company received the initial advance against the credit facility in the amount of US\$2,000,000. In partial consideration of the US\$5,000,000 gross credit facility available to the Company, and in connection with the initial advance, the Company issued to Espresso Capital warrants for the purchase of 3,289,500 common shares at a price of C\$0.35 per share. The Warrants expire on April 18, 2020.
2. On August 20, 2019, the Company signed a definitive agreement with respect to the sale of DenseLight for \$26,000,000. The Share Sale Agreement was signed on November 8, 2019 when the sale was consummated.
3. On June 30, 2020, the Company announced that it signed a Letter of Intent to establish a joint venture with Xiamen Sanan Integrated Circuit Co. Ltd. ("Sanan IC") to manufacture cost-effective, high-performance optical engines based on POET's proprietary CMOS compatible Optical Interposer platform technology. The definitive joint venture agreement was signed on October 21, 2020.

D. Exchange Controls

Canada has no system of exchange controls. There are no Canadian restrictions on the repatriation of capital or earnings of a Canadian public company to non-resident investors. There are no laws in Canada or exchange restrictions affecting the remittance of dividends, profits, interest, royalties and other payments to non-resident holders of the Company's securities, except as discussed in "ITEM 10.E. Taxation" below.

E. Taxation

The following summary discusses certain material U.S. and Canadian tax considerations related to the holding and disposition of common stock as of the hereof. Prospective purchasers of our common stock are advised to consult their own tax advisers concerning the consequences under the tax laws of the country of which they are resident or in which they are otherwise subject to tax of making an investment in our common stock.

Canadian Federal Income Tax Considerations

The Company believes the following is a brief summary of the material principal Canadian federal income tax consequences to a U.S. Holder (as defined below) of common shares of the Company who deals at arm's length with the Company, holds the shares as capital property and who, for the purposes of the Income Tax Act (Canada) (the "Tax Act") and the Canada — U.S. Income Tax Convention (1980) (the "Treaty"), is at all relevant times resident in the U.S., is not and is not deemed to be resident in Canada and does not use or hold and is not deemed to use or hold the shares in carrying on a business in Canada. Special rules, which are not discussed below, may apply to a U.S. Holder that is an insurer that carries on business in Canada and elsewhere. U.S. Holders are urged to consult their own tax advisers with respect to their particular circumstances.

This summary is based upon the current provisions of the Tax Act, the regulations thereunder in force at the date hereof, all specific proposals to amend such regulations and the Tax Act publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof and the current provisions of the Convention and the current administrative practices of the Canada Revenue Agency published in writing prior to the date hereof. This summary does not otherwise take into account or anticipate any changes in law or administrative practices whether by legislative, governmental or judicial decision or action, nor does it take into account tax laws of any province or territory of Canada or of the U.S. or of any other jurisdiction outside Canada.

For the purposes of the Tax Act, all amounts relating to the acquisition, holding or disposition of the common shares must be converted into Canadian dollars based on the relevant exchange rate applicable thereto.

This summary does not address all aspects of Canadian federal income taxation that may be relevant to any particular U.S. Holder in light of such holder's individual circumstances. Accordingly, U.S. Holders should consult with their own tax advisors for advice with respect to their own particular circumstances.

Under the Tax Act and the Treaty, a U.S. Holder of common shares will generally be subject to a 15% withholding tax on dividends paid or credited or deemed by the Tax Act to have been paid or credited on such shares. The withholding tax rate is 5% where the U.S. Holder is a corporation that beneficially owns at least 10% of the voting shares of the Company and the dividends may be exempt from such withholding in the case of some U.S. Holders such as qualifying pension funds and charities.

A U.S. Holder will generally not be subject to tax under the Tax Act on any capital gain realized on a disposition of common shares, provided that the shares do not constitute "taxable Canadian property" to the U.S. Holder at the time of disposition. Generally, common shares will not constitute taxable Canadian property to a U.S. Holder provided that such shares are listed on a designated stock exchange (which currently includes the TSXV) at the time of the disposition and, during the 60- month period immediately preceding the disposition, the U.S. Holder, persons with whom the U.S. Holder does not deal at arm's length, or the U.S. Holder together with all such persons has not owned 25% or more of the issued shares of any series or class of the Company's capital stock. If the common shares constitute taxable Canadian property to a particular U.S. Holder, any capital gain arising on their disposition may be exempt from Canadian tax under the Convention if at the time of disposition the common shares do not derive their value principally from real property situated in Canada.

U.S. Federal Income Tax Considerations

Subject to the limitations described herein, the following discussion summarizes certain U.S. federal income tax consequences to a U.S. Holder of our common shares. A "U.S. Holder" means a holder of our common shares who is:

- an individual who is a citizen or resident of the U.S. for U.S. federal income tax purposes;

- a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized in the U.S. or under the laws of the U.S. or any political subdivision thereof, or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust (i) if, in general, a court within the U.S. is able to exercise primary supervision over its administration and one or more U.S. persons have the authority to control all of its substantial decisions, or (ii) that has in effect a valid election under applicable U.S. Treasury Regulations to be treated as a U.S. person.

Unless otherwise specifically indicated, this discussion does not consider the U.S. tax consequences to a person that is not a U.S. Holder (a “Non-U.S. Holder”). This discussion considers only U.S. Holders that will own our common shares as capital assets (generally, for investment) and does not purport to be a comprehensive description of all of the tax considerations that may be relevant to each U.S. Holder’s decision to purchase our common shares.

This discussion is based on current provisions of the Internal Revenue Code of 1986, as amended (the “Code”), current and proposed Treasury Regulations promulgated thereunder, and administrative and judicial decisions as of the date hereof, all of which are subject to change, possibly on a retroactive basis. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to any particular U.S. Holder in light of such holder’s individual circumstances. In particular, this discussion does not address the potential application of the alternative minimum tax or the U.S. federal income tax consequences to U.S. Holders that are subject to special treatment, including U.S. Holders that:

- are broker-dealers or insurance companies;
- have elected market-to-market accounting;
- are tax-exempt organizations or retirement plans;
- are financial institutions or “financial services entities”;
- hold our common shares as part of a straddle, “hedge” or “conversion transaction” with other investments;
- acquired our common shares upon the exercise of employee stock options or otherwise as compensation;
- own directly, indirectly or by attribution at least 10% of our voting power;
- have a functional currency that is not the U.S. Dollar;
- are grantor trusts;
- are certain former citizens or long-term residents of the U.S.; or
- are real estate trusts or regulated investment companies.

If a partnership (or any other entity treated as a partnership for U.S. federal income tax purposes) holds our common shares, the tax treatment of the partnership and a partner in such partnership will generally depend on the status of the partner and the activities of the partnership. Such a partner or partnership should consult its own tax advisor as to its tax consequences.

In addition, this discussion does not address any aspect of state, local or non-U.S. laws or the possible application of U.S. federal gift or estate taxes.

Each potential U.S Holder of our common shares is advised to consult its own tax advisor with respect to the specific tax consequences to it of purchasing, holding or disposing of our common shares, including the applicability and effect of federal, state, local and foreign income tax and other laws to its particular circumstances.

Distributions

Subject to the discussion below under “Passive Foreign Investment Company Status,” a U.S. Holder will be required to include in gross income as ordinary dividend income the amount of any distribution paid on our common shares, including any non-U.S. taxes withheld from the amount paid, to the extent the distribution is paid out of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. Distributions in excess of such earnings and profits will be applied against and will reduce the U.S. Holder’s basis in our common shares and, to the extent in excess of such basis, will be treated as gain from the sale or exchange of our common shares. The dividend portion of such distributions generally will not qualify for the dividends received deduction available to corporations.

Subject to the discussion below under “Passive Foreign Investment Company Status,” dividends that are received by U.S. Holders that are individuals, estates or trusts may qualify for taxation at the rate applicable to long-term capital gains (a maximum marginal federal income tax rate of 20%), provided that such U.S. Holders satisfy certain holding period requirements and such dividends meet the requirements of “qualified dividend income.” For this purpose, dividends paid by a non-U.S. corporation may qualify if the non-U.S. corporation is eligible for benefits of a comprehensive income tax treaty with the U.S., which benefits include an information exchange program and is determined to be satisfactory by the U.S. Secretary of the Treasury. The IRS has determined that the U.S.- Canada Tax Treaty is satisfactory for this purpose. Dividends that fail to meet such requirements, and dividends received by corporate U.S. Holders, are taxed at ordinary income rates.

Distributions of current or accumulated earnings and profits paid in foreign currency to a U.S. Holder (including any non-U.S. taxes withheld therefrom) will be includible in the income of a U.S. Holder in a U.S. Dollar amount calculated by reference to the exchange rate on the day the distribution is received. A U.S. Holder that receives a foreign currency distribution and converts the foreign currency into U.S. dollars subsequent to receipt may have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. dollar, which will generally be U.S. source ordinary income or loss. A loss might not be deductible due to certain limitation.

U.S. Holders will have the option of claiming the amount of any non-U.S. income taxes withheld at source either as a deduction from gross income or as a dollar-for-dollar credit against their U.S. federal income tax liability. Individuals who do not claim itemized deductions, but instead utilize the standard deduction, may not claim a deduction for the amount of the non-U.S. income taxes withheld, but such amount may be claimed as a credit against the individual’s U.S. federal income tax liability. The amount of non-U.S. income taxes which may be claimed as a credit in any taxable year is subject to complex limitations and restrictions, which must be determined on an individual basis by each shareholder. These limitations include, among others, rules that limit foreign tax credits allowable with respect to specific classes of income to the U.S. federal income taxes otherwise payable with respect to each such class of income. A U.S. Holder will be denied a foreign tax credit with respect to non-U.S. income tax withheld from a dividend received on the common shares if such U.S. Holder does not satisfy certain holding period requirements.

Distributions of current or accumulated earnings and profits generally will be foreign source income for U.S. foreign tax credit purposes.

Disposition of Common Shares

Subject to the discussion below under “Passive Foreign Investment Company Status,” upon the sale, exchange or other taxable disposition of our common shares, a U.S. Holder will recognize capital gain or loss in an amount equal to the difference between such U.S. Holder’s basis in such common shares, which is usually the cost of such shares, and the amount realized on the disposition. Capital gain from the sale, exchange or other disposition of common shares held more than one year is long-term capital gain, and is eligible for a reduced rate of taxation for individuals (currently a maximum marginal federal income tax rate of 20%). Gains recognized by a U.S. Holder on a sale, exchange or other disposition of common shares generally will be treated as U.S. source income for U.S. foreign tax credit purposes. A loss recognized by a U.S. Holder on the sale, exchange or other taxable disposition of common shares generally is allocated to U.S. source income. The deductibility of capital losses recognized on the sale, exchange or other taxable disposition of common shares is subject to limitations. A U.S. Holder that receives foreign currency upon disposition of common shares and converts the foreign currency into U.S. dollars subsequent to the settlement date or trade date (whichever date the taxpayer was required to use to calculate the value of the proceeds of sale) may have foreign exchange gain or loss based on any appreciation or depreciation in the value of the foreign currency against the U.S. Dollar, which will generally be U.S. source ordinary income or loss. Such loss may not be deductible due to certain limitations.

Passive Foreign Investment Company Status

We would be a passive foreign investment company (a "PFIC") if (taking into account certain "look-through" rules with respect to the income and assets of our corporate subsidiaries in which we own 25 percent (by value) of the stock) either (i) 75 percent or more of our gross income for the taxable year was passive income or (ii) the average percentage (by value) of our total assets that are passive assets during the taxable year was at least 50 percent.

If we were a PFIC, each U.S. Holder would (unless it made one of the elections discussed below on a timely basis) be taxable on gain recognized from the disposition of our common shares (including gain deemed recognized if the common shares are used as security for a loan) and upon receipt of certain "excess distributions" (generally, distributions that exceed 125% of the average amount of distributions in respect to such common shares received during the preceding three taxable years or, if shorter, during the U.S. Holder's holding period prior to the distribution year) with respect to our common shares as if such income had been recognized ratably over the U.S. Holder's holding period for the common shares. The U.S. Holder's income for the current taxable year would include (as ordinary income) amounts allocated to the current taxable year and to any taxable year period prior to the first day of the first taxable year for which we were a PFIC. Tax would also be computed at the highest ordinary income tax rate in effect for each other taxable year period to which income is allocated, and an interest charge on the tax as so computed would also apply. Additionally, if we were a PFIC, U.S. Holders who acquire our common shares from decedents (other than non resident aliens) would be denied the normally available step-up in basis for such shares to fair market value at the date of death and, instead, would have a tax basis in such shares equal to the decedent's basis, if lower.

As an alternative to the tax treatment described above, a U.S. Holder could elect to treat us as a "qualified electing fund" (a "QEF"), in which case the U.S. Holder would be taxed currently, for each taxable year that we are a PFIC, on its pro rata share of our ordinary earnings and net capital gain (subject to a separate election to defer payment of taxes, which deferral is subject to an interest charge). Special rules apply if a U.S. Holder makes a QEF election after the first taxable year in its holding period in which we are a PFIC. In the event that we conclude that we will be classified as a PFIC, we will make a determination at such time as to whether we will be able to provide U.S. Holders with the information that is necessary to make a QEF election. Amounts includable in income as a result of a QEF election will be determined without regard to our prior year losses or the amount of cash distributions, if any, received from us. A U.S. Holder's basis in its common shares will increase by any amount included in income and decrease by any amounts not included in income when distributed because such amounts were previously taxed under the QEF rules. So long as a U.S. Holder's QEF election is in effect with respect to the entire holding period for its common shares, any gain or loss realized by such holder on the disposition of its common shares held as a capital asset ordinarily will be capital gain or loss.

As an alternative to making the QEF election, a U.S. Holder of PFIC stock which is regularly traded on a qualified exchange may avoid the negative effects of the PFIC rules by electing to mark the stock to market and recognizing as ordinary income or loss, each taxable year that we are a PFIC, an amount equal to the difference as of the close of the taxable year between the fair market value of the PFIC stock and the U.S. Holder's adjusted tax basis in the PFIC stock. Losses would be allowed only to the extent of net mark-to-market gain previously included by the U.S. Holder under the election for prior taxable years. This election is available for so long as the Company's common shares constitute "marketable stock," which includes stock of a PFIC that is "regularly traded" on a "qualified exchange or other market." Generally, a "qualified exchange or other market" includes a national market system established pursuant to Section 11A of the Exchange Act, or a foreign securities exchange that is regulated or supervised by a governmental authority of the country in which the market is located and that has certain characteristics. A class of stock that is traded on one or more qualified exchanges or other markets is "regularly traded" on an exchange or market for any calendar year during which that class of stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter, subject to special rules relating to an initial public offering. It is not entirely clear whether either the OTCBB or TSXV are qualified exchanges or other markets, or whether there will be sufficient trading volume with respect to the Company's common shares, and accordingly, whether the common shares will be "marketable stock" for these purposes. Furthermore, there can be no assurances that the Company's common shares will continue to trade on any of the exchanges listed above.

We believe we were not a PFIC for the year ending December 31, 2021 and do not expect to be classified as a PFIC for the year ending December 31, 2022. However, PFIC status is determined as of the end of each taxable year and is dependent on a number of factors, including the value of our passive assets, the amount and type of our gross income, and our market capitalization. Therefore, there can be no assurance that we will not be classified as a PFIC for the current taxable year or in a future taxable year. U.S. Holders which are individuals, estates and trusts and whose income exceeds certain thresholds will be required to pay a 38% surtax on “net investment income” including, among other things, dividends (if any) and net gain realized from our common shares. U.S. Holders should consult with their own tax advisors regarding the application of this tax. We will notify U.S. Holders in the event we conclude that we will be treated as a PFIC for any taxable year.

Information Reporting and Backup Withholding

U.S. Holders (other than exempt recipients, such as corporations) generally are subject to information reporting requirements with respect to dividends paid on, or proceeds from the disposition of, our common shares. U.S. Holders are also generally subject to backup withholding (currently at a rate of 28%) on dividends paid on, or proceeds from the disposition of, our common shares unless the U.S. Holder provides IRS Form W-9 or otherwise establishes an exemption.

The amount of any backup withholding will be allowed as a credit against a U.S. or Non-U.S. Holder’s U.S. federal income tax liability and may entitle such holder to a refund, provided that certain required information is furnished to the IRS.

F. Dividends and Paying Agents

Not Required.

G. Statements by Experts

The consolidated financial statements of POET Technologies Inc. as of December 31, 2021, 2020 and 2019 included herein, have been audited by Marcum LLP, our independent registered accounting firm for that period, 555 Long Wharf Drive, 8th Floor, New Haven, CT 06511, USA, as stated in their report appearing herein, and are included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

H. Documents on Display

The Company’s documents can be viewed at its Canadian office, located at: Suite 1107, 120 Eglinton Avenue East, Toronto, Ontario M4P 1E2, Canada. Further, we file reports under Canadian regulatory requirements on SEDAR; you may access our reports filed on SEDAR by accessing their website at www.sedar.com. The Company is subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the Exchange Act), and files reports, Annual Reports and other information with the SEC. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. The Company’s reports, Annual Reports and other information can be inspected on the SEC’s website.

As a foreign private issuer, we are exempt from the rules under the Exchange Act related to the furnishing and content of proxy statements, and our officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act. In addition, we are not required under the Exchange Act to file annual, and other reports and financial statements with the SEC as frequently or as promptly as United States domestic companies whose securities are registered under the Exchange Act.

We maintain a corporate website at www.poet-technologies.com. Information contained on, or that can be accessed through, our website does not constitute a part of this Annual Report on Form 20-F. We have included our website address in this Annual Report on Form 20-F solely as an inactive textual reference.

I. Subsidiary information

Not Required.

ITEM 11. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate Risk

Short-term investments bear interest at fixed rates, and as such, are subject to interest rate risk resulting from changes in fair value from market fluctuations in interest rates. The Company does not depend on interest from its investments to fund its operations.

Exchange Rate Risk

The functional currency of each of the entities included in the accompanying consolidated financial statements is the local currency where the entity is domiciled. Functional currencies include the Chinese Yuan, US, Singapore and Canadian dollar. Most transactions within the entities are conducted in functional currencies. As such, none of the entities included in the consolidated financial statements engage in hedging activities. The Company is exposed to a foreign currency risk when its subsidiaries hold current assets or current liabilities in currencies other than its functional currency. A 10% change in foreign currencies held would increase or decrease other comprehensive loss by \$1,000,422.

The following table shows exchange rates, from CAD to USD, for the past six months:

Period	High (1)	Low (1)	Average (2)
March 2022	0.8008	0.7758	0.7892
February 2022	0.7893	0.7814	0.7859
January 2022	0.7997	0.7831	0.7917
December 2021	0.7915	0.7727	0.7817
November 2021	0.8086	0.7825	0.7951
October 2021	0.8121	0.7906	0.8037
October 2021 — March 2022	0.8121	0.7727	0.7912

(1) Bank of Canada monthly average rates

(2) Bank of Canada daily closing average rates

The following table shows exchange rates, from SGD to USD, for the past six months:

Period	High (1)	Low (1)	Average (2)
March 2022	0.7384	0.7316	0.7355
February 2022	0.7452	0.7357	0.7420
January 2022	0.7437	0.7346	0.7401
December 2021	0.7410	0.7289	0.7333
November 2021	0.7419	0.7288	0.7364
October 2021	0.7443	0.7358	0.7399
October 2021 — March 2022	0.7455	0.7288	0.7388

(1) Bank of Singapore monthly average rates

(2) Bank of Singapore daily closing average rates

The following table shows exchange rates, from CNY to USD, for the past six months:

Period	High (1)	Low (1)	Average (2)
March 2022	0.1584	0.1569	0.1576
February 2022	0.1585	0.1571	0.1576
January 2022	0.1582	0.1566	0.1572
December 2021	0.1576	0.1568	0.1569
November 2021	0.1571	0.1561	0.1564
October 2021	0.1567	0.1550	0.1557
October 2021 — March 2022	0.1585	0.1545	0.1563

(1) Bank of China monthly average rates

(2) Bank of China daily closing average rates

Market Risk

Market risk arises from the possibility that changes in market prices will affect the value of the financial instruments of the Company. The Company is exposed to fair value fluctuations on its cash equivalents. The Company's other financial instruments (cash and accounts payable and accrued liabilities) are not subject to market risk, due to the short-term nature of these instruments. The Company manages market risk through its investment policy where surplus funds are only invested in a manner that will provide the optimal blend of investment returns and principal protection while meeting its daily cash flow and liquidity demands.

ITEM 12. Description of Securities Other than Equity Securities

A. Debt Securities

Not Required.

B. Warrants and Rights

Not Required.

C. Other Securities

Not Required.

D. American Depositary Shares

Not Required.

PART II

ITEM 13. Defaults, Dividend Arrearages and Delinquencies

Not Required.

ITEM 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

Not Required.

ITEM 15. Controls and Procedures

(a) Disclosure Controls and Procedures

Disclosure controls and procedures are defined by Rules 13a-15(e) and 15d-15(e) under the Exchange Act as controls and other procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosures.

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of December 31, 2021, our disclosure controls and procedures were not effective due to a material weakness in our internal control over financial reporting relating to user access controls over certain software we utilize for financial reporting. Specifically, it was found that adequate restrictions were not in place to ensure appropriate segregation of duties among our personnel, which could result in inappropriate access rights in certain instances (the "User Access Material Weakness"). A material weakness, as defined in the Sarbanes Oxley Act of 2002 ("SOX"), is a control deficiency, or combination of control deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of the annual consolidated financial statements will not be prevented or detected on a timely basis.

(b) Management’s Annual Report on Internal Control over Financial Reporting

Our management, under the oversight of our Board of Directors (in particular its audit committee), is responsible for establishing and maintaining adequate internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act and as set forth in Section 404 of SOX). The Company’s internal control system was designed to provide reasonable assurance to management and the Board of Directors regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements. Under the SOX framework, our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board. Our internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of our assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with IFRS, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our consolidated financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2021. In making this assessment, it used the criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that assessment and those criteria, management concluded that we did not maintain effective internal controls over financial reporting as of December 31, 2021 as a result of the User Access Material Weakness.

The User Access Material Weakness did not result in a material misstatement of our consolidated financial statements for the fiscal year ended December 31, 2021 or any prior annual or interim periods nor has it resulted in any failure to safeguard our assets, including our cash and fixed assets. However, if the User Access Material Weakness is not remediated, a material misstatement of account balances or disclosures may not be prevented, and may go undetected, which could result in a material misstatement of future annual or interim consolidated financial statements.

Following the identification of the User Access Material Weakness (which occurred subsequent to December 31, 2021), management has taken steps to remediate that material weakness. Specifically, management has:

- Removed administrative user access to financial reporting systems from members of the finance department.
- Removed user access provisioning from members of the finance department.
- Limited the user access rights of significant control owners to view only access rights over certain financial reporting data.
- Initiated quarterly user access review to certify that only approved users have access rights to financial reporting software.

Although management has taken immediate remedial steps, the User Access Material Weakness will not be considered remediated until the applicable remedial controls operate for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively. Further, our independent registered accounting firm has not performed a new audit of our internal control over financial reporting and we cannot give assurances that the measures we have thus far taken to remediate the aforementioned material weakness were sufficient or that they will prevent future material weaknesses. As management continues to evaluate and work to improve our internal control over financial reporting, we may determine it necessary to take additional measures or modify the remediation measures we have taken to date.

(c) Attestation Report of Registered Public Accounting Firm

Marcum LLP, an independent registered public accounting firm, has audited our internal control over financial reporting as of December 31, 2021, as stated in their report which appears herein.

(d) Changes in Internal Controls over Financial Reporting

Although we have undertaken the remediation efforts described above subsequent to December 31, 2021, there were no changes in our internal control over financial reporting during year ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. [RESERVED]

ITEM 16A. Audit Committee Financial Expert

Our Board of Directors has determined that Chris Tsiofas is an audit committee financial expert. The Board has determined that Mr. Tsiofas satisfies the criteria of “audit committee financial expert” set forth in Item 16A of Form 20-F and is independent in accordance with Rule 4200 of the Nasdaq Marketplace Rules.

ITEM 16B. Code of Ethics

As amended in March 2022, our Board of Directors adopted a Code of Business Conduct and Ethics (the “Code”) that applies to all our employees, including without limitation our chief executive officer, chief financial officer and principal accounting officer. Our Code may be viewed on our website at www.poe-technologies.com and is filed as an Exhibit to this Annual Report. A copy of our Code may be obtained, without charge, upon a written request addressed to our office at, 120 Eglinton Avenue East, Suite 1107, Toronto, Ontario M4P 1E2, Canada.

ITEM 16C. Principal Accountant Fees and Services Fees Paid to Independent Registered Public Accounting Firm

The following table sets forth, for each of the years indicated, the fees billed by our independent registered public accounting firm, Marcum LLP.

Services Rendered	Year Ended December 31,	
	2021	2020
Audit Fees (1)	\$ 265,000	\$ 170,500
All Other Fees (2)	17,200	17,200
Total	\$ 282,200	\$ 187,700

(1) Audit fees included fees for the audit of the Company's annual consolidated financial statements, SOX 404(b) audit and services rendered in connection with filing of registration statements.

(2) Tax fees relate to tax compliance services for our US-based entities.

Our Audit Committee, in accordance with its charter, reviews and pre-approves all audit services and permitted non-audit services (including the fees and other terms) to be provided by our independent auditors. All of the services provided by Marcum LLP over the past two years were pre-approved by the Audit Committee.

ITEM 16D. Exemptions from the Listing Standards for Audit Committees

Not Required.

ITEM 16E. Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Not Required.

ITEM 16F. Change in Registrant's Certifying Accountants

Not Required.

ITEM 16G. Corporate Governance

Not Required.

ITEM 16H. Mine Safety Disclosure

Not Required.

PART III

ITEM 17. Financial Statements

The Company's consolidated financial statements are stated in U.S. dollars and are prepared in accordance with IFRS as issued by the International Accounting Standards Board.

The consolidated financial statements required under ITEM 17 are attached hereto and found immediately following the text of this Annual Report and are incorporated by reference herein. The audit report of Marcum LLP, independent registered public accounting firm, is included herein immediately preceding the audited consolidated financial statements.

- a. Audited Financial Statements — for the years ended December 31, 2021, 2020 and 2019 and as of December 31, 2021, 2020 and 2019

ITEM 18. Financial Statements

The Company has elected to provide financial statements pursuant to ITEM 17.

ITEM 19. Exhibits

- 1.1 [Certificate and Articles of Continuance \(1\)](#)
- 1.2 [Amended and Restated Bylaws \(2\)](#)
- 1.3 [Articles of Amendment, dated February 24, 2022 \(8\)](#)
- 2.0 [Description of Securities \(6\)](#)
- 4.1 [License Agreement with the University of Connecticut, dated April 28, 2003, as amended April 15, 2014 \(1\)](#)
- 4.3 [Shareholder Rights Plan Agreement between the Company and TMX Equity Transfer Services, Inc.\(2\)](#)
- 4.4 [Employment Agreement with Suresh Venkatesan, dated June 10, 2015 \(3\)](#)
- 4.5 [Employment Agreement with Vivek Rajgarhia, dated November 4, 2019 \(6\)](#)
- 4.6 [Employment Agreement with Thomas Mika, dated November 2, 2016 \(4\)](#)
- 4.7 [Definitive agreement with San'an Integrated Circuit Co., Ltd dated October 21, 2020 \(7\)](#)
- 4.8 [Sale and Purchase Agreement for DenseLight Semiconductors PTE, LTD, dated April 27, 2016 \(4\)](#)
- 4.9 [Sale and Purchase Agreement for BB Photonics Inc. dated May 16, 2016 \(4\)](#)
- 4.10 [2021 Stock Option Plan \(8\)](#)
- 4.11 [Form of Option Agreement\(1\)](#)
- 4.12 [Form of Warrant for Purchase of Common Shares \(1\)](#)
- 4.13 [Stock Specimen Certificate \(1\)](#)
- 4.15 [Share Sale Agreement for DenseLight Semiconductors PTE, Ltd dated August 20, 2019 \(6\)](#)
- 4.16 [Employment agreement with Vivek Rajgarhia, dated November 4, 2019 \(6\)](#)
- 4.18 [Warrant Indenture with TSX Trust Company, dated April 3, 2019 \(6\)](#)
- 4.20 [Warrant Indenture with TSX Trust Company, dated May 3, 2019 \(6\)](#)
- 4.22 [Warrant Indenture with TSX Trust Company, dated June 3, 2019 \(6\)](#)
- 4.24 [Warrant Indenture with TSX Trust Company, dated August 2, 2019 \(6\)](#)
- 4.26 [Warrant Indenture with TSX Trust Company, dated September 19, 2019 \(6\)](#)
- 4.27 [Warrant indenture with TSX Trust Company, dated February 11, 2021 \(7\)](#)
- 4.28 [Engagement letter with Cormark Securities Inc, dated January 25, 2021 \(7\)](#)
- 4.29 [Upsize letter with Cormark Securities Inc, dated January 26, 2021 \(7\)](#)
- 4.30 [Form of Subscription for Units of Private Placement, February 11, 2021 \(7\)](#)
- 8.1 [List of Subsidiaries: See ITEM 4.C.](#)
- 11.1 [Code of Business Conduct and Ethics \(7\)](#)
- 12.1 [Certification of Principal Executive Officer pursuant to Rule 13a-14\(a\) or Rule 15d-14\(a\) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 \(8\)](#)
- 12.2 [Certification of Principal Financial Officer pursuant to Rule 13a-14\(a\) or Rule 15d-14\(a\) under the Securities Exchange Act of 1934, as amended, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 \(8\)](#)
- 13.1 [Certification of Principal Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(8\)](#)
- 13.2 [Certification of Principal Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 \(8\)](#)
- 23.1 [Consent of Marcum LLP, independent registered accounting firm \(8\)](#)
- 101.INS(*) [XBRL Instance Document \(8\)](#)
- 101.SCH(*) [XBRL Taxonomy Extension Schema Linkbase Document \(8\)](#)
- 101.AL(*) [XBRL Taxonomy Extension Calculation Linkbase Document \(8\)](#)
- 101.DEF(*) [XBRL Taxonomy Extension Definition Linkbase Document \(8\)](#)
- 101.LAB(*) [XBRL Taxonomy Extension Label Linkbase Document \(8\)](#)
- 101.PRE(*) [XBRL Taxonomy Extension Presentation Linkbase Document \(8\)](#)
- 104(*) [Cover Page Interactive Data File \(embedded within Inline XBRL document\) \(8\)](#)

(1) Filed as an exhibit to the Company's registration statement under the Securities and Exchange Act on Form 20-F on May 15, 2014 and incorporated herein by reference.

(2) Filed as an exhibit to the Company's annual Form 20-F on April 13, 2015 and incorporated herein by reference.

(3) Filed as an exhibit to the Company's annual Form 20-F on March 18, 2016 and incorporated herein by reference.

(4) Filed as an exhibit to the Company's annual Form 20-F on April 18, 2017 and incorporated herein by reference.

(5) Filed as an exhibit to the Company's annual Form 20-F on April 30, 2019 and incorporated herein by reference.

(6) Filed as an exhibit to the Company's annual Form 20-F on April 29, 2020 and incorporated herein by reference.

(7) Filed as an exhibit to the Company's annual Form 20-F on April 9, 2021 and incorporated herein by reference.

(8) Filed as an exhibit to this Form 20-F.

(*) In accordance with Rule 402 of Regulation S-T, the information in these exhibits shall not be deemed to be "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and shall not be incorporated by reference into any registration statement or other document filed under the Securities Act, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

We file reports and other information with the Securities and Exchange Commission; you may obtain copies of our filings with the SEC by accessing their website located at www.sec.gov. Further, we file reports under Canadian regulatory requirements on SEDAR; you may access our reports filed on SEDAR by accessing their website at www.sedar.com.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

The accompanying consolidated financial statements of the Company and other financial information contained in this Annual Report are the responsibility of management. The consolidated financial statements have been prepared in conformity with IFRS, using management's best estimates and judgments, where appropriate. In the opinion of management, these consolidated financial statements reflect fairly the financial position and the results of operations and cash flows of the Company within reasonable limits of materiality. The financial information contained elsewhere in this Annual Report has been reviewed to ensure consistency with that in the consolidated financial statements.

To assist management in discharging these responsibilities, the Company maintains a system of procedures and internal control which is designed to provide reasonable assurance that its assets are safeguarded against loss from unauthorized use or disposition, that transactions are executed in accordance with management's authorization and that the financial records form a reliable base for the preparation of accurate and reliable financial information.

The Board of Directors endeavors to ensure that management fulfills its responsibilities for the financial reporting and internal control. The Board of Directors exercises this responsibility through its independent Audit Committee comprising a majority of unrelated and outside directors. The Audit Committee meets periodically with management and annually with the external auditors to review audit recommendations and any matters that the auditors believe should be brought to the attention of the Board of Directors. The Audit Committee also reviews the consolidated financial statements and recommends to the Board of Directors that the statements be approved for issuance to the shareholders.

The consolidated financial statements for the years ended December 31, 2021, 2020 and 2019 have been audited by Marcum LLP, independent registered public accounting firm, which has full and unrestricted access to the Audit Committee. Marcum's report on the consolidated financial statements is presented herein.

SIGNATURES

The Registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this Annual Report on its behalf.

POET TECHNOLOGIES INC.

/s/ Suresh Venkatesan

Suresh Venkatesan

Chief Executive Officer

Date: April 26, 2022



**POET
TECHNOLOGIES INC.**

**Consolidated Financial Statements
For the Year Ended December 31, 2021, 2020 and 2019**



REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of
POET Technologies Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial position of POET Technologies Inc. (the "Company") as of December 31, 2021, 2020 and 2019, the related consolidated statements of operations and deficit, comprehensive loss, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, 2020 and 2019, and the results of its operations and its cash flows for each of the years in the period ended December 31, 2021, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2021, based on the criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2013 and our report dated April 26, 2022, expressed an adverse opinion on the effectiveness of the Company's internal control over financial reporting because of the existence of a material weakness.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provides a reasonable basis for our opinion.



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Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Description of the Matter

As described in Note 5 to the financial statements, in October 2020, the Company signed a Joint Venture Agreement (“JVA”), establishing a joint venture, Super Photonics Xiamen Co., Ltd (“SPX”). The Company contributed intellectual property (“IP Assets”) that were independently valued at \$22,500,000.

The Company recognized a gain on the contribution of its IP Assets to SPX in accordance with Internal Accounting Standards (IAS) 28, Investment in Associates and Joint Ventures. The Company only recognized a gain on the contribution of the IP Assets in equivalence to the other joint venture’s interest in SPX. The unrecognized gain on the Company’s investment will be periodically realized as the Company’s ownership in SPX is reduced.

SPX was determined to be a joint venture as both POET and the other joint venture exercise joint control over SPX. All relevant activity of SPX requires unanimous consent. The Company recognizes its share of SPX’s profits or losses using the equity method.

During the year ending December 31, 2021, the Company recognized a gain of \$2,587,500. As of December 31, 2021, the Company’s ownership interest in SPX was 88.5%.

Auditing the Company’s recording of the joint venture was complex and involved subjective auditor judgment because this area involved significant estimations by management as part of the valuation of the IP Assets. This transaction required a higher degree of auditor subjectivity in applying audit procedures to address the matter when evaluating the results of the valuation.

How We Addressed the Matter in Our Audit

We obtained and read the JVA, gained an understanding of the purpose and nature of the joint venture and the rights and control provided under the agreement. We further evaluated management’s approach and documentation surrounding the guidance they followed in the recording of this joint venture.

Further, we independently analyzed the appraised fair value of the IP Assets (\$22.5M) with the assistance of an internal Marcum specialist, further assessing the Company-engaged specialists’ appropriateness and reasonableness of methods and assumptions used.

We evaluated the Company’s application of relevant accounting guidance and the consistency of management’s methods and assumptions used in determining whether SPX is an equity method investment and whether the Company has joint control over the joint venture and the fair value determination for the equity method investment.

/s/ Marcum LLP

We have served as the Company’s auditor since 2009, such date takes into account the acquisition of a portion of UHY LLP by Marcum LLP in April 2010.

Hartford, CT
April 26, 2022
PCAOB ID 688



**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

To the Shareholders and Board of Directors of
POET Technologies Inc.

Adverse Opinion on Internal Control over Financial Reporting

We have audited POET Technologies Inc.' (the "Company") internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, because of the effect of the material weakness described in the following paragraph on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

A material weakness is a control deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the Company's annual or interim financial statements will not be prevented or detected on a timely basis. The following material weakness has been identified and included in "Management's Annual Report on Internal Control Over Financial Reporting": The Company did not design and maintain effective internal controls over the user access controls over certain software utilized for financial reporting. The Company did not adequately restrict user access to ensure appropriate segregation of duties among certain personnel who also had responsibility for controls that interacted with the software utilized for financial reporting, which was within the internal control over financing reporting environment. Specifically, the provisioning and user recertification controls over the respective software are not designed to ensure users maintain proper segregation of duties and therefore could have inappropriate access rights.

This material weakness was considered in determining the nature, timing and extent of audit tests applied in our audit of the fiscal December 31, 2021 consolidated financial statements, and this report does not affect our report dated April 26, 2022 on those financial statements.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated statements of financial position as of December 31, 2021, 2020 and 2019 and the related consolidated statements of operations and deficit, comprehensive loss, changes in shareholders' equity, and cash flows and the related notes for each of the three years in the period ended December 31, 2021 of the Company and our report dated April 26, 2022 expressed an unqualified opinion on those consolidated financial statements.



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Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management Annual Report on Internal Control Over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that degree of compliance with the policies or procedures may deteriorate.

/s/ Marcum LLP

Hartford, CT
April 26, 2022

POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
(Expressed in US Dollars)

December 31,	2021	2020	2019
Assets			
Current			
Cash and cash equivalents (Note 2)	\$ 14,941,775	\$ 6,872,894	\$ 1,428,129
Short-term investments (Note 2)	6,366,828	-	-
Receivable from the sale of discontinued operations (Notes 3 and 21)	-	-	18,000,000
Prepays and other current assets (Note 4)	480,523	618,717	831,265
	21,789,126	7,491,611	20,259,394
Investment in joint venture (Note 5)	1,445,251	-	-
Property and equipment (Note 6)	3,064,234	3,185,754	3,143,060
Patents and licenses (Note 7)	528,476	438,677	452,384
Right of use asset (Note 8)	326,890	520,686	222,517
	\$ 27,153,977	\$ 11,636,728	\$ 24,077,355
Liabilities			
Current			
Accounts payable and accrued liabilities (Note 9)	\$ 1,791,222	\$ 1,730,361	\$ 1,725,708
Covid-19 government support loans (Note 25)	31,660	147,841	-
Lease liability (Note 8)	101,074	172,949	90,504
Convertible debentures (Note 10)	-	3,341,246	3,089,033
	1,923,956	5,392,397	4,905,245
Non-current covid-19 government support (Note 25)	-	70,310	-
Non-current lease liability (Note 8)	258,274	359,048	133,254
	2,182,230	5,821,755	5,038,499
Shareholders' Equity			
Share capital (Note 11(b))	147,729,846	114,586,260	112,144,172
Equity component of convertible debentures (Note 10)	-	565,121	627,511
Warrants and compensation options (Note 12)	5,328,455	5,557,002	8,525,358
Contributed surplus (Note 13)	46,954,333	44,407,679	38,799,337
Accumulated other comprehensive loss	(2,053,917)	(1,983,212)	(1,908,715)
Deficit	(172,986,970)	(157,317,877)	(139,148,807)
	24,971,747	5,814,973	19,038,856
	\$ 27,153,977	\$ 11,636,728	\$ 24,077,355

Commitments and contingencies (Note 15)

On behalf of the Board of Directors



Director



Director

The accompanying notes are an integral part of these consolidated financial statements.

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POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF OPERATIONS AND DEFICIT
(Expressed in US Dollars)

For the Years Ended December 31,	2021	2020	2019
Revenue (Note 23)	\$ 209,100	\$ -	\$ -
Operating expenses			
Selling, marketing and administration (Note 20)	9,055,528	8,137,998	6,697,387
Research and development (Note 20)	8,165,128	6,634,317	2,083,815
Operating expenses	<u>17,220,656</u>	<u>14,772,315</u>	<u>8,781,202</u>
Operating loss before the following	(17,011,556)	(14,772,315)	(8,781,202)
Impairment of long lived assets (Note 22)	-	-	(1,764,459)
Interest expense (Notes 8 and 10)	(364,619)	(937,903)	(819,911)
Amortization of debt issuance costs (Note 10)	-	-	(372,340)
Other income, including interest	75,084	41,148	10,540
Forgiveness of Covid-19 government support loans (Note 25)	186,747	-	-
Gain on contribution of intellectual property to joint venture (Note 5)	2,587,500	-	-
Share of loss in joint venture (Note 5)	(1,142,249)	-	-
Credit loss on receivable from sale of discontinued operation (Note 3 and 21)	-	(2,500,000)	-
Net loss from continuing operations, before taxes	(15,669,093)	(18,169,070)	(11,727,372)
Income tax recovery (Note 24)	-	-	292,740
Net loss from continuing operations	(15,669,093)	(18,169,070)	(11,434,632)
Income (loss) from discontinued operations, net of taxes (Notes 21 and 24)	-	-	5,481,757
Net loss	<u>(15,669,093)</u>	<u>(18,169,070)</u>	<u>(5,952,875)</u>
Deficit, beginning of year	(157,317,877)	(139,148,807)	(133,195,932)
Net loss	(15,669,093)	(18,169,070)	(5,952,875)
Deficit, end of year	<u>\$ (172,986,970)</u>	<u>\$ (157,317,877)</u>	<u>\$ (139,148,807)</u>
)	
Basic and diluted loss per share, continuing operations (Note 14)	\$ (0.45)	\$ (0.62)	(0.40)
Basic and diluted income (loss) per share, discontinued operations (Note 14)	\$ -	\$ -	\$ 0.19
)	
Basic and diluted net loss per share (Note 14)	<u>\$ (0.45)</u>	<u>\$ (0.62)</u>	<u>(0.21)</u>

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Expressed in US Dollars)

For the Years Ended December 31,	2021	2020	2019
Net loss	\$ (15,669,093)	\$ (18,169,070)	\$ (5,952,875)
Other comprehensive (loss) income - net of income taxes			
Items that may in the future be reclassified to profit (loss):			
Exchange differences on translating foreign operations, continuing operations	(70,705)	(74,497)	3,109
Exchange differences on translating foreign operations, discontinued operations	-	-	171,690
Comprehensive loss	<u>\$ (15,739,798)</u>	<u>\$ (18,243,567)</u>	<u>\$ (5,778,076)</u>

The accompanying notes are an integral part of these consolidated financial statements.

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POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Expressed in US Dollars)

For the Years Ended December 31,	2021	2020	2019
Share Capital			
Beginning balance	\$ 114,586,260	\$ 112,144,172	\$ 112,028,194
Funds from the exercise of stock options	3,124,392	794,808	60,028
Fair value of stock options exercised	2,699,042	768,356	55,950
Funds from the exercise of warrants and compensation warrants	12,994,358	293,642	-
Fair value of warrants and compensation warrants exercised	5,351,586	127,964	-
Conversion of convertible debentures	3,571,342	369,545	-
Fair value of warrants issued on conversion of convertible debentures	(1,229,305)	(146,858)	-
Exercise of warrants issued in conjunction with debt financing	-	221,620	-
Common shares issued to settle accounts payable	13,814	13,011	-
Funds from common shares issued on private placement	11,815,595	-	-
Share issue costs	(1,143,034)	-	-
Fair value of warrants issued on private placement	(3,766,007)	-	-
Fair value of broker warrant issued as share issue costs	(288,197)	-	-
December 31,	<u>147,729,846</u>	<u>114,586,260</u>	<u>112,144,172</u>
Equity Component of convertible debentures			
Beginning balance	565,121	627,511	-
Fair value of equity component of convertible debentures	(565,121)	(62,390)	627,511
December 31,	<u>-</u>	<u>565,121</u>	<u>627,511</u>
Warrants and Compensation Options			
Beginning balance	5,557,002	8,525,358	8,303,738
Fair value of warrants issued in conjunction with of debt financing	-	(221,620)	221,620
Fair value of warrants and compensation warrants exercised	(5,351,586)	(127,964)	-
Fair value of expired warrants and compensation options	(160,470)	(2,765,630)	-
Fair value of warrants issued on the exercise of convertible debentures	1,229,305	146,858	-
Fair value of warrants issued on private placement	3,766,007	-	-
Fair value of broker warrants issued as share issue costs	288,197	-	-
December 31,	<u>5,328,455</u>	<u>5,557,002</u>	<u>8,525,358</u>
Contributed Surplus			
Beginning balance	44,407,679	38,799,337	36,042,754
Stock-based compensation	4,534,370	3,612,945	2,812,533
Fair value of stock options exercised	(2,699,042)	(768,356)	(55,950)
Fair value of expired warrants and compensation options	160,470	2,765,630	-
Fair value effect of conversion of convertible debentures	550,856	(1,877)	-
December 31,	<u>46,954,333</u>	<u>44,407,679</u>	<u>38,799,337</u>
Accumulated Other Comprehensive Loss			
Beginning balance	(1,983,212)	(1,908,715)	(2,083,514)
Other comprehensive income (loss) attributable to common shareholders - translation adjustment	(70,705)	(74,497)	174,799
December 31,	<u>(2,053,917)</u>	<u>(1,983,212)</u>	<u>(1,908,715)</u>
Deficit			
Beginning balance	(157,317,877)	(139,148,807)	(133,195,932)
Net loss	(15,669,093)	(18,169,070)	(5,952,875)
December 31,	<u>(172,986,970)</u>	<u>(157,317,877)</u>	<u>(139,148,807)</u>
Total Shareholders' Equity	<u>\$ 24,971,747</u>	<u>\$ 5,814,973</u>	<u>\$ 19,038,856</u>

The accompanying notes are an integral part of these consolidated financial statements.

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POET TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(Expressed in US Dollars)

For the Years Ended December 31,	2021	2020	2019
CASH AND CASH EQUIVALENTS (USED IN) PROVIDED BY:			
OPERATING ACTIVITIES			
Net loss	\$ (15,669,093)	\$ (18,169,070)	\$ (5,952,875)
Discontinued operations, net of tax	-	-	(5,481,757)
Net loss, continuing operations	(15,669,093)	(18,169,070)	(11,434,632)
Adjustments for:			
Depreciation of property and equipment (Note 6)	840,366	631,263	166,342
Amortization of patents and licenses (Note 7)	69,560	65,782	61,671
Amortization of right of use asset (Note 8)	190,596	116,057	15,683
Amortization of debt issuance cost (Note 10)	-	-	372,340
Impairment of long lived assets (Note 22)	-	-	1,764,459
Accretion of debt discount on convertible debentures and non-cash interest (Notes 8 and 10)	213,843	524,095	280,829
Stock-based compensation (Note 13)	4,534,370	3,612,945	2,888,141
Income tax recovery (Notes 24)	-	-	(292,740)
Non-cash settled operating costs (Notes 6 and 11)	13,814	910,738	-
Credit loss on receivable from the sale of discontinued operations (Note 3)	-	2,500,000	-
Gain on lease modification (Note 8)	-	(786)	-
Non-cash foreign exchange	-	161,000	-
Gain on contribution of intellectual property to joint venture (Note 5)	(2,587,500)	-	-
Share of loss in joint venture (Note 5)	1,142,249	-	-
Forgiveness of covid-19 government support loans (Note 25)	(186,747)	-	-
	(11,438,542)	(9,647,976)	(6,177,907)
Net change in non-cash working capital accounts:			
Prepaid and other current assets	134,926	232,522	(685,667)
Accounts payable and accrued liabilities	70,323	(22,510)	420,457
Cash flows from operating activities, continuing operations	(11,233,293)	(9,437,964)	(6,443,117)
Cash flows from operating activities, discontinued operations	-	-	(2,951,104)
	(11,233,293)	(9,437,964)	(9,394,221)
INVESTING ACTIVITIES			
Purchase of short-term investments (Note 2)	(6,366,828)	-	-
Proceeds from the sale of discontinued operations (Note 21)	-	15,500,000	-
Purchase of property and equipment (Note 6)	(771,523)	(1,521,788)	(445,678)
Purchase of patents and licenses (Note 7)	(159,359)	(52,075)	(77,037)
Cash flows from investing activities, continuing operations	(7,297,710)	13,926,137	(522,715)
Cash flow from investing activities, discontinued operations	-	-	5,908,623
	(7,297,710)	13,926,137	5,385,908
FINANCING ACTIVITIES			
Issue of common shares for cash, net of issue costs (Note 11)	26,791,311	1,088,450	60,028
Payment of lease liability (Note 8)	(237,634)	(144,142)	(19,162)
Proceeds from covid-19 government support loans (Note 25)	-	218,151	-
Proceeds from convertible debentures, net of issue costs paid in cash (Note 10)	-	-	3,352,849
Proceeds from loan payable and promissory note (Note 10)	-	-	4,000,000
Repayment of loan payable and promissory note (Note 10)	-	-	(4,000,000)
Cash flows from financing activities, continuing operations	26,553,677	1,162,459	3,393,715
Cash flow from financing activities, discontinued operations	-	-	(258,460)
	26,553,677	1,162,459	3,135,255
Effect of exchange rate on cash, continuing operations	46,207	(205,867)	(252,671)
Effect of exchange rate on cash, discontinued operations	-	-	(14,010)
Effect of exchange rate on cash	46,207	(205,867)	(266,681)
Net change in cash and cash equivalents, continuing operations	8,068,881	5,444,765	(3,824,788)
Net change in cash and cash equivalents, discontinued operations	-	-	2,685,049
Cash and cash equivalents, beginning of year	6,872,894	1,428,129	2,567,868
Cash and cash equivalents, end of year	\$ 14,941,775	\$ 6,872,894	\$ 1,428,129

The accompanying notes are an integral part of these consolidated financial statements.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

1. DESCRIPTION OF BUSINESS

POET Technologies Inc. is incorporated in the Province of Ontario. POET Technologies Inc. and its subsidiaries (the “Company”) design and develop the POET Optical Interposer and Photonic Integrated Circuits for the data center and tele-communications markets. The Company’s head office is located at 120 Eglinton Avenue East, Suite 1107, Toronto, Ontario, Canada M4P 1E2. These audited consolidated financial statements of the Company were approved by the Board of Directors of the Company on April 26, 2022.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

These consolidated financial statements of the Company and its subsidiaries were prepared in accordance with International Financial Reporting Standards (“IFRS”), as issued by the International Accounting Standards Board (“IASB”).

The preparation of financial statements in accordance with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise judgment in applying the Company’s accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed below:

Basis of presentation

These consolidated financial statements include the accounts of POET Technologies Inc. and its subsidiaries; ODIS Inc. (“ODIS”), Opel Solar Inc. (“OPEL”), BB Photonics Inc. (“BB Photonics”), POET Technologies Pte Ltd. (“PTS”) and POET Optoelectronics Shenzhen Co., Ltd (“POET Shenzhen”). They also include the accounts of DenseLight Semiconductor Pte Ltd. (“DenseLight”) up-to November 8, 2019. All intercompany balances and transactions have been eliminated on consolidation.

Business combinations

Acquisitions of businesses are accounted for using the acquisition method. The acquisition cost is measured at the acquisition date at the fair value of the consideration transferred, including all contingent consideration.

Subsequent changes in contingent consideration are accounted for through the consolidated statements of operations and deficit and consolidated statements of comprehensive loss in accordance with the applicable standards.

Goodwill arising on acquisition is initially measured at cost, being the difference between the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree and the net recognized amount (generally fair value) of the identifiable assets and liabilities assumed at the acquisition date. If the net of the amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer’s previously held interest in the acquiree (if any), the excess is recognized immediately in the consolidated statements of operations and deficit as a bargain purchase gain.

Acquisition-related costs, other than those that are associated with the issue of debt or equity securities that the Company incurs in connection with a business combination, are expensed as incurred.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Foreign currency translation

These consolidated financial statements are presented in U.S. dollars (“USD”), which is the Company’s presentation currency.

Items included in the financial statements of each of the Company’s subsidiaries are measured using the currency of the primary economic environment in which the entity operates (the “functional currency”). Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transaction. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities not denominated in the functional currency of an entity are recognized in the statement of operations and deficit.

Assets and liabilities of entities with functional currencies other than U.S. dollars are translated into the presentation currency at the year end rates of exchange, and the results of their operations are translated at average rates of exchange for the year. The resulting translation adjustments are included in accumulated other comprehensive loss in shareholders’ equity. Additionally, foreign exchange gains and losses related to certain intercompany loans that are permanent in nature are included in accumulated other comprehensive loss. Elements of equity are translated at historical rates.

Financial instruments

IFRS 9 introduced new classification and measurement models for financial assets. The investment classifications held-to-maturity and available-for-sale are no longer used and financial assets at fair value through other comprehensive income (“FVTOCI”) were introduced. Financial assets held with an objective to hold assets in order to collect contractual cash flows which arise on specified dates that are solely principal and interest are measured at amortised cost using the effective interest method. Debt investments held with an objective to hold both assets in order to collect contractual cash flows which arise on specified dates that are solely principal and interest as well as selling the asset on the basis of fair value are measured at FVTOCI. All other financial assets are classified and measured at fair value through profit or loss (“FVTPL”). Financial liabilities are classified as either FVTPL or other financial liabilities, and the portion of the change in fair value that relates to the Company’s credit risk is presented in other comprehensive income (loss). Instruments classified as FVTPL are measured at fair value with unrealized gains and losses recognized in net income (loss). Other financial liabilities are subsequently measured at amortised cost using the effective interest method.

Transaction costs that are directly attributable to the acquisition or issuance of financial assets and financial liabilities, other than financial assets and financial liabilities classified as FVTPL, are added to or deducted from the fair value on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities classified as FVTPL are recognized immediately in consolidated net income (loss).

Derecognition

Financial assets

The Company derecognizes a financial asset when the contractual rights to the cash flows from the financial asset expire, or it transfers the rights to receive the contractual cash flows in a transaction in which substantially all of the risks and rewards of ownership of the financial asset are transferred or in which the Company neither transfers nor retains substantially all of the risks and rewards of ownership and it does not retain control of the financial asset. Any interest in transferred financial assets that is created or retained by the Company is recognized as a separate asset or liability.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Financial liabilities

A financial liability is derecognized from the balance sheet when it is extinguished, that is, when the obligation specified in the contract is either discharged, cancelled or expires. Where there has been an exchange between an existing borrower and lender of debt instruments with substantially different terms, or there has been a substantial modification of the terms of an existing financial liability, this transaction is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. A gain or loss from extinguishment of the original financial liability is recognized in profit or loss.

The Company's financial instruments include cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities.

The following table outlines the classification of financial instruments under IFRS 9:

Financial Assets

Cash and cash equivalents	Amortized cost
Short-term investments	Amortized cost

Financial Liabilities

Accounts payable and accrued liabilities	Amortized cost
Convertible debentures	Amortized cost
Covid-19 government support loans	Amortized cost

Convertible debentures are accounted for as a compound financial instrument with a debt component and a separate equity component. The debt component of these compound financial instruments is measured at fair value on initial recognition by discounting the stream of future interest and principal payments at the rate of interest prevailing at the date of issue for instruments of similar term and risk. The debt component is subsequently deducted from the total carrying value of the compound instrument to derive the equity component. The debt component is subsequently measured at amortized cost using the effective interest rate method. Interest expense based on the coupon rate of the debenture and the accretion of the liability component to the amount that will be payable on redemption are recognized through profit or loss as a finance cost.

Cash and cash equivalents

Cash and cash equivalents consist of cash in current accounts of \$4,216,911 (2020 - \$722,894, 2019 - \$1,278,129) and funds invested in US and Canadian Term Deposits of \$10,724,864 (2020 - \$6,150,000, 2019 - \$150,000) earning interest at rates ranging from 0.20% - 0.25% and maturing in less than 90 days.

Cash and cash equivalents include restricted funds of nil (2020 - \$184,569, 2019 - \$93,800) which serves as a bank guarantee for the purchase of certain equipment. A bank guarantee was discharged in 2020 and a new bank guarantee was put in place. The new bank guarantee was discharged in 2021. The bank guarantee was reduced on a monthly basis by \$14,197 (2020 - \$14,197, 2019 - \$10,424) which is the amount paid monthly in settlement of the outstanding balance on the equipment.

Short-term investments

The short-term investments of \$6,366,828 consist of guaranteed investment certificates (GICs) held with one Canadian chartered bank and earn interest at rates ranging from 0.75 to 1.44%. The GICs have maturity dates between June 2022 and July 2022. Investments are carried at amortized cost.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Property and equipment

Property and equipment are recorded at cost. Depreciation is calculated based on the estimated useful life of the asset using the following method and useful lives:

Machinery and equipment	Straight Line, 5 years
Leasehold improvements	Straight Line, 5 years or life of the lease, whichever is less
Office equipment	Straight Line, 3 - 5 years

Patents and licenses

Patents and licenses are recorded at cost and amortized on a straight line basis over 12 years. Ongoing maintenance costs are expensed as incurred.

Impairment of long-lived assets

The Company's tangible and intangible assets are reviewed for indications of impairment whenever events or changes in circumstances indicate that the carrying amounts of the assets may not be recoverable. An assessment is made at each reporting date whether there is any indication that an asset may be impaired.

An impairment loss is recognized when the carrying amount of an asset exceeds its recoverable amount. Impairment losses are recognized in profit and loss for the year. The recoverable amount is the greater of the asset's fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate largely independent cash inflows, the recoverable amount is determined for the cash-generating unit ("CGU") to which the asset belongs.

An impairment loss is reversed if there is an indication that there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, if no impairment loss had been recognized. The Company reported no impairment loss for the year ended December 31, 2021 (2020 - nil, 2019 - \$714,000) (Note 22).

Goodwill

Goodwill represents the excess of the cost of an acquired business over the fair value of the identifiable assets acquired net of liabilities assumed. Goodwill is measured at cost less accumulated impairment losses and is not amortized. Goodwill is tested for impairment on an annual basis or whenever facts or circumstances indicate that the carrying amount may exceed its recoverable amount.

The Company performs its annual test for goodwill impairment annually in the fourth quarter. The Company utilized a five-year cash flow forecast using the annual budget approved by the Board of Directors as a basis for such forecasts. Cash flow forecasts beyond that of the budget were prepared using a stable growth rate for future periods. These forecasts were based on historical data and future trends expected by the Company. The Company's valuation model also takes into account working capital and capital investments required to maintain the condition of the assets. Forecasted cash flows were discounted using an after-tax rate of 30%.

Based on the impairment tests, the value in-use of the CGU to which goodwill is applicable is less than the carrying amount. As a result goodwill of \$1,050,459 was impaired in 2019. No provision for impairment of goodwill was made in 2021 or 2020 (Note 22).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Income taxes

The Company follows the liability method of accounting for income taxes. Under this method, deferred income taxes are provided on differences between the financial reporting and income tax bases of assets and liabilities and on income tax losses available to be carried forward to future years for tax purposes. Deferred income taxes are measured using the substantively enacted tax rates and laws that are expected to be in effect when the differences are expected to reverse. Deferred tax assets are only recognized if the amount is expected to be realized in the future.

Revenue recognition

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Company recognizes revenue when it transfers control over a product or service to a customer.

Sale of goods

Revenue from the sale of goods is recognized, net of discounts and customer rebates, at the point in time the transfer of control of the related products has taken place as specified in the sales contract and collectability is reasonably assured.

Service revenue

The Company provides contract services, primarily in the form of non-recurring revenue ("NRE") where control is passed to the customer over time. The contracts generally provide agreed upon milestones for customer payment which include but are not limited to the delivery of sample products, design reports and test reports. The customer makes payment when it has approved the delivery of the milestone. The Company must determine if the contract is made up of a series of independent performance obligations or a single performance obligation. Where NRE contracts contain multiple performance obligations for which a standalone transaction price can be assessed, revenue is recognized as each performance obligation is satisfied. Where NRE contracts contain a single performance obligation to be settled over time, revenue is recognized progressively based on the output method.

Other income

Interest income

Interest income on cash is recognized as earned using the effective interest method.

Wage subsidies

Wages subsidies received from the Singaporean government are netted against R&D related wages and benefits on the consolidated statements of operations and deficit.

Government Grants

Loans received exclusively from governmental agencies to support the Company throughout the COVID-19 pandemic qualify to be forgiven if certain conditions are met. Forgiveness of COVID-19 related loans will be recognized as other income on the consolidated statements of operations and deficit.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Intangible assets

Research and development costs

Research costs are expensed in the year incurred. Development costs are also expensed in the year incurred unless the Company believes a development project meets IFRS criteria as set out in IAS 38, *Intangible Assets*, for deferral and amortization. IAS 38 requires all research costs be charged to expense while development costs are capitalised only after technical and commercial feasibility of the asset for sale or use have been established. This means that the entity must intend and be able to complete the intangible asset and either use it or sell it and be able to demonstrate how the asset will generate future economic benefits. Development costs are tested for impairment whenever events or changes indicate that its carrying amount may not be recoverable.

In-Process Research and Development

Under IFRS, in-process research and development (“IPR&D”) acquired in a business combination that meets the definition of an intangible asset is capitalized with amortization commencing when the asset is ready for use (i.e., when development is complete). The Company acquired \$714,000 of IPR&D when it acquired BB Photonics Inc. in 2016. During 2020, management observed indicators that suggested that IPR&D may be impaired. IPR&D acquired with BB Photonics was no longer useable with the novel POET Interposer platform. BB Photonics IPR&D would not generate sufficient cash flow to support its value in use. Management completed an impairment assessment of IPR&D and determined that the amount of \$714,000 was impaired. An impairment loss of \$714,000 was recorded in 2019. No impairment was recorded in 2021 or 2020 (Note 22).

Stock-based compensation

Stock options and warrants awarded to non employees are measured using the fair value of the goods or services received unless that fair value cannot be estimated reliably, in which case measurement is based on the fair value of the stock options. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option pricing model with assumptions applicable at the date of grant.

Loss per share

Basic loss per share, net of taxes is calculated by dividing net loss by the weighted average number of common shares outstanding during the year. Diluted loss per share is calculated by dividing net loss by the weighted average number of common shares outstanding during the period after giving effect to potentially dilutive financial instruments. The dilutive effect of stock options and warrants is determined using the treasury stock method.

Joint Venture

A joint arrangement is an arrangement among two or more parties where the parties are bound by a contractual arrangement and the contractual arrangement gives the parties joint control of the arrangement. A joint venture is a form of joint arrangement where an entity is independently formed and the parties jointly have rights to the net assets of the arrangement and therefore account for their interests under the equity method.

Share Consolidation

On February 24, 2022, the Company filed Articles of Amendment to consolidate its common shares on a ten-for-one basis. For further clarity, for every ten (10) pre-consolidated common shares, shareholders received one (1) post-consolidated common share. On February 28, 2022 the Company’s common shares began trading on the TSX Venture Exchange on a post consolidation basis. The Company’s name and trading symbol remained unchanged. All references to share and per share amounts in these consolidated financial statements and accompanying notes to the consolidated financial statements have been retroactively restated to reflect the ten-for-one share consolidation.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

3. RECEIVABLE FROM THE SALE OF DISCONTINUED OPERATIONS

On November 8, 2019, the Company sold 100% of the issued and outstanding shares of DenseLight for \$26,000,000. The Company received \$8,000,000 upon the consummation of the sale with the remaining \$18,000,000 expected over three tranche payments in 2020. Payments received in the first quarter were as follows: \$4,750,000 received on February 14, 2020 and \$8,250,000 received on March 30, 2020.

The Company received payments of \$1,500,000 and \$1,000,000 on June 29, 2020 and July 3, 2020 respectively. After taking into consideration the length of time it had taken the Buyer to make the foregoing payments and the Company's expectations regarding the likelihood of receiving an additional payment, the Company determined that it was in its best interest to accept partial payments as final payment on the Company's receivable. As a result, the Company recognized a credit loss of \$2,500,000 during the year ended December 31, 2020. Credit loss was nil in 2021 and 2019.

4. PREPAIDS AND OTHER CURRENT ASSETS

The following table reflects the details of prepaids and other current assets at December 31:

	2021	2020	2019
Sales tax recoverable and other current assets	\$ 141,568	\$ 122,353	\$ 81,265
Deposits on equipment	288,287	-	-
Prepaid expenses	50,668	496,364	750,000
	<u>\$ 480,523</u>	<u>\$ 618,717</u>	<u>\$ 831,265</u>

Research and development credit, security deposits on leased properties and certain prepaid expenses were disposed of upon the sale of DenseLight on November 8, 2019.

5. JOINT VENTURE

On October 20, 2020, the Company signed a Joint Venture Agreement ("JVA") establishing a joint venture, Super Photonics Xiamen Co., Ltd ("SPX") in Xiamen China, with Xiamen Sanan Integrated Circuit Co. Ltd. ("Sanan IC") whose purpose is to design, develop, manufacture and sell 100G, 200G and 400G optical engines based on POET's proprietary Optical Interposer platform technology. SPX was registered on March 12, 2021. SPX will be subsequently capitalized through a combination of committed cash, capital equipment and intellectual property from Sanan IC and intellectual property and know-how from the Company.

The Company's contribution of intellectual property to SPX was independently valued at \$22,500,000. During the period from March 12, 2021 to December 31, 2021, the Company recognized a gain of \$2,587,500 related to its contribution of intellectual property to SPX in accordance with IAS 28. The Company only recognized a gain on the contribution of the intellectual property equivalent to the Sanan IC's interest in SPX, the unrecognized gain of \$19,912,500 will be applied against the investment and periodically realized as the Company's ownership interest in SPX is reduced. As at December 31, 2021, Sanan IC's and the Company's ownership interests were 11.5% and 88.5% respectively.

SPX was determined to be a joint venture as both Sanan IC and POET exercise joint control over SPX. All relevant activity of SPX require unanimous consent.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

5. JOINT VENTURE (Continued)

The Company's investment in joint venture during the year can be summarized as follows:

	December 31, 2021
Investment	\$ 22,500,000
Unrecognized gain on contribution of intellectual property	(19,912,500)
Share of loss in joint venture	(1,142,249)
Investment balance	\$ 1,445,251

Summarized financial information of the joint venture is as follows:

	December 31, 2021
Current assets	\$ 2,287,252
Intangible assets	\$ 22,500,000
Liabilities	\$ (44,683)
Owners Equity	\$ (24,742,569)
Net loss	\$ 1,212,417

The Company recognizes its share of SPX's profits or losses using the equity method. On a weighted average basis, the Company recognized 94.2% or \$1,142,249 of the net operating loss of SPX for the period from March 12, 2021 to December 31, 2021. The Company's current share of the operating loss is a result of the high value of the Company's initial contribution. The Company's share of the loss will reduce as Sanan IC periodically contributes cash and other assets to SPX.

6. PROPERTY AND EQUIPMENT

	Equipment not ready for use	Leasehold improvements	Machinery and equipment	Office equipment	Total
Cost					
Balance, January 1, 2019	\$ 3,142,153	\$ 667,342	\$ 11,017,985	\$ 621,441	\$ 15,448,921
Additions	1,986,210	-	39,260	19,480	2,044,950
Impairment and disposals ⁽¹⁾	(4,388,762)	(667,342)	(8,198,519)	(555,688)	(13,810,311)
Effect of changes in foreign exchange rates	24,741	-	14,529	-	39,270
Balance, December 31, 2019	764,342	-	2,873,255	85,233	3,722,830
Additions	888,726	68,961	525,685	38,416	1,521,788
Reclassification	(519,366)	-	516,111	3,255	-
Disposals ⁽²⁾	(897,727)	-	-	-	(897,727)
Effect of changes in foreign exchange rates	(8,828)	2,967	79,606	1,281	75,026
Balance, December 31, 2020	227,147	71,928	3,994,657	128,185	4,421,917
Additions, net of returns ⁽³⁾	(128,575)	-	842,877	57,221	771,523
Reclassification	(96,334)	47,393	48,941	-	-
Effect of changes in foreign exchange rates	(2,238)	(2,206)	(56,455)	(2,137)	(63,036)
Balance, December 31, 2021	\$ -	\$ 117,115	\$ 4,830,020	\$ 183,269	\$ 5,130,404

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

6. PROPERTY AND EQUIPMENT (Continued)

Accumulated Depreciation					
Balance, January 1, 2019	-	350,497	5,411,757	387,154	6,149,408
Depreciation for the year	-	-	144,337	22,005	166,342
Impairment and disposals ⁽¹⁾	-	(350,497)	(5,044,288)	(341,195)	(5,735,980)
Balance, December 31, 2019	-	-	511,806	67,964	579,770
Depreciation for the year	-	10,332	609,803	11,128	631,263
Effect of changes in foreign exchange rates	-	445	24,405	280	25,130
Balance, December 31, 2020	-	10,777	1,146,014	79,372	1,236,163
Depreciation for the year	-	18,891	794,834	26,641	840,366
Effect of changes in foreign exchange rates	-	(142)	(10,122)	(95)	(10,359)
Balance, December 31, 2021	-	29,526	1,930,726	105,918	2,066,170
Carrying Amounts					
At December 31, 2019	\$ 764,342	\$ -	\$ 2,361,449	\$ 17,269	\$ 3,143,060
At December 31, 2020	\$ 227,147	\$ 61,151	\$ 2,848,643	\$ 48,813	\$ 3,185,754
At December 31, 2021	\$ -	\$ 87,589	\$ 2,899,294	\$ 77,351	\$ 3,064,234

- (1) On November 8, 2019, the Company disposed of property and equipment used in the operations DenseLight.
- (2) During 2020, the Company settled certain R&D expenses by transferring \$897,727 worth of equipment to the supplier. The equipment was initially installed in the fabrication facility of the supplier who provided discounted R&D services to the Company. The equipment will be used by the supplier for volume production primarily for the benefit of the Company.
- (3) During the year, the Company returned \$196,490 in equipment to a vendor. The equipment was not needed as the Company had alternatives. The equipment was returned without penalty to the Company.

7. PATENTS AND LICENSES

Cost	
Balance, January 1, 2019	\$ 737,686
Additions	77,037
Disposals ⁽¹⁾	(29,696)
Balance, December 31, 2019	785,027
Additions	52,075
Balance, December 31, 2020	837,102
Additions	159,359
Balance, December 31, 2021	996,461
Accumulated Amortization	
Balance, January 1, 2019	270,972
Amortization	61,671
Balance, December 31, 2019	332,643
Amortization	65,782
Balance, December 31, 2020	398,425
Amortization	69,560
Balance, December 31, 2021	467,985

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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7. PATENTS AND LICENSES (Continued)

Carrying Amounts

At December 31, 2019	\$	452,384
At December 31, 2020	\$	438,677
At December 31, 2021	\$	528,476

(1) On November 8, 2019, the Company disposed of certain patents unrelated to the Company's technology on the sale of DenseLight.

8. RIGHT OF USE ASSET AND LEASE LIABILITY

On January 1, 2019, the Company adopted IFRS, 16 Leases. Upon adoption of IFRS 16, the Company recognized a lease liability and right of use asset relating to new leases entered into on February 15, 2019 related to DenseLight, and November 1, 2019 related to PTS. The lease liability was measured at the present value of the remaining lease payments, discounted using the Company's incremental borrowing rate of 12%. During 2020, the Company modified its lease resulting in reducing the space it leased for the operations at PTS. The Company recognized a gain of \$786 on the lease modification which is included in selling, general and marketing on the consolidated statements of operations and deficit.

Right of use asset	Building
Cost	
Balance, January 1, 2019	\$ -
Additions	1,127,534
Disposal ⁽¹⁾	(892,300)
Effect of changes in foreign exchange rates	2,966
Balance, December 31, 2019	238,200
Additions	465,068
Lease modification	(47,939)
Effect of changes in foreign exchange rates	(2,097)
Balance, December 31, 2020	653,232
Effect of changes in foreign exchange rates	(4,122)
Balance, December 31, 2021	\$ 649,110
Accumulated Amortization	
Balance, January 1, 2019	-
Amortization	15,683
Balance, December 31, 2019	15,683
Amortization	116,057
Effect of changes in foreign exchange rates	806
Balance, December 31, 2020	132,546
Amortization	190,596
Effect of changes in foreign exchange rates	(922)
Balance, December 31, 2021	322,220
Carrying Amounts	
At December 31, 2019	\$ 222,517
At December 31, 2020	\$ 520,686
At December 31, 2021	\$ 326,890

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

8. RIGHT OF USE ASSET AND LEASE LIABILITY (Continued)

Lease liability

Balance, January 1, 2019	\$	-
Additions		1,127,534
Interest expense		4,705
Interest included in discontinued operations		74,494
Lease payments		(19,162)
Lease payments included in discontinued operations		(258,460)
Disposal ⁽¹⁾		(695,733)
Effect of changes in foreign exchange rates		(9,620)
Balance, December 31, 2019		223,758
Interest expense		44,655
Lease modification		(48,725)
Additions		452,385
Lease payments		(144,142)
Effect of changes in foreign exchange rates		4,066
Balance, December 31, 2020		531,997
Interest expense		67,675
Lease payments		(237,634)
Effect of changes in foreign exchange rates		(2,690)
Balance, December 31, 2021	\$	359,348

(1) The Company disposed of \$892,000 of right of use asset and \$695,733 of lease liability on November 8, 2019 with the sale of DenseLight on November 8, 2019 (Note 21).

9. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities at December 31 was as follows:

	2021	2020	2019
Trade payables	\$ 987,498	\$ 1,603,284	\$ 1,507,644
Payroll related liabilities	521,692	60,455	44,677
Accrued liabilities	282,032	66,622	173,387
	\$ 1,791,222	\$ 1,730,361	\$ 1,725,708

10. CONVERTIBLE DEBENTURES, LOAN PAYABLE AND PROMISSORY NOTE

On April 1, 2019 the Company announced that it arranged for certain financing required to bridge the Company up to the sale of its DenseLight subsidiary.

Convertible Debentures

In 2019, the Board of Directors approved the issuance of up to \$10.5 million of unsecured convertible debentures (the "Convertible Debentures") of the Company. The Convertible Debentures were sold in multiple tranches, on a brokered private placement basis through the Company's financial advisors, IBK Capital. In 2019, the Company closed five tranches of the private placement of the Convertible Debentures that raised gross proceeds of \$3,729,921 (CAD\$4,988,292). The Convertible Debentures, bear interest at 12% per annum, compounded annually with 1% payable at the beginning of each month and mature two years from the date of issue. The Company paid \$377,072 (CAD\$499,462) in brokerage fees and other costs related to the closing of these five tranches.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

10. CONVERTIBLE DEBENTURES, LOAN PAYABLE AND PROMISSORY NOTE (Continued)

The Convertible Debentures were convertible at the option of the holders thereof into units at any time after October 31, 2019 at a conversion price of CAD\$4.00 per unit for a total 1,245,750 units of the Company. Each unit will consist of one common share and one common share purchase warrant. Each common share purchase warrant will entitle the holder to purchase one common share of the Company at a price of CAD\$5.00 per share for a period of four years from the date upon which the convertible debenture is issued. Upon completing the sale of DenseLight, holders of Convertible Debentures will have the right to cause the Company to repurchase the Convertible Debentures at face value, subject to certain restrictions. The Convertible Debentures are governed by a trust indenture between the Company and TSX Trust Company as trustee.

Insiders of the Company subscribed for 14.3% or \$535,000 (CAD\$710,000) of the Convertible Debentures, including the Company's board of directors and senior management team. Insiders of IBK Capital subscribed for 4% or \$146,000 (CAD\$200,000) of the Convertible Debentures.

IAS 32 *Financial Instruments: Presentation* define these debt securities as compound financial instruments made up of both a liability component and an equity component. The debt component of the Convertible Debentures were fair valued using effective discount rates ranging from 28.74% to 29.71% which the Company determined would be the interest rate of the debts without a conversion feature. The difference between the fair value of the debt component and the loan is allocated to the equity component and is included in shareholders' equity.

Because the Convertible Debentures are denominated in Canadian dollars and the conversion price is also denominated in Canadian dollars, the number of equity instruments that would be issued upon exercise of the convertible debentures are fixed. As a result, the equity component of the convertible debentures will not be periodically remeasured.

During 2021, holders of certain convertible debentures converted \$3,571,342 (2020 - \$369,545) worth of convertible debentures into 1,119,750 (2020 - 123,500) units of the Company. On September 19, 2021, \$7,886 of convertible debentures matured and was repaid to the holder of the convertible debenture. As of December 31, 2021 all convertible debentures were either exercised or matured and repaid.

The following table reflects the details of convertible debentures at December 31, 2020:

<u>Convertible Debentures</u>	<u>Loan</u>	<u>Equity Component</u>	<u>Accretion</u>	<u>Debt Component</u>
Issued April 3, 2020 (net of issue costs)	\$ 1,293,519	\$ (242,004)	\$ 338,988	\$ 1,390,503
Issued May 3, 2020 (net of issue costs)	806,893	(151,842)	218,159	873,210
Issued June 3, 2020 (net of issue costs)	496,995	(93,278)	117,481	521,198
Issued August 2, 2020 (net of issue costs)	290,365	(54,978)	62,683	298,070
Issued September 19, 2020 (net of issue costs)	122,965	(23,019)	22,905	122,851
Effect of foreign exchange rate changes	-	-	-	135,414
Balance December 31, 2020	<u>\$ 3,010,737</u>	<u>\$ (565,121)</u>	<u>\$ 760,216</u>	<u>\$ 3,341,246</u>

The following table reflects the details of convertible debentures at December 31, 2019:

<u>Convertible Debentures</u>	<u>Loan</u>	<u>Equity Component</u>	<u>Accretion</u>	<u>Debt Component</u>
Issued April 3, 2020 (net of issue costs)	\$ 1,293,519	\$ (242,004)	\$ 128,240	\$ 1,179,755
Issued May 3, 2020 (net of issue costs)	979,256	(183,317)	84,708	880,647
Issued June 3, 2020 (net of issue costs)	582,356	(109,017)	42,855	516,194
Issued August 2, 2020 (net of issue costs)	374,753	(70,154)	19,690	324,289
Issued September 19, 2020 (net of issue costs)	122,965	(23,019)	5,336	105,282
Effect of foreign exchange rate changes	-	-	-	82,866
Balance December 31, 2019	<u>\$ 3,352,849</u>	<u>\$ (627,511)</u>	<u>\$ 280,829</u>	<u>\$ 3,089,033</u>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

10. CONVERTIBLE DEBENTURES, LOAN PAYABLE AND PROMISSORY NOTE (Continued)

Loan Payable and Promissory Note

The second component of the financing in 2019 consisted of a credit facility (the “Bridge Loan”) provided by Espresso Capital Ltd which granted the Company access to a maximum \$5,000,000. The Company signed the loan documents on April 18, 2019 and was advanced \$3,100,000 shortly thereafter.

Funds drawn on the Credit Facility bore interest at a rate of 17.25% per annum (the “Interest Rate”), calculated daily from the date of each advance until the earlier of the due date of each such advance, if any, and December 31, 2019 (the “Maturity Date”). The Interest Rate was comprised of 15% cash interest and 2.25% deferred interest. Per the agreement, the interest rate was retroactively increased to 19.25% because the Company did not consummate the sale of Denselight by October 15, 2019.

In 2019, the Company paid \$147,077 in costs related to the Bridge Loan. Additionally, the Company issued to Espresso Capital Ltd, warrants for the purchase of 328,950 common shares at a price of CAD\$3.50 per share. The Warrants expire on April 18, 2020. The fair value of the warrants was estimated on the date of issue using the Black-Scholes option pricing model with the following assumptions: volatility of 78.91%, interest rate of 1.62% and an expected life of 1 year. The estimated fair value assigned to the warrants was \$221,620. The total cost of \$368,697 along with the foreign exchange impact of \$3,543 was deferred and charged against the Bridge Loan and subsequently amortized over the life of the Bridge Loan. The Bridge loan was repaid on November 8, 2019.

Additionally, on August 30, 2019, the Company signed a term promissory note (the “Promissory Note”) for up-to \$1,000,000 with Century Prosper Investment Corporation (the “Lender”). The Promissory Note bore interest at 15% per annum. The Promissory Note and accrued interest were repayable on the six-month anniversary of each advance. At the option of the Lender, the advances and accrued interest may be repaid in full five days after the sale of the Company’s DensLight subsidiary. The Company was advanced \$900,000 in 2019 on this Promissory Note. The \$900,000 advance and related interest of \$17,160 were repaid on November 8, 2019.

11. SHARE CAPITAL

(a) AUTHORIZED

Unlimited number of common shares
One special voting share

(b) COMMON SHARES ISSUED

	Number of Shares	Amount
Balance, January 1, 2019	28,808,230	112,028,194
Funds from the exercise of stock options	28,125	60,028
Fair value of stock options exercised	-	55,950
Balance, December 31, 2019	28,836,355	112,144,172
Funds from the exercise of stock options	330,284	794,808
Fair value of stock options exercised	-	768,356
Funds from the exercise of warrants	74,400	293,642
Fair value of exercised warrants (Notes 10 and 11)	-	127,964
Issued on the conversion of convertible debentures (Note 10)	123,500	369,545
Fair value of warrants issued on conversion of convertible debentures	-	(146,858)
Exercise of warrants issued in conjunction with debt financing	94,245	221,620
Shares issued to settle accounts payable	3,027	13,011
Balance, December 31, 2020	29,461,811	\$ 114,586,260

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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11. SHARE CAPITAL (Continued)

Funds from the exercise of stock options	1,001,519	3,124,392
Fair value of stock options exercised	-	2,699,042
Issued on the conversion of convertible debentures (Note 10)	1,119,750	3,571,342
Fair value of warrants issued upon conversion of convertible debentures	(1,229,305)	-
Funds from the exercise of warrants	3,144,750	12,994,358
Fair value of warrants exercised	-	5,351,586
Funds from Common shares issued on private placement	1,764,720	11,815,595
Fair value of warrants issued on private placement	-	(3,766,007)
Share issue costs	-	(1,143,034)
Fair value of broker warrants issued as share issue costs	-	(288,197)
Shares issued to settle accounts payable	1,678	13,814
Balance, December 31, 2021	36,494,228	\$ 147,729,846

During 2020, holders of certain convertible debentures converted \$369,545 worth of convertible debentures into 123,500 units of the Company. Each unit consists of one common share and one common share purchase warrant. Each common share purchase warrant entitles the holder to purchase one common share of the Company at a price of \$3.80 (CAD\$5.00) per share for a period of four years from the date upon which the convertible debenture was issued.

The fair value of the share purchase warrants was estimated using the Black-Scholes option pricing model with the following weighted average assumptions: dividend yield of 0%, risk-free interest rate of 1.32%, volatility of 76.55%, and estimated life of 2 years. The estimated fair value assigned to the warrants was \$146,858.

During 2020, the Company engaged with a firm to assist with its shareholder communications strategy. The terms of the agreement require the Company to issue common shares at certain pre-determined dates in satisfaction of past services rendered. During 2020, the Company settled \$13,011 in accounts payable related to past services rendered under this agreement by issuing 3,027 common shares at a price of \$4.30 (CAD\$5.60) per share to the firm.

On February 11, 2021, the Company completed a brokered private placement offering of 1,764,720 units at a price of \$6.70 (CAD\$8.50) per unit for gross proceeds of \$11,815,595 (CAD\$15,000,120). Each unit consists of one common share and one common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at a price of \$9.00 (CAD\$11.50) per share until February 11, 2023. At any time after June 12, 2021, the Company reserves the right to accelerate the expiry of the warrants if the Company's average stock price exceeds \$18.10 (CAD\$23.00) for a period of 10 consecutive trading days. The broker was paid a cash commission of \$708,667 (CAD\$900,007) equating to 6% of the gross proceeds and received 105,883 broker warrants. Each broker warrant is exercisable into one common share of the Company at a price of \$6.70 (CAD\$8.50) per broker warrant until February 11, 2023. The Company incurred additional share issuance costs of \$434,367 directly related to the private placement and warrant exercises.

The fair value of the share purchase warrants and broker warrants was estimated using the Black-Scholes option pricing model with the following weighted average assumptions: dividend yield of 0%, risk-free interest rate of 0.19%, volatility of 75.26%, and estimated life of 2 years. The estimated fair value assigned to the warrants and broker warrants was \$3,766,007 and \$288,197, respectively.

In 2020, the Company engaged with a firm to assist with its shareholder communications strategy. The terms of the agreement require the Company to issue common shares at certain pre-determined dates in satisfaction of past services rendered. During 2021, the Company settled \$13,814 (2020 - \$13,011) in accounts payable related to past services rendered under this agreement by issuing 1,678 (2020 - 3,027) common shares at a price of \$8.20 (CAD\$10.10) (2020 - \$4.30 (CAD\$5.60) per share to the firm.

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(Expressed in US Dollars)

12. WARRANTS AND COMPENSATION OPTIONS

The following table reflects the continuity of warrants and compensation options:

	Historical Average Exercise Price	Number of Warrants/Compensation options	Historical Fair value
Balance, January 1, 2019	\$ 4.40	4,625,029	\$ 8,303,738
Fair value of warrants issued as cost of debt financing	2.70	328,950	221,620
Balance, December 31, 2019	4.30	4,953,979	8,525,358
Fair value of warrants issued on conversion of convertible debentures (Notes 10 and 11)	3.80	123,500	146,858
Fair value of expired compensation options issued to brokers	4.30	(150,544)	(479,204)
Fair value related to the exercise of warrants issued as cost of debt financing (1)	2.70	(328,950)	(221,620)
Fair value of expired warrants issued on public offering	5.80	(1,254,535)	(2,286,426)
Historical fair value assigned to warrants exercised	3.90	(74,400)	(127,964)
Balance, December 31, 2020	3.90	3,269,050	5,557,002
Fair value of warrant issued on private placement	9.00	1,764,720	3,766,007
Fair value of broker warrants issued on private placement	6.70	105,883	288,197
Fair value of warrants issued on conversion of convertible debentures (Notes 10)	3.80	1,119,750	1,229,305
Historical fair value assigned to warrants exercised	3.90	(3,144,750)	(5,351,586)
Fair value of expired warrants	3.90	(93,300)	(160,470)
Balance, December 31, 2021	\$ 7.10	3,021,353	\$ 5,328,455

(1) These warrants had a cashless exercise feature. The warrant holder utilized the cashless exercise feature to exercise the warrants, which resulted in the Company issuing 94,245 common shares to the warrant holders.

13. STOCK OPTIONS AND CONTRIBUTED SURPLUS**Stock Options**

On October 7, 2021, shareholders of the Company approved amendments to the Company's fixed 20% stock option plan (as amended, previously referred to as the "2020 plan", now referred to as the "2021 Plan"). Under the 2021 Plan, the board of directors may grant options to acquire common shares of the Company to qualified directors, officers, employees and consultants. The 2021 Plan provides that the number of common shares issuable pursuant to options granted under the 2021 Plan and pursuant to other previously granted options is limited to 7,090,518 (the "Number Reserved"). Any subsequent increase in the Number Reserved must be approved by shareholders of the Company and cannot, at the time of the increase, exceed 20% of the number of issued and outstanding shares. The stock options vest in accordance with the policies determined by the Board of Directors from time to time consistent with the provisions of the 2021 Plan which grants discretion to the Board of Directors.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
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13. STOCK OPTIONS AND CONTRIBUTED SURPLUS (Continued)

Stock option transactions and the number of stock options outstanding were as follows:

	Number of Options	Historical Weighted Average Exercise Price
Balance, January 1, 2019	4,446,373	\$ 5.80
Expired/cancelled ⁽¹⁾	(870,781)	9.00
Exercised	(28,125)	2.20
Granted	1,778,567	2.70
Balance, December 31, 2019	5,326,034	4.30
Expired/cancelled	(828,794)	10.20
Exercised	(330,284)	2.40
Granted	947,493	3.60
Balance, December 31, 2020	5,114,449	3.30
Expired/cancelled	(166,438)	3.40
Exercised	(1,001,519)	3.00
Granted	1,013,125	8.50
Balance, December 31, 2021	4,959,617	\$ 4.40

(1) 227,719 cancelled options related to staff employed at DenseLight

During the year ended December 31, 2021, the Company recorded stock-based compensation of \$4,534,370 (2020 - \$3,612,945, 2019 - \$2,888,141) relating to stock options that vested during the year. The stock-based compensation applicable to employees of DenseLight in the amount of nil (2020 - nil, 2019 - \$(75,608)) has been allocated to discontinued operations (see note 21).

The stock options granted were valued using the Black-Scholes option pricing model using the following assumptions:

	2021	2020	2019
Weighted average exercise price	\$ 8.50	\$ 3.60	\$ 2.70
Weighted average risk-free interest rate	0.80% - 1.48%	0.52% - 1.52%	1.57%
Weighted average dividend yield	0%	0%	0%
Weighted average volatility	90.68%	94.77%	95.48%
Weighted average estimated life	10 years	10 years	10 years
Weighted average share price	\$ 8.50	\$ 3.60	\$ 2.70
Share price on the various grant dates:	\$ 6.20 - \$9.50	\$ 2.20 - \$3.90	\$ 2.40 - \$2.80
Weighted average fair value	\$ 7.50	\$ 3.00	\$ 2.40

The underlying expected volatility was determined by reference to the Company's historical share price movements, its dividend policy and dividend yield and past experience relating to the expected life of granted stock options.

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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13. STOCK OPTIONS AND CONTRIBUTED SURPLUS (Continued)

The weighted average remaining contractual life and weighted average exercise price of options outstanding and of options exercisable as at December 31, 2021 are as follows:

Options Outstanding			Options Exercisable		
Exercise Range	Number Outstanding	Historical Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (years)	Number Exercisable	Historical Weighted Average Exercise Price
\$1.10 - \$2.50	749,313	\$ 2.20	6.20	661,188	\$ 2.20
\$2.60 - \$3.70	933,617	\$ 2.60	7.38	546,304	\$ 2.60
\$3.80 - \$9.20	3,276,687	\$ 5.10	7.79	1,731,064	\$ 3.90
	4,959,617	\$ 4.40	7.45	2,938,556	\$ 3.30

14. LOSS PER SHARE

	2021	2020	2019
Numerator			
Net loss from continuing operations	\$ (15,669,093)	\$ (18,169,070)	\$ (11,434,632)
Net income (loss) from discontinued operations	\$ -	\$ -	\$ 5,481,757
Net loss	\$ (15,669,093)	\$ (18,169,070)	\$ (5,952,875)
Denominator			
Weighted average number of common shares outstanding	34,545,752	29,169,653	28,821,638
Weighted average number of common shares outstanding - diluted	34,545,752	29,169,653	28,821,638
Basic and diluted loss per share, continuing operations	\$ (0.45)	\$ (0.62)	\$ (0.40)
Basic and diluted income per share, discontinued operations	\$ -	\$ -	\$ 0.19
Basic and diluted loss per share	\$ (0.45)	\$ (0.62)	\$ (0.21)

The effect of common share purchase options, warrants, compensation warrants and shares to be issued on the net loss in 2021, 2020 and 2019 is not reflected as they are anti-dilutive.

15. COMMITMENTS AND CONTINGENCIES

The Company has operating leases on four facilities; head office located in Toronto, Canada, design and testing operations located in Allentown, Pennsylvania (formerly in San Jose, California) and operating facilities located in Singapore and China. The Company's design and testing operations terminated a lease on January 31, 2020. A new lease was initiated on April 1, 2020 and expires on March 31, 2025. The lease on the Company's operating facilities in Singapore was initiated on November 1, 2019 and expires April 30, 2022. The lease on the Company's operating facilities in China was initiated in November 19, 2020 and expires on November 18, 2023. As at December 31, 2021, the Company's head office was on a month to month lease term.

POET TECHNOLOGIES INC.

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15. COMMITMENTS AND CONTINGENCIES (Continued)

Remaining annual lease payments to the lease expiration dates are as follows:

2022	\$	182,787
2023 and beyond		258,274
	\$	<u>441,061</u>

16. RELATED PARTY TRANSACTIONS

Compensation to key management personnel were as follows:

	2021	2020	2019
Salaries	\$ 1,782,297	\$ 1,501,058	\$ 1,251,277
Share-based payments ⁽¹⁾	2,077,333	2,144,930	2,135,579
Total	<u>\$ 3,859,630</u>	<u>\$ 3,645,988</u>	<u>\$ 3,386,856</u>

(1) Share-based payments are the fair value of options granted to key management personnel and expensed during the various years as calculated using the Black-Scholes model.

All transactions with related parties have occurred in the normal course of operations and are measured at the exchange amounts, which are the amounts of consideration established and agreed to by the related parties.

17. SEGMENT INFORMATION

The Company and its subsidiaries operate in a single segment; the design, manufacture and sale of semi-conductor products and services for commercial applications. The Company's operating and reporting segment reflects the management reporting structure of the organization and the manner in which the chief operating decision maker regularly assesses information for decision making purposes, including the allocation of resources. A summary of the Company's operations is below:

OPEL, ODIS, POET Shenzhen and PTS

OPEL, ODIS, POET Shenzhen and PTS are the developers of the POET platform semiconductor process IP for monolithic fabrication of integrated circuit devices containing both electronic and optical elements on a single die.

BB Photonics

BB Photonics developed photonic integrated components for the datacom and telecom markets utilizing embedded dielectric technology that enables the low-cost integration of active and passive devices into photonic integrated circuits. BB Photonics' operation is currently dormant.

On a consolidated basis, the Company operates geographically in Singapore, China (collectively "Asia"), the United States and Canada. Geographical information is as follows:

As of December 31,	2021			
	Asia	US	Canada	Consolidated
Current assets	\$ 537,647	\$ 291,772	\$ 20,959,707	\$ 21,789,126
Investment in joint venture	1,445,251	-	-	1,445,251
Property and equipment	2,787,273	276,961	-	3,064,234
Patents and licenses	-	528,476	-	528,476
Right of use asset	150,134	176,756	-	326,890
Total Assets	<u>\$ 4,920,305</u>	<u>\$ 1,273,965</u>	<u>\$ 20,959,707</u>	<u>\$ 27,153,977</u>

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

17. SEGMENT INFORMATION (Continued)

Year Ended December 31,	Asia	US	Canada	Consolidated
Revenue	\$ 209,100	\$ -	\$ -	\$ 209,100
Selling, marketing and administration	\$ (1,563,829)	\$ (5,460,915)	\$ (2,030,784)	\$ (9,055,528)
Research and development	(4,849,553)	(2,679,452)	(636,123)	(8,165,128)
Gain on contribution of intellectual property to joint venture	2,587,500	-	-	2,587,500
Interest expense	(35,043)	(32,632)	(296,944)	(364,619)
Forgiveness of Covid-19 government support loans	-	186,747	-	186,747
Other income, including interest	-	-	75,084	75,084
Share of loss in joint venture	(1,142,249)	-	-	(1,142,249)
Net loss	\$ (4,794,074)	\$ (7,986,252)	\$ (2,888,767)	\$ (15,669,093)

2020				
As of December 31,	Asia	US	Canada	Consolidated
Current assets	\$ 304,450	\$ 69,874	\$ 7,117,287	\$ 7,491,611
Property and equipment	2,982,496	203,258	-	3,185,754
Patents and licenses	-	438,677	-	438,677
Right of use asset	289,542	231,144	-	520,686
Total Assets	\$ 3,576,488	\$ 942,953	\$ 7,117,287	\$ 11,636,728

The Year Ended December 31,	Asia	US	Canada	Consolidated
Selling, marketing and administration	\$ (1,182,054)	\$ (5,495,161)	\$ (1,460,783)	\$ (8,137,998)
Research and development	(3,269,873)	(1,447,729)	(1,916,715)	(6,634,317)
Interest expense	(20,181)	(24,474)	(893,248)	(937,903)
Credit loss on receivable from the sale of discontinued operation	-	-	(2,500,000)	(2,500,000)
Other income, including interest	-	-	41,148	41,148
Net loss	\$ (4,472,108)	\$ (6,967,364)	\$ (6,729,598)	\$ (18,169,070)

2019				
As of December 31,	Asia	US	Canada	Consolidated
Current assets	\$ 86,849	\$ 22,523	\$ 20,150,022	\$ 20,259,394
Property and equipment	3,055,906	87,154	-	3,143,060
Patents and licenses	-	452,384	-	452,384
Right of use asset	222,517	-	-	222,517
Total Assets	\$ 3,365,272	\$ 562,061	\$ 20,150,022	\$ 24,077,355

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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17. SEGMENT INFORMATION (Continued)

The Year Ended December 31,	Asia	US	Canada	Consolidated
Selling, marketing and administration	\$ (217,416)	\$ (5,126,260)	\$ (1,353,711)	\$ (6,697,387)
Research and development	(218,900)	(107,161)	(1,757,754)	(2,083,815)
Impairment of long lived assets	-	-	(1,764,459)	(1,764,459)
Interest expense	(4,705)	-	(815,206)	(819,911)
Amortization of debt issuance costs	-	-	(372,340)	(372,340)
Other income, including interest	-	-	10,540	10,540
Income tax recovery	-	292,740	-	292,740
Net loss from continuing operations	(441,021)	(4,940,681)	(6,052,930)	(11,434,632)
Income from discontinued operations, net of taxes	5,481,757	-	-	5,481,757
Net income (loss)	\$ 5,040,736	\$ (4,940,681)	\$ (6,052,930)	\$ (5,952,875)

18. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

The Company's financial instruments consist of cash and cash equivalents, receivable from the sale of discontinued operation, short-term investments, convertible debentures, covid-19 government support loans and accounts payable and accrued liabilities. Unless otherwise noted, it is management's opinion that the Company is not exposed to significant interest risk arising from these financial instruments. The Company estimates that carrying value of these instruments approximates fair value due to their short term nature.

The Company has classified financial assets and (liabilities) as follows at December 31:

	2021	2020	2019
Financial assets, measured at amortized cost:			
Cash and cash equivalents	\$ 14,941,775	\$ 6,872,894	\$ 1,428,129
Short-term investments	\$ 6,366,828	\$ -	\$ -
Accounts receivable, measured at amortized cost:			
Receivable from the sale of discontinued operations	\$ -	\$ -	\$ 18,000,000
Other liabilities, measured at amortized cost:			
Accounts payable and accrued liabilities	\$ (1,791,222)	\$ (1,730,361)	\$ (1,725,708)
Convertible debentures	\$ -	\$ (3,341,246)	\$ (3,089,033)
Covid-19 government support loans	\$ (31,660)	\$ (218,151)	\$ -

Exchange Rate Risk

The functional currency of each of the entities included in the accompanying consolidated financial statements is the local currency where the entity is domiciled. Functional currencies include the Chinese Yuan, US, Singapore and Canadian dollar. Most transactions within the entities are conducted in functional currencies. As such, none of the entities included in the consolidated financial statements engage in hedging activities. The Company is exposed to a foreign currency risk when its subsidiaries hold current assets or current liabilities in currencies other than its functional currency. A 10% change in foreign currencies held would increase or decrease other comprehensive loss by \$1,000,422.

Liquidity Risk

The Company currently does not maintain credit facilities. The Company's existing cash and cash resources are considered sufficient to fund operating and investing activities beyond one year from the issuance of these consolidated financial statements. The Company may, however, need to seek additional financing in the future.

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19. CAPITAL MANAGEMENT

In the management of capital, the Company includes shareholders' equity (excluding accumulated other comprehensive loss and deficit) and cash. The components of capital on December 31, 2021 were:

Cash and cash equivalents	\$	14,941,775
Shareholders' equity	\$	200,012,634

The Company's objective in managing capital is to ensure that financial flexibility is present to increase shareholder value through growth and responding to changes in economic and/or market conditions; to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business and to safeguard the Company's ability to obtain financing should the need arise.

In maintaining its capital, the Company has a strict investment policy which includes investing its surplus capital only in highly liquid, highly rated financial instruments.

The Company reviews its capital management approach on an ongoing basis.

20. EXPENSES

Research and development costs can be analysed as follows:

	2021	2020	2019
Wages and benefits	\$ 3,270,528	\$ 1,586,900	\$ 874,673
Subcontract fees	1,516,343	3,802,919	834,598
Stock-based compensation	1,769,951	567,859	237,311
Supplies	1,608,306	676,639	137,233
	<u>\$ 8,165,128</u>	<u>\$ 6,634,317</u>	<u>\$ 2,083,815</u>

Selling, marketing and administration costs can be analysed as follows:

Stock-based compensation	\$ 2,764,419	\$ 3,045,086	\$ 2,650,830
Wages and benefits	2,643,451	2,233,449	1,619,719
Professional fees	1,155,316	800,551	1,120,805
General expenses	1,304,690	1,188,712	813,951
Depreciation and amortization	1,100,522	813,103	243,674
Management and consulting fees	-	-	154,357
Rent and facility costs	87,130	57,097	94,051
	<u>\$ 9,055,528</u>	<u>\$ 8,137,998</u>	<u>\$ 6,697,387</u>

21. DISCONTINUED OPERATIONS

On November 8, 2019, the Company sold 100% of the issued and outstanding shares of DenseLight for \$26,000,000. The Buyer assumed control of DenseLight on November 8, 2019 and is responsible for all operations of DenseLight. Upon closing, the Company recognized a gain on the sale of \$8,707,280. The sale proceeds were to be paid over multiple tranches. The first tranche payment was received on November 8, 2019 in the amount of \$8,000,000. The second tranche payment was payment was made in two installments, with first paid on February 14, 2020 in the amount of \$4,750,000 and the second on March 30, 2020 in the amount of \$8,250,000.

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21. DISCONTINUED OPERATION (Continued)

The Company received payments of \$1,500,000 and \$1,000,000 on June 29, 2020 and July 3, 2020 respectively. After taking into consideration the length of time it had taken the Buyer to make the foregoing payments and the Company's expectations regarding the likelihood of receiving an additional payment, the Company determined that it was in its best interest to accept partial payments as final payment on the Company's receivable. As a result, the Company recognized a credit loss of \$2,500,000 during the year ended December 31, 2020 (nil - 2021 and 2019).

The Company received an additional \$2,000,000, in excess of the sale proceeds which was immediately paid to Oak Capital on behalf of the Buyer for due diligence, legal and other expenses.

Revenue and expenses, and gains and losses relating to the discontinued operations were removed from the results of continuing operations and are shown as a single line item on the face of the consolidated statements of operations and deficit. The operating results of the discontinued operations can be analysed as follows:

Results of discontinued operations

	For the Year Ended December 31,		For the Period From January 1, 2019 to November 8,
	2021	2020	2019
Revenue	\$ -	\$ -	\$ 4,426,355
Cost of revenue	-	-	1,201,373
Gross margin	-	-	3,224,982
Operating expenses			
Research and development	-	-	5,677,222
Selling, marketing and administration	-	-	1,950,526
Interest expense	-	-	74,494
Impairment loss	-	-	-
Other income	-	-	(1,251,737)
Operating expenses	-	-	6,450,505
Loss from discontinued operations	-	-	(3,225,523)
Gain on sale of discontinued operations, net of taxes	-	-	8,707,280
Income tax recovery	-	-	-
Net income, net of taxes	\$ -	\$ -	\$ 5,481,757

Disaggregated Revenues

The Company disaggregates revenue by timing of revenue recognition, that is, at a point in time and revenue over time. Disaggregated revenue is as follows:

	For the Year Ended December 31,		For the Period From January 1, 2019 to November 8,
	2021	2020	2019
Non-contract revenue (at a point in time) ⁽¹⁾	\$ -	\$ -	\$ 2,092,426
Contract revenue (revenue over time) ⁽²⁾	-	-	2,221,429
Contract revenue (at a point in time) ⁽²⁾	-	-	112,500
	\$ -	\$ -	\$ 4,426,355

(1) Revenue from the sale of products.

(2) Revenue from long-term projects or non-recurring engineering (NRE).

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21. DISCONTINUED OPERATION (Continued)

	Contract	
	Receivables	Liabilities
Balance, January 1, 2019	60,000	-
Revenues recognized	2,333,929	(2,333,929)
Changes due to payment, fulfillment of performance obligations or other	(1,293,929)	2,333,929
Balance, November 8, 2019	<u>\$ 1,100,000</u>	<u>\$ -</u>

Research and development costs included in discontinued operations can be analysed as follows:

	For the Year Ended December 31,		For the Period From January 1, 2019 to November 8,
	2021	2020	2019
Wages and benefits	\$ -	\$ -	\$ 3,565,076
Supplies	-	-	1,412,572
Subcontract fees	-	-	728,457
Stock-based compensation	-	-	(28,883)
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 5,677,222</u>

Selling, marketing and administration costs included in discontinued operations can be analysed as follows:

Wages and benefits	\$ -	\$ -	\$ 887,860
Rent and facility costs	-	-	604,442
General expenses	-	-	458,465
Stock-based compensation	-	-	(46,725)
Professional fees	-	-	46,484
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,950,526</u>

Cash flows from (used in) discontinued operations

	2021	2020	2019
CASH (USED IN) PROVIDED BY:			
OPERATING ACTIVITIES			
Net income (loss)	\$ -	\$ -	\$ 5,481,757
Adjustments for:			
Depreciation of property and equipment	-	-	-
Gain on sale of discontinued operations	-	-	(8,707,280)
Amortization of intangibles	-	-	-
Interest expense	-	-	74,494
Impairment loss	-	-	-
Stock-based compensation	-	-	(75,608)
Income tax recovery	-	-	-
Deferred rent	-	-	(1,825)
Expected credit loss	-	-	-
	<u>-</u>	<u>-</u>	<u>(3,228,462)</u>

POET TECHNOLOGIES INC.

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21. DISCONTINUED OPERATION (Continued)

Net change in non-cash working capital accounts:			
Accounts receivable	-	-	584,902
Prepaid and other current assets	-	-	497,259
Inventory	-	-	(334,425)
Accounts payable and accrued liabilities	-	-	(470,378)
Cash flows provided by (used in) operating activities	-	-	(2,951,104)
INVESTING ACTIVITIES			
Proceeds from the sale of discontinued operations, net of cash given up ⁽¹⁾	-	-	7,519,126
Purchase of property and equipment (Note 6)	-	-	(1,599,272)
Purchase of patents and licenses (Note 7)	-	-	(11,231)
Cash flows from investing activities	-	-	5,908,623
FINANCING ACTIVITIES			
Payment of lease liability (Note 8)	-	-	(258,460)
Cash flows from financing activities	-	-	(258,460)
EFFECT OF EXCHANGE RATE CHANGES ON CASH	-	-	(14,010)
NET CHANGE IN CASH	\$ -	\$ -	\$ 2,685,049

Effect of Disposal on the Financial Position of the Group on November 8, 2019

Accounts receivable	\$	396,037
Prepaid and other current assets		2,303,014
Inventory		774,404
Property and equipment		8,424,638
Right of use asset		880,577
Patents		29,696
Goodwill and customer list		6,718,953
Trade payables		(1,312,053)
Lease Liability		(695,733)
Deferred tax liability		(707,687)
Net assets disposed	\$	16,811,846
⁽¹⁾ Consideration received in cash	\$	8,000,000
⁽¹⁾ Cash given up		(480,874)
Consideration receivable		18,000,000
Net inflows	\$	25,519,126

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(Expressed in US Dollars)

22. GOODWILL, INTANGIBLE ASSET AND DEFERRED TAX LIABILITY

On May 11 and June 22, 2016 the Company acquired DenseLight and BB photonics for \$10,500,000 and \$1,550,000 respectively. The all stock purchases were accomplished with the issuance of 13,611,150 common shares and 1,996,090 common shares of the Company at a price of \$0.7714 and \$0.777 per share, respectively. The purchase price in both acquisitions exceeded the net assets acquired which resulted in the difference being accounted for as goodwill on the consolidated statements of financial position.

The continuity of goodwill is as follows:

	DenseLight	BB Photonics	Total
Balance January 1, 2019	\$ 6,630,544	\$ 1,050,459	\$ 7,681,003
Impairment	-	(1,050,459)	(1,050,459)
Disposed on the sale of DenseLight	(6,630,544)	-	(6,630,544)
Balance, December 31, 2019, 2020 and 2021	\$ -	\$ -	\$ -

Deferred tax liability was created on the date of purchase for both DenseLight and BB Photonics. The following is a continuity of deferred tax liability.

	DenseLight	BB Photonics	Total
Balance, January 1, 2019	707,687	292,740	1,000,427
Tax effect of Impairment	-	(292,740)	(292,740)
Disposed on the sale of DenseLight	(707,687)	-	(707,687)
Balance, December 31, 2019, 2020 and 2021	\$ -	\$ -	\$ -

Included in the sale of DenseLight on November 8, 2019 was \$6,630,544 of goodwill and \$707,687 of deferred liability.

INTANGIBLE ASSETS

	Technology	Customer Relationships	Total
Balance, January 1, 2019	\$ 714,000	\$ 186,131	\$ 900,131
Impairment	(714,000)	-	(714,000)
Disposals ⁽¹⁾	-	(186,131)	(186,131)
Balance, December 31, 2019, 2020 and 2021	-	-	-
Balance, January 1, 2019	-	97,722	97,722
Amortization for the year	-	-	-
Disposals ⁽¹⁾	-	(97,722)	(97,722)
Balance, December 31, 2019, 2020 and 2021	-	-	-
At December 31, 2019, 2020, 2021	\$ -	\$ -	\$ -

(1) The Company disposed of its customer relationships intangible assets and related amortization on November 8, 2019 with the sale of DenseLight (Note 21).

POET TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Expressed in US Dollars)

23. REVENUE

Disaggregated Revenues

The Company disaggregates revenue by timing of revenue recognition, that is, at a point in time and revenue over time. During the year ended December 31, 2021, the Company recognized \$209,100 from non-recurring engineering services. The revenue was over time. All performance obligations were fulfilled and there were no contract assets or liabilities at December 31, 2021. The Company did not recognize revenue during the years ended December 31, 2020 and 2019.

24. INCOME TAXES

The following table reconciles the expected income tax recovery at the Canadian statutory income tax rate of 26.5% for 2021 (2020 - 26.5%, 2019 - 26.5%) to the amounts recognized in operations.

For the Year Ended December 31,	2021	2020	2019
Net loss, continuing operations	\$ (15,669,093)	\$ (18,169,070)	\$ (11,727,372)
Net income, discontinued operations	-	-	5,481,757
Net loss before taxes	\$ (15,669,093)	\$ (18,169,070)	\$ (6,245,615)
Expected current income tax recovery	4,152,310	4,814,804	1,655,088
Deferred tax recovery	-	-	292,740
	4,152,310	4,814,804	1,947,828
For the Year Ended December 31,	2021	2020	2019
Adjustments to income tax recovery:			
Amounts not deductible for tax purposes	\$ (1,201,600)	\$ (957,400)	\$ (1,212,900)
Other non-deductible items	(111,000)	(137,000)	(173,000)
Other deductible items	157,000	115,000	216,000
Non-taxable gain	383,000	-	2,307,000
Non-taxable loan forgiveness	49,000	-	-
Foreign tax differential	(508,000)	(221,000)	591,000
Non-recognizable permanent capital loss	-	-	(1,175,000)
Unusable foreign tax recoveries	-	-	(7,040,081)
Unrecognized tax recovered (losses)	(2,920,710)	(3,614,404)	4,831,893
Income tax recovery recognized	\$ -	\$ -	\$ 292,740

The following table reflects future income tax assets at December 31:

	2021	2020	2019
Resource assets	\$ 1,024,271	\$ 1,024,271	\$ 1,024,271
Gross unamortized share issue costs	1,114,604	325,600	385,000
Canadian non-capital losses	21,404,000	22,969,000	16,545,000
Canadian capital losses	5,565,125	4,432,532	4,432,500
US non-capital losses	86,073,000	78,829,000	75,060,000
Singapore non-capital losses	9,180,000	3,753,000	378,000
	124,361,000	111,333,403	97,824,771
Unrecognized deferred tax assets	(124,361,000)	(111,333,403)	(97,824,771)
Deferred income tax assets recognized	\$ -	\$ -	\$ -

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in US Dollars)

25. COVID-19 GOVERNMENT SUPPORT LOANS

In March 2020, the United States Congress passed the Paycheck Protection Program (“PPP”), authorizing loans to small businesses for use in paying employees that they continue to employ throughout the COVID-19 pandemic and for rent, utilities and interest on mortgages. Loans obtained through the PPP are eligible to be forgiven as long as the proceeds are used for qualifying purposes and certain other conditions are met. On May 3, 2020, the Company received a loan in the amount of \$186,747 through the PPP. During the year, the Company received notice from the Small Business Administration of Washington, DC that the PPP loan was forgiven in full. The forgiven loan was reclassified to the consolidated statements of operations and deficit and recognized as income for the year ended December 31, 2021.

On April 9, 2020, the Canadian government launched the Canada Emergency Business Account (“CEBA”) which is intended to support businesses during COVID-19 by providing interest free financing of up to \$31,660 (CA\$40,000) until December 31, 2023. If 75% of the loan is repaid by December 31, 2023, the loan recipient will be eligible for a loan forgiveness of the remaining 25% of the amount loaned. On April 15, 2020, the Company received a loan in the amount of \$31,660 through the CEBA. If the loan has not been repaid by December 31, 2023, the outstanding amount will be automatically extended for an additional two years at 5% interest per annum payable monthly and maturing on December 31, 2025. The Company expects to repay 75% of the amount borrowed prior to December 31, 2023.

26. SUBSEQUENT EVENTS

On March 14, 2022 the Company's common shares began trading on the NASDAQ under the trading symbol “POET”.



Ministry of Government and Consumer Services
Ministère des Services gouvernementaux et des Services aux consommateurs

Certificate of Amendment

Certificat de modification

Business Corporations Act

Loi sur les sociétés par actions

POET TECHNOLOGIES INC.

Corporation Name / Dénomination sociale

641402

Ontario Corporation Number / Numéro de société de l'Ontario

This is to certify that these articles are effective on

La présente vise à attester que ces statuts entreront en vigueur le

February 24, 2022 / 24 février 2022

Barbara Duckitt

Director / Directeur

Business Corporations Act / Loi sur les sociétés par actions

The Certificate of Amendment is not complete without the Articles of Amendment



Ce certificat de modification n'est pas complet s'il ne contient pas les statuts de modification

Certified a true copy of the record of the Ministry of Government and Consumer Services.

Barbara Duckitt

Director/Registrar

Copie certifiée conforme du dossier du ministère des Services gouvernementaux et des Services aux consommateurs.

Barbara Duckitt

Directeur ou registrateur



Articles of Amendment

Business Corporations Act

Corporation Name (Date of Incorporation/Amalgamation)
POET TECHNOLOGIES INC. (November 14, 1985)

1. The name of the corporation is changed to:
Not amended

2. The number of directors or the minimum/maximum number of directors are amended as follows:
Not amended

3. The articles are amended as follows:

A. Restrictions, if any, on business the corporation may carry on or on powers the corporation may exercise. If none, enter "None":
Not amended

B. The classes and any maximum number of shares that the corporation is authorized to issue:
The Articles of the Corporation are amended as follows: 1. To consolidate all of the issued and outstanding common shares of the Corporation (the "Common Shares") on a 10:1 basis; such that every ten (10) pre-consolidation Common Shares shall be consolidated into one (1) post-consolidated Common Share (the "Consolidation"). 2. No fractional Common Shares will be issued upon giving effect to the Consolidation. All fractions of Common Shares post-Consolidation will be rounded down to the next lowest whole number and no cash will be payable in lieu thereof.

C. Rights, privileges, restrictions and conditions (if any) attaching to each class of shares and directors' authority with respect to any class of shares which may be issued in series. If there is only one class of shares, enter "Not Applicable":

The endorsed Articles of Amendment are not complete without the Certificate of Amendment.
Certified a true copy of the record of the Ministry of Government and Consumer Services.

Suzanne Luckett
Director/Registrar, Ministry of Government and Consumer Services

Not amended

D. The issue, transfer or ownership of shares is/is not restricted and the restrictions (if any) are as follows. If none, enter "None":

Not amended

E. Other provisions:

Not amended

4. The amendment has been duly authorized as required by sections 168 and 170 (as applicable) of the Business Corporations Act.

5. The resolution authorizing the amendment was approved by the shareholders/directors (as applicable) of the corporation on:

October 07, 2021

The articles have been properly executed by the required person(s).

The endorsed Articles of Amendment are not complete without the Certificate of Amendment.
Certified a true copy of the record of the Ministry of Government and Consumer Services.

Sachana Duckitt

Director/Registrar, Ministry of Government and Consumer Services

Exhibit 4.10**POET TECHNOLOGIES INC.****2021 STOCK OPTION PLAN (the "Plan")****1. Purchase of the Plan**

The purpose of the Plan is to assist the Corporation in attracting, retaining and motivating Directors, Employees and Consultants of the Corporation and which terms are hereinafter collectively referred to as ("Directors, Employees and Consultants") and any of its subsidiaries and to closely align the personal interests of such Directors, Employees and Consultants with those of the shareholders by providing them with the opportunity, through options, to acquire common shares in the capital of the Corporation. Capitalized terms used in this Plan that are not otherwise defined have the meanings ascribed to them in TSX Venture Exchange Policy 4.4 – Incentive Stock Options ("Policy 4.4") or TSX Venture Exchange Policy 1.1 - Interpretation.

2. Implementation

The Plan and the grant and exercise of any options under the Plan are subject to compliance with the applicable requirements of each stock exchange ("Exchanges") on which the shares of the Corporation are listed at the time of the grant of any options under the Plan and of any governmental authority or regulatory body to which the Corporation is subject.

Upon approval by the Shareholders of the Corporation, the Plan will replace and supersede the previous Plan known as the "2020 Stock Option Plan" which was approved by Shareholders on August 26, 2020. Notwithstanding that at some future date, the shares of the Corporation are no longer listed on the TSX Venture Exchange, the Plan will remain in effect until amended or discontinued in accordance with section 7, provided that it is in compliance with all applicable corporate and securities laws, rules and regulations.

3. Administration

The Plan shall be administered by the Board of Directors of the Corporation which shall, without limitation, subject to the approval of the Exchanges, have full and final authority in its discretion, but subject to the express provisions of the Plan, to interpret the Plan, to prescribe, amend and rescind rules and regulations relating to it and to make all other determinations deemed necessary or advisable for the administration of the Plan. The Board of Directors may delegate any or all of its authority with respect to the administration of the Plan and any or all of the rights, powers and discretions with respect to the Plan granted to it hereunder to such committee of directors of the Corporation as the Board of Directors may designate and upon such delegation such committee of directors, as well as the Board of Directors, shall be entitled to exercise any or all of such authority, rights, powers and discretions with respect to the Plan. When used hereafter in the Plan, "Board of Directors" shall be deemed to include a committee of directors acting on behalf of the Board of Directors.

4. Shares Issuable Under the Plan

Subject to the requirements of the TSX Venture Exchange:

- (a) the aggregate number of shares ("Optioned Shares") that may be issuable pursuant to options granted under the Plan will not exceed 70,905,183 shares (being an increase of 12,366,629 since last shareholders' approval) hereinafter referred to as the "Fixed Number";
- (b) this Plan, in order to be implemented, requires the approval of the majority of the shareholders of the Corporation;
- (c) unless this Plan is approved by the majority of the disinterested shareholders of the Corporation (the "Disinterested Approval"),
 - (i) the aggregate number of shares reserved for issuance under stock options granted to Insiders of the Corporation (as a group), at any point in time, under this Plan and all outstanding stock option plans or grants of options may not exceed 10% of the issued shares of the Corporation;
 - (ii) no options exceeding an aggregate of 10% of the issued shares of the Corporation, calculated at the date an option is granted to an Insider, may be granted to Insiders (as a Group) within a 12 month period under this Plan and all outstanding stock option plans or grants of options.;

- (iii) no options exceeding an aggregate of 5% of the issued shares of the Corporation, calculated on the date an option is granted to the Person, may be granted to any one Person (and, where permitted under Policy 4.4, any Companies wholly owned by that Person) within a 12 month period under this Plan and all outstanding stock option plans or grants of options;
- (iv) upon the Corporation obtaining the requisite Disinterested Approval, the provisions set out in this subsection 4 (c) shall no longer apply;
- (d) no options exceeding an aggregate of 2% of the issued shares of the Corporation, calculated at the date an option is granted to the Consultant, may be granted to any one Consultant in a 12 month period;
- (e) no options exceeding an aggregate of 2% of the issued shares of the Corporation, calculated at the date an option is granted to any such Person, may be granted to all Persons retained to provide Investor Relations Activities in any 12 month period. Persons retained to provide Investor Relations Activities shall include any Consultant that performs Investor Relations Activities and any Employee or Director whose role and duties primarily consist of Investor Relations Activities.
- (f) Policy 4.4 requires that the Board of Directors, through the establishment of appropriate procedures, monitor the trading in the securities of the Issuer by all Optionees performing Investor Relations Activities. These procedures may include, for example, the establishment of a designated brokerage account through which the Optionee conducts all trades in the securities of the Issuer or a requirement for such Optionees to file insider trade reports with the Board.

5. Eligibility

(a) General

Options may be granted under the Plan to Directors, Employees, Consultants, and Consultant Companies of the Corporation and any of its subsidiaries (collectively the "Optionees" and individually an "Optionee"). Subject to the provisions of the Plan, the total number of Optioned Shares to be made available under the Plan and to each Optionee, the time or times and price or prices at which options shall be granted, the time or times at which such options are exercisable, and any conditions or restrictions on the exercise of options, shall be in the full and final discretion of the Board of Directors.

(b) Consultant Company and other Companies

Provided that a Form 4F (*Certification and Undertaking Required from a Company Granted an Incentive Stock Option*) duly completed and signed by the Optionee in the form attached hereto as Schedule "B" or such other form as may be amended by the TSX Venture Exchange from time to time, options may also be granted under the Plan to:

- (i) Except in relation to a Consultant Company, a company which is providing consulting services to the Corporation and is wholly owned by individuals eligible for an option grant.

(c) Management Company Employees

Options may also be granted to individuals (hereinafter referred to as "Management Company Employees") employed by a company providing management services to the Corporation, which services are required for the ongoing successful operation of the business enterprise of the Corporation, except for services involving Investor Relations Activities.

(d) Options Granted to Employees, Consultants or Management Company Employees

The Corporation and the Optionee are responsible for ensuring and confirming that, in the event it wishes to grant options under the Plan to Employees, Consultants, Consultant Companies or Management Company Employees, it will only grant such options to Optionees who are bona fide Employees, Consultants, Consultant Companies or Management Company Employees, as the case may be.

6. Terms and Conditions

All options under the Plan shall be granted upon and subject to the terms and conditions hereinafter set forth.

(a) Exercise price

The exercise price to each Optionee for each Optioned Share shall be determined by the Board of Directors, but shall be:

- (i) not less than the last closing price of the Corporation's common shares as traded on the TSX Venture Exchange before the date of the stock option grant, unless the price determined by the Board of Directors is discounted, in which case shall not be less than the Discounted Market Price of the Corporation's common shares as traded on the TSX Venture Exchange, or
- (ii) such other price as may be agreed to by the Corporation and accepted by the TSX Venture Exchange,

provided that the exercise price for each Optioned Share in respect of options granted within 90 days of a Distribution by a Prospectus shall not be less than the greater of the Discounted Market Price and the price per share paid by public investors for listed shares of the Corporation under the Distribution.

(b) Reduction in the Exercise Price of Options Granted to Insiders

In the event the Corporation wishes to reduce the exercise price of any options held by Insiders of the Corporation at the time of the proposed reduction, the approval of the disinterested Shareholders of the Corporation will be required prior to the exercise of any such options at the reduced exercise price.

(c) Option Agreement

All options shall be granted under the Plan by means of an agreement (the "Option Agreement") between the Corporation and each Optionee in the form attached hereto as Schedule "A" or such other form as may be approved by the Board of Directors, such approval to be conclusively evidenced by the execution of the Option Agreement by any one director or officer of the Corporation, or otherwise as determined by the Board of Directors.

(d) Length of Grant

Subject to sections 6 (k), 6 (m), 6 (n), 6 (o), 6 (p) and 6 (s), all options granted under the Plan shall be for a term determined by the Board of Directors, provided that no options shall expire later than that date which is 10 years from the date such options were granted.

(e) Non-Assignability of Options

All options granted under the Plan are non-transferable and non-assignable (whether absolutely or by way of mortgage, pledge or other charge) by an Optionee other than by will or other testamentary instrument or the laws of succession (subject to section 6 (p) hereof) and may be exercisable during the lifetime of the Optionee only by such Optionee.

(f) Vesting Schedules

The following vesting schedules will apply to incentive stock options granted under the Plan. Each Optionee who is granted options under the Plan will become vested with the right to exercise one-quarter (1/4) of the options on the first anniversary of the grant and the remaining options vesting quarterly over the next three years, such that the Optionee will be vested with the right to exercise one hundred percent (100%) of the options granted upon the conclusion of forty-eight (48) months from the date of the grant of the options. The Board of Directors may, at the time of grant, apply a different vesting schedule for any or all options granted, including such schedule whereby the options will vest immediately, provided that options granted to Persons retained to provide "Investor Relations Activities" must vest in stages over a period of not less than 12 months with no more than one-quarter (1/4) of the options vesting in any three month period.

(g) Right to Postpone Exercise

Each Optionee, upon becoming entitled to exercise the option in respect of any Optioned Shares in accordance with the Option Agreement, shall thereafter be entitled to exercise the option to purchase such Optioned Shares at any time prior to the expiration or other termination of the Option Agreement or the option rights granted thereunder in accordance with such agreement.

(h) Exercise and Payment

Any option granted under the Plan may be exercised by an Optionee or, if applicable, the legal

representatives of an Optionee, giving notice to the Corporation specifying the number of shares in respect of which such option is being exercised, accompanied by payment (by bank draft or certified cheque/check payable to the Corporation) of the entire exercise price (determined in accordance with the Option Agreement) for the number of shares specified in the notice. Upon any such exercise of an option by an Optionee the Corporation shall cause the transfer agent and registrar of shares of the Corporation to promptly deliver to such Optionee or the legal representatives of such Optionee, as the case may be, a share certificate in the name of such Optionee or the legal representatives of such Optionee, as the case may be, representing the number of shares specified in the notice. If the Corporation has engaged an administrator to administer the Plan, such as an Internet-based administration platform, which also includes the availability of a broker-assisted exercise process, the Optionee agrees to follow the procedures established by the Corporation or such administrator with respect to the exercise of options.

(i) Rights of Optionees

The Optionees shall have no rights whatsoever as shareholders in respect of any of the Optioned Shares (including, without limitation, voting rights or any right to receive dividends, warrants or rights under any rights offering) other than Optioned Shares in respect of which Optionees have exercised their option to purchase and which have been issued by the Corporation.

(j) Effect of a Take-Over Bid

If a bona fide offer (an "Offer") for Shares is made to the Optionee or to shareholders of the Corporation generally or to a class of shareholders which includes the Optionee, which Offer, if accepted in whole or in part, would result in the offeror becoming a control person of the Corporation, within the meaning of subsection 1(1) of the Securities Act, the Corporation shall, immediately upon receipt of notice of the Offer, notify each Optionee of full particulars of the Offer, whereupon (subject to the approval of the Exchanges) all Option Shares subject to such Option will become fully vested and the Option may be exercised in whole or in part by the Optionee so as to permit the Optionee to tender the Option Shares received upon such exercise, pursuant to the Offer. However, if:

- (i) the Offer is not completed within the time specified therein; or
- (ii) all of the Option Shares tendered by the Optionee pursuant to the Offer are not taken up or paid for by the offeror in respect thereof;

then the Option Shares received upon such exercise, or in the case of clause (b) above, the Option Shares that are not taken up and paid for, may be returned by the Optionee to the Corporation and reinstated as authorized but unissued Shares and with respect to such returned Option Shares, the Option shall be reinstated as if it had not been exercised and the terms upon which such Option Shares were to become vested pursuant to section 6 (f) shall be reinstated. If any Option Shares are returned to the Corporation under this section 6 (g), the Corporation shall immediately refund the exercise price to the Optionee for such Option Shares.

(k) Acceleration of Expiry Date

If at any time when an Option granted under the Plan remains unexercised with respect to any Unissued Option Shares, an Offer is made by an offeror, the Directors may, upon notifying each Optionee of full particulars of the Offer, declare all Option Shares issuable upon the exercise of Options granted under the Plan, fully vested, and declare that the Expiry Date for the exercise of all unexercised Options granted under the Plan is accelerated so that all Options will either be exercised or will expire prior to the date upon which Shares must be tendered pursuant to the Offer. The Directors shall give each Optionee as much notice as possible of the acceleration of the Options under this section, except that not less than 5 business days' and not more than 30 calendar days' notice is required.

(l) Effect of a Change of Control

If a Change of Control occurs, all Option Shares subject to each outstanding Option will become fully vested, whereupon such Option may be exercised in whole or in part by the Optionee, subject to the approval of the Exchanges if necessary.

(m) Alterations in Shares

In the event of a stock dividend, subdivision, redivision, consolidation, share reclassification (other than

pursuant to the Plan), amalgamation, merger, corporate arrangement, reorganization, liquidation or the like, of or by the Corporation, the Board of Directors may make such adjustment, if any, of the number of Optioned Shares, or of the exercise price, or both, as it shall deem appropriate to give proper effect to such event. If because of a proposed merger, amalgamation or other corporate arrangement or reorganization, the exchange or replacement of shares in the Corporation for those in another corporation is imminent, the Board of Directors may, in a fair and equitable manner, determine the manner in which all unexercised option rights granted under the Plan shall be treated including, for example, requiring the acceleration of the time for the exercise of such rights by the Optionees and of the time for the fulfillment of any conditions or restrictions on such exercise. All determinations of the Board of Directors under this section 6 (m) shall be full and final.

(n) Termination for Cause

If an Optionee ceases to be either a Director, Employee, Consultant or Management Company Employee of the Corporation or of any of its subsidiaries as a result of having been dismissed from any such position for cause, all unexercised option rights of that Optionee under the Plan shall immediately become terminated and shall lapse, notwithstanding the original term of the option granted to such Optionee under the Plan.

(o) Termination Other Than For Cause

- (i) If an Optionee ceases to be either an Employee, Consultant or Management Company Employee of the Corporation or any of its subsidiaries for any reason other than as a result of having been dismissed for cause as provided in section 6 (n) or as a result of the Optionee's death, such Optionee shall have the right for a period of 90 days (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of ceasing to be either an Employee, Consultant or Management Company Employee to exercise the option under the Plan with respect to all Optioned Shares of such Optionee to the extent they were exercisable on the date of ceasing to be either an Employee, Consultant or Management Company Employee. Upon the expiration of such 90 day period all unexercised option rights of that Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to such Optionee under the Plan.
- (ii) If an Optionee ceases to be either a Director or Officer of the Corporation or any of its subsidiaries for any reason other than as a result of having been dismissed for cause as provided in section 6 (n) or as a result of the Optionee's death, such Optionee shall have the right for a period of one year (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of ceasing to be either a Director or Officer to exercise the option under the Plan with respect to all Optioned Shares of such Optionee to the extent they were exercisable on the date of ceasing to be either a Director or Officer. Upon the expiration of such one year period all unexercised option rights of that Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to such Optionee under the Plan.
- (iii) If an Optionee engaged in providing Investor Relations Activities to the Corporation ceases to be employed in providing such Investor Relations Activities, such Optionee shall have the right for a period of 30 days (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of ceasing to provide such Investor Relations Activities to exercise the option under the Plan with respect to all Optioned Shares of such Optionee to the extent there were exercisable on the date of ceasing to provide such Investor Relations Activities. Upon the expiration of such 30-day period all unexercised option rights of that Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to such Optionee under the Plan.

(p) Deceased Optionee

In the event of the death of any Optionee, the legal representatives of the deceased Optionee shall have the right for a period of one year (or until the normal expiry date of the option rights of such Optionee if earlier) from the date of death of the deceased Optionee to exercise the deceased Optionee's option with respect to all of the Optioned Shares of the deceased Optionee to the extent they were exercisable on the date of death. Upon the expiration of such period all unexercised option rights of the deceased Optionee shall immediately become terminated and shall lapse notwithstanding the original term of the option granted to the deceased Optionee under the Plan.

(q) **Hold Period**

In addition to any resale restrictions under securities legislation, securities regulation and securities rules, as amended, and the policies, notices, instruments and blanket orders in force from time to time that are applicable to an Issuer, and any other circumstances for which the Exchange Hold Period may apply, where the exercise price of the stock option is at a discount to the Market Price, all stock options and any Option Shares issued under stock options exercised prior to the expiry of the Exchange Hold Period must be legended with the Exchange Hold Period commencing on the date the stock options were granted.

(r) **Cancelled or Expired Options**

Options that have been cancelled or that have expired without being exercised continue to be issuable under the plan under which they were approved.

(s) **Extension of Options during Blackout Period.**

Stock options governed by this plan that have an expiry date which falls within a period (a "blackout period") during which the Corporation prohibits Optionees from exercising their stock options are automatically extended as set out below. The following requirements are applicable to any such automatic extension provision:

- (i) The blackout period must be formally imposed by the Corporation pursuant to its internal trading policies as a result of the bona fide existence of undisclosed Material Information. For greater certainty, in the absence of the Corporation formally imposing a blackout period, the expiry date of any options will not be automatically extended in any circumstances.
- (ii) The blackout period must expire upon the general disclosure of the undisclosed Material Information. The expiry date of the affected stock options can be extended to no later than ten (10) business days after the expiry of the blackout period.
- (iii) The automatic extension of an Optionee's options will not be permitted where the Optionee or the Issuer is subject to a cease trade order (or similar order under Securities Laws) in respect of the Issuer's securities.

7. Amendment and Discontinuance of Plan

Subject to the acceptance of the Exchanges, the Board of Directors may from time to time amend or revise the terms of the Plan or may discontinue the Plan at any time, provided that no such action may in any manner adversely affect the rights under any options earlier granted to an Optionee under the Plan without the consent of that Optionee.

8. No Further Rights

Nothing contained in the Plan nor in any option granted hereunder shall give any Optionee or any other person any interest or title in or to any shares of the Corporation or any rights as a shareholder of the Corporation or any other legal or equitable right against the Corporation whatsoever other than as set forth in the Plan and pursuant to the exercise of any option, nor shall it confer upon the Optionees any right to continue as a Director, Employee or Consultant of the Corporation or of any of its subsidiaries.

9. Compliance with Laws

The obligations of the Corporation to sell shares and deliver share certificates under the Plan are subject to such compliance by the Corporation and the Optionees as the Corporation deems necessary or advisable with all applicable corporate and securities laws, rules and regulations.

Approved by the Shareholders on October 7, 2021.

SCHEDULE "A"

POET TECHNOLOGIES INC.

STOCK OPTION PLAN - OPTION AGREEMENT

This Option Agreement dated ● (the "Grant Date") is entered into between POET TECHNOLOGIES INC. ("the Corporation") and ● (the "Optionee") pursuant to the Corporation's Stock Option Plan (the "Plan"). A copy of the current version of the Plan is available for download from SEDAR (www.sedar.com) or from the Company's website (<http://www.poet-technologies.com/documents/Stock-Option-Plan.pdf>).

The parties agree and confirm that: (i) the Optionee was granted ● options (the "Options"), each option entitling the optionee to purchase one common share (an "Option Share" or collectively the "Optioned Shares") of the Corporation for the price of ● per share (the "Exercise Price"); (ii) the Options will vest according to the vesting schedule set forth below, and only the vested Options are exercisable; (iii) unless exercised or cancelled earlier, the Options expire and this agreement will terminate on ● (the "Expiry Date"); (iv) the Options are subject to the conditions set out in the Plan and subject to there being no objection by the TSX Venture Exchange to the grant of the Option to the Optionee.

[INSERT VEST SCHEDULE TABLE]

For greater certainty, the Options continue to be exercisable until the termination or cancellation thereof as provided in this Option Agreement and the Plan.

By signing this Option Agreement, the Optionee acknowledges that the Optionee (i) is either a bona fide Director, Officer, Employee, Consultant, or Management Company Employee of the Corporation (as defined in Policy 4.4 of the TSX Venture Exchange), (ii) has read and understands the Plan, and (iii) agrees to the terms and conditions of the Plan and this Option Agreement.

The Optionee hereby agrees to comply with all applicable Canadian securities laws, all applicable securities laws of the Subscriber's jurisdiction of residence and all applicable Rules, Regulations and Policies of the TSX Venture Exchange for the exercise of Options and the sale of the Optioned Shares. Any sale of shares issuable under this Option Agreement prior to the effective date of the exercise is considered a short sale under applicable securities laws.

The Corporation has engaged Solium Capital Inc. ("Solium") to administer the Plan using an Internet-based administration platform, which also includes the availability of a broker-assisted exercise process. The Optionee can exercise his Option by executing an "Exercise and Hold" or "Exercise and Sell" transaction by accessing Solium's website or by telephone. For Exercise and Hold transactions, the aggregate Exercise Price along with the applicable withholding income taxes ("Taxes") will need to be sent to the Secretary of the Corporation before the Optioned Shares can be issued and sent to the Optionee. For Exercise and Sell transactions, the aggregate Exercise Price along with the applicable Taxes will be paid to Corporation by Solium from the proceeds of the sale of the Optioned Shares.

Upon any exercise of Options pursuant to an Exercise and Sell transaction, if the Optionee is a person residing in the United States at the time of exercising his Option, the Optionee covenants, agrees and certifies that as at the date of such exercise,

- he is not an affiliate of the Corporation, as that term is defined in the U.S Securities Act of 1933, (or if he is, he is an affiliate of the Corporation only by virtue of being an officer or director of the Corporation),
- he has not offered, and has not instructed any person to offer, the Optioned Shares to a person in the United States;
- the sale of his Optioned Shares should only be executed in, on or through the facilities of The TSX Venture Exchange and neither he nor any person acting on his behalf know that a sale has been prearranged with a buyer in the United States,
- neither he nor any affiliate of his nor any person acting on his behalf has engaged or will engage in any directed selling efforts in the United States in connection with the offer and sale of such Optioned Shares,
- the sale will be bona fide and not for the purpose of "washing off" any resale restrictions imposed,
- he does not intend to replace the shares sold with fungible unrestricted securities; and
- his sale or contemplated sale is not a transaction, or part of a series of transactions which is part of a plan or scheme to evade the registration provisions of the 1933 Act.

Executed by the Corporation as of ●.

POET TECHNOLOGIES INC.

Acceptance

Per: _____
Authorized Signatory

OPTIONEE (Employee Number)

Dated:



FORM 4F
CERTIFICATION AND UNDERTAKING REQUIRED FROM A
COMPANY GRANTED AN INCENTIVE STOCK OPTION

Re: _____ (the "Issuer")

Trading Symbol: _____

_____ (the "Option Holder") certifies that all securities of the Option Holder are owned by _____, a Person eligible to be granted an incentive stock option, and undertakes, for the duration of the time that the Option Holder is the holder of an incentive stock option in the securities of the Issuer, that it will not:

1. effect or permit any transfer of ownership or option of securities of the Option Holder; or
2. allot and issue further securities of any class of shares of the Option Holder to any other individual or entity.

Acknowledgement - Personal Information

"Personal Information" means any information about an identifiable individual, and includes the information contained in the first paragraph of this Form.

The undersigned hereby acknowledges and agrees that it has obtained the express written consent of each individual to:

- (a) the disclosure of Personal Information by the undersigned to the Exchange (as defined in Appendix 6A) pursuant to this Form; and
- (b) the collection, use and disclosure of Personal Information by the Exchange for the purposes described in Appendix 6A or as otherwise identified by the Exchange, from time to time.

Dated _____

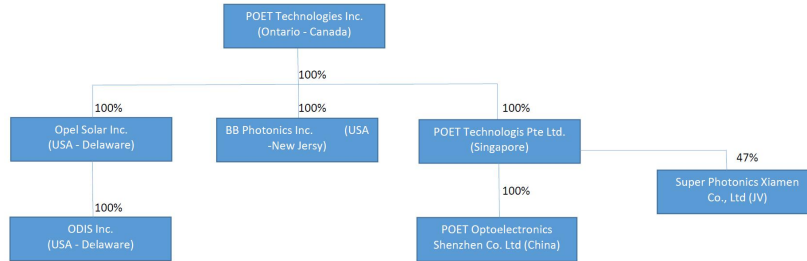
[Name of Option Holder]

Authorized signatory

Exhibit 8.1

**POET Technologies
List of Associated Companies
2021**

All Companies 100% owned except for JV



- POET Technologies Head office, administrative functions, entity to raise capital. 2% of R&D performed out of POET
- Opel Solar Owns some historic patents that are not involved in the current tech. Was the operating sub in the US when the company had a solar business
- ODIS Inc Operating sub doing R&D in the US. 30% of R&D is from the US.
- POET Singapore Singapore sub currently doing bearing lion share of tech development. Currently stands at 68%
- POET SZ Operating sub in China
- BB Photonics Dormant entity
- Super Photonics JV established in March 2021

Exhibit 12.1**CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Suresh Venkatesan, certify that:

1. I have reviewed this annual report on Form 20-F of POET Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 26, 2022

By: /s/ Suresh Venkatesan
Suresh Venkatesan
Chief Executive Officer

Exhibit 12.2

**CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Thomas Mika, certify that:

1. I have reviewed this annual report on Form 20-F of POET Technologies Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the company as of, and for, the periods presented in this report;
4. The company's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the company's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the company's internal control over financial reporting; and
5. The company's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the company's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the company's internal control over financial reporting.

Date: April 26, 2022

By: /s/ Thomas Mika
Thomas Mika
Chief Financial Officer

Exhibit 13.1**Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Suresh Venkatesan, the Chief Executive Officer of POET Technologies Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 20-F for the year ended December 31, 2021 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is provided solely for purposes of complying with the provisions of Section 906 of the Sarbanes-Oxley Act of 2002 and is not intended to be used or relied upon for any other purpose.

Date: April 26, 2022

/s/ Suresh Venkatesan

Name: Suresh Venkatesan

Title: Chief Executive Officer

Exhibit 13.2**Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Thomas Mika, the Chief Financial Officer of POET Technologies Inc. (the "Company"), hereby certify, that, to my knowledge:

1. The Annual Report on Form 20-F for the year ended December 31, 2021 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

The foregoing certification is provided solely for purposes of complying with the provisions of Section 906 of the Sarbanes- Oxley Act of 2002 and is not intended to be used or relied upon for any other purpose.

Date: April 26, 2022

/s/ Thomas Mika

Name: Thomas Mika

Title: Chief Financial Officer

**Exhibit 23.1**INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the incorporation by reference in the Registration Statement of POET Technologies Inc. on Form F-10 (File Nos. 333-255631, 333-227873 and 333-213422) of our report dated April 26, 2022, with respect to our audits of the consolidated financial statements of POET Technologies Inc. as of December 31, 2021, December 31, 2020 and December 31, 2019 and for the years ended December 31, 2021, December 31, 2020 and December 31, 2019 and our report dated April 26, 2022 with respect to our audit of internal control over financial reporting of POET Technologies Inc. as of December 31, 2021, which reports are included in this Annual Report on Form 20-F of POET Technologies Inc. for the year ended December 31, 2021.

Our report on the effectiveness of internal control over financial reporting expressed an adverse opinion because of the existence of a material weakness.

/s/ Marcum LLP

Marcum LLP
Hartford, CT
April 26, 2022



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