California Nanotechnologies Corp.
For the fiscal nine months ended November 30, 2022

MANAGEMENT DISCUSSION AND ANALYSIS

This Management Discussion and Analysis ("MD&A") should be read in conjunction with the Condensed Consolidated Interim Financial Statements and related notes of California Nanotechnologies Corp. (the "Company" or "Cal Nano") for the fiscal nine months ended November 30, 2022. The Company's functional and presentation currency is U.S. dollars and all amounts in this MD&A are expressed in U.S. dollars. The Company reports its financial position, results of operations and cash flows in accordance with International Financial Reporting Standards ("IFRS"), as issued by the International Accounting Standards Board ("IASB"). This MD&A has been completed as of January 24, 2023.

A. Company Overview

Cal Nano's mission is to pioneer and commercialize next-generation Nanophase and advanced materials and products to fulfill rising industry demand. Cal Nano's primary technologies are Spark Plasma Sintering and cryogenic milling which enhance material performance by improving engineering properties. While historically an R&D partner, Cal Nano has transitioned to becoming a commercialization partner as customers transition to larger-scale production. Target markets are the semiconductor, cleantech, aerospace, defense, automotive, medical, and the oil and gas industries.

As the Official North American Technical and Training Partner of Fuji-SPS, a pioneer of Spark Plasma Sintering ("SPS") technology, Cal Nano offers SPS services, equipment sales and equipment support. SPS is the leading technology for sintering Nanophase, Functionally Graded, Diffusion Bonded, Thermoelectric, and other advanced materials. The Company is enhancing the technology and exploring more potential commercial opportunities via extensive collaborations and partnerships with select universities and tier one production suppliers. The Company purchased a Fuji Mark V SPS for pilot-scale R&D production activities in 2017.

Since inception, Cal Nano has been actively building industry recognition through published papers and other scientific endeavors. A listing of trade show activities is included at the end of this document.

B. Markets

Cal Nano currently services customers in the semiconductor, cleantech, aerospace, academic, automotive, medical, and the oil and gas industries. A related company, Omni-Lite Industries, has many long-standing relationships in these areas, providing further access to future commercial customers.

C. Results of Operations for the nine months ended November 30, 2022

Revenue: For the fiscal nine months ended November 30, 2022, the Company reported revenue of $1,019,570 compared to $609,080 from the prior fiscal year, an increase of 67%. The increase in the first nine months is due to the increase in spark plasma sintering and cryomilling programs for multiple customers across industries including work with our thermoelectrics and new biotech clients.

Net Income: Net Income for the fiscal nine months ended November 30, 2022 was $88,575 compared to a loss of $51,862 in the prior fiscal year. Depreciation expense continues to be significant as the Company operates the additional SPS equipment purchased for $675,750 in October 2017.

Operating Expenses: Overall operating expenses for the fiscal nine months ended November 30, 2022 was $521,133 compared to the prior fiscal year which totaled $414,011, an increase of 26%. This is due to an increase in payroll expenses during the quarter of $12,000, an increase in depreciation of approximately $21,000 for the ROU asset, an increase in both lab and shop expenses of $15,000 and $17,000 respectively.

Earnings (loss) per share: Basic earnings per share was $nil. The weighted average number of shares was 31,803,750.

The diluted earnings per share was $nil. At November 30, 2022, the diluted weighted average number of shares was 32,590,917.

The basic gain (loss) per common share is calculated using net income (loss) divided by the weighted-average number of common shares outstanding. The diluted gain (loss) per common share is calculated using net income (loss) divided by the weighted-average number of diluted common shares outstanding.

At November 30, 2022, 787,167 stock options were included in the calculation of the weighted average number of diluted common shares outstanding. At November 30, 2021, 1,770,000 options were excluded in calculating the weighted-average number because the Company was in a net loss position and therefore any exercise would be anti-dilutive.

SUMMARY OF FINANCIAL HIGHLIGHTS (U.S. $)
All figures in US dollars unless noted.

	For the nine months ended November 30, 2022	**For the nine months ended November 30, 2021**	**% Increase (decrease)**
Revenue	$ 1,019,570	$ 609,080	67%
Cash flow from operations	428,034	12,277	338%
Net income/(loss)	88,575	(51,862)	271%

Selected Quarterly Information

The following table summarizes selected quarterly information from the last eight quarters.

ALL FIGURES IN US DOLLARS UNLESS NOTED

	November 30, 2022	August 31, 2022	May 31, 2022	February 28, 2022	November 30, 2021	August 31, 2021	May 31, 2021	February 28, 2021
Revenue	$418,422	$271,968	$329,180	$472,420	$234,555	$168,155	$206,370	$148,164
Cash flow (used for) from operations	118,130	112,875	197,029	70,289	5,278	12,072	(5,073)	17,009
Net income (loss)	64,801	(26,496)	50,270	327,462	(19,729)	(22,414)	(9,719)	(37,546)

Liquidity and Capital Resources

The following table summarizes the Company's cash flows by activity and cash on hand.

	November 30, 2022	November 30, 2021
Net cash from operating activities	**$ 428,034**	$ 12,277
Net cash used for financing activities	**(163,614)**	608
Net cash used for investing activities	**(23,800)**	(7,721)
Net (decrease)/increase in cash	**240,620**	5,164
Cash at the beginning of the period	**51,332**	19,973
Cash at the end of the period	**291,952**	25,137

At November 30, 2022, the source of liquidity was cash from operating activities. The cash balance was $291,952. For the nine months ended November 30,2022, the Company's working capital (current assets less current liabilities) was $173,139 (deficiency in 2021 - $1,555,025).

The Company's functional and reporting currency is U.S. dollars; however, the calculation of income tax expense is based on income in the currency of the country of origin. As such, the Company is continually subject to foreign exchange fluctuations, particularly as the Canadian dollar moves against the U.S. dollar.

The Company manages its exposure to foreign currency fluctuations by maintaining foreign currency bank accounts to offset foreign currency payables and planned expenditures. The Company reports in its functional currency, the U.S. dollar.

The Company does not have any off-statement of financial position arrangements.

D. Key Developments

Cal Nano continues to focus on Spark Plasma Sintering and Cryogenic Milling as its main technologies and drivers for future development and growth. Cal Nano's pilot-scale SPS and cryomilling systems enable scale-up from small-scale R&D programs to low-volume production of powders and sintering products.

In June 2014, the Company purchased a larger mill, increasing its cryogenic milling capacity by a factor of six, which is now operational. The Company has received several larger development orders from a large, Seattle-based airframe manufacturer, which will require Cal Nano to utilize its new larger milling capacity. Cal Nano has also received orders from multiple other industrial and national lab partners for cryomilling at this larger capacity. In 2018, the Company has received a patent which outlines equipment designs and concepts which make the cryogenic milling safely and economically feasible on a large scale. Cal Nano is currently working on important cryomilling programs and continues to evaluate scale-up opportunities.

In 2018, the Company became the exclusive marketing partner of SUGA Co. Ltd, a manufacturer of SPS equipment in Japan. This relationship places Cal Nano as exclusive Technical and Marketing Partner in North America. In 2022, Cal Nano became the official distributor of SUGA's equipment in North America which provides an added revenue stream for the company. As a result, the Company received its first two SPS equipment sales that year as an exclusive distributor for SUGA Co. Ltd.

To complement the existing equipment at Cal Nano, larger production scale equipment is being evaluated as customer and partner needs are assessed. Cal Nano has recently completed and is in the process of working on multiple large-scale R&D programs which have the possibility to drive future growth.

E. Risk Factors

The Company is subject to a number of risks as outlined below.

Experimental Field

Cal Nano is engaged in the research and development of new materials with the goal of commercializing viable products. The nanotechnology industry and specifically the production of nanocrystalline materials require extensive experimental effort and can require significant investment. Customers may be hesitant to implement any new materials developed without extensive and time-consuming testing.

No Assurance of Commercial Production

Cal Nano has historically been a research and development firm. The Company is now in the commercial production phase of its growth, with the procurement of the large Fuji Mark V system in 2017. There is no assurance that it will achieve commercial levels of production or sales for any product.

E. Risk Factors-continued

Relationships with Customers

The success of Cal Nano is directly related to the strength of its relationships with and the economic success of its larger customers. Should Cal Nano's relationships with these customers become strained or the profitability of these customers become negatively affected, the Company's profitability may be impacted.

Competition

Cal Nano is engaged in the technology industry. There is a high degree of competition in these industries which could impact Cal Nano's ability to find and keep customers.

Potential Fluctuations in Financial Results

If Cal Nano's future anticipated revenues are not realized on a timely basis, Cal Nano's financial results could be materially adversely affected.

Financial results in the future may be influenced by these or other factors.

Management of Growth

Any expansion of Cal Nano's business may place a significant strain on its financial, operational and managerial resources. There can be no assurance that Cal Nano will be able to manage its operations and financial assets successfully in order to manage any growth it undertakes. Any inability of Cal Nano to manage growth successfully could have a material adverse effect on Cal Nano's business, financial condition and results of operations.

Government Regulations

Cal Nano may be subject to various laws, regulations, regulatory actions and court decisions that may have negative effects on Cal Nano. Changes in the regulatory environment imposed upon Cal Nano could adversely affect the ability of Cal Nano to attain its corporate objectives.

Reliance on Key Personnel and Consultants

There can be no assurance that any of Cal Nano's directors, officers or employees will remain with Cal Nano or that, in the future, directors, officers or employees will not organize competitive businesses or accept employment with companies competitive with Cal Nano.

E. Risk Factors-continued

Additional Financing Requirements and Access to Capital

Cal Nano may require additional financing to implement its business plan. The ability of the Company to arrange such financing in the future will depend in part upon the prevailing capital market conditions as well as the business performance of Cal Nano. There can be no assurance that Cal Nano will be successful in its efforts to arrange additional financing, if needed, on terms satisfactory to Cal Nano. If additional financing is raised by the issuance of shares from the treasury of Cal Nano, control of Cal Nano may change and shareholders may suffer additional dilution. There can be no assurance that Cal Nano will generate cash flow from operations necessary to support the continuing operations of Cal Nano.

F. Disclosure Controls and Procedures

Disclosure controls and procedures have been designed to ensure that information required to be disclosed by the Corporation is accumulated and communicated to our management as appropriate to allow timely decisions regarding disclosure. The Company's Chief Executive Officer and a Director have concluded, based on their evaluation at November 30, 2021, that the Company's disclosure controls and procedures are effective to provide reasonable assurance that material information related to Cal Nano, is made known to them by employees or third-party consultants working for the Company. It should be noted that while the Company's Chief Executive Officer and a Director believe that the disclosure controls and procedures will provide a reasonable level of assurance and that they are effective, they do not expect that the disclosure controls and procedures will prevent all errors and fraud. A control system, no matter how well conceived or operated, can provide only reasonable, not absolute assurance that the objectives of the control system are met.

G. Outstanding Share Capital

At November 30, 2022:

- Common Shares issued and outstanding: 31,803,750
- Stock options:

Description	Number
Options outstanding at November 30, 2022	2,420,000
Options exercisable at November 30, 2022	1,591,667

H. Transactions with Related Parties

Advances from related party are from a related entity that owns 19.1% of the Company's shares. The advances bear interest at 2% per annum through December 31, 2018, 2.89% through November 30, 2022, and 7.5% thereafter. The loan is secured by all the assets of the Company. No interest was paid during the nine months ended November 30, 2021 and November 30, 2022 on the advance amount of $904,879. Accrued interest and interest expense for the nine months ended November 30, 2022 was $306,331 (November 30, 2021 – $271,978), and $78,807 (2021-$9,740) respectively. A portion of the accrued interest in the amount of $140,643 was included in Advances to Related Party totaling $1,295,522. Also included is the principal paid by the related party in the amount of $250,000 on March 16, 2020. As a result of the bank calling its line of credit, the $250,000 payment was part of the guarantee agreement on the debt instrument. Interest expense of 4.25% on the $250,000 debt for the nine months ended November 30, 2022 was $7,969 (2021-$7,969). This related entity had guaranteed the Company's long-term primary credit facility and had no other transactions with the Company during the nine months ended November 30, 2022 (2021-nil). On August 1, 2021 the company entered into a lease agreement with the related entity.

On May 24, 2022, the Company entered into a demand agreement with the related party for the debt stated above. The terms of the agreement include an interest rate increase to 7.5% per annum, monthly interest payments of $7,501.95 beginning June 1, 2022, and monthly principal repayments of $10,000.00 commencing March 30, 2023. Payments of both interest and principal will continue until the earlier of full debt repayment or March 30, 2025.

I. Board of Directors

Some of the Company's directors are material shareholders.

J. Financial instruments

As part of its operations, the Company utilizes a number of financial instruments. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from these financial instruments except as otherwise disclosed. The Company manages these risks by operating in a manner that minimizes risk exposure to the extent practical.

J. Financial instruments-continued

Financial instruments of the Company consist of cash, accounts receivable, accounts payable and accrued liabilities, interest payable, bank indebtedness and advances from related parties.

	November 30, 2022		November 30, 2021	
	Carrying Value	**Fair Value**	Carrying Value	Fair Value
At FVTPL				
Cash	**$ 291,952**	**$ 291,952**	$ 25,137	$ 25,137
At amortized cost				
Accounts receivable	**207,583**	**207,583**	79,819	79,819
Accounts payable and accrued liabilities	**275,477**	**275,477**	110,416	110,416
Interest payable	**-**	**-**	137,779	137,779
Bank indebtedness	**-**	**-**	152,736	152,736
Advances from related party	**1,467,342**	**1,467,342**	1,295,522	1,295,522

Fair value represents the price at which a financial instrument could be exchanged in an orderly market, in an arm's length transaction between knowledgeable and willing parties who are under no compulsion to act. The Company classifies the fair value of the financial instruments according to the following hierarchy based on the amount of observable inputs used to value the instrument.

Level 1 Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 Pricing inputs are other than quoted prices in active markets included in level 1. Prices in level 2 are either directly or indirectly observable as of the reporting date. Level 2 valuations are based on inputs, including quoted forward prices for commodities, time value and volatility factors, which can be substantially observed or corroborated in the marketplace.

Level 3 Valuations in this level are those with inputs for the assets or liabilities that are not based on observable market date.

There have been no transfers during the period between Levels 1, 2 and 3.

The carrying values of accounts receivable, accounts payable and accrued liabilities, interest payable and current portion of bank indebtedness approximate their fair value due to their short-term nature.

The fair value of the Company's long-term portion of bank indebtedness approximate its fair values due to the interest rates applied to these instruments, which approximate market interest rates. The fair value of the Company's advances from related party approximate their fair values due to the amounts being due on demand.

J. Financial instruments-continued

The Company holds various forms of financial instruments. The nature of these instruments and the Company's operations expose the Company to various risks. The Company manages its exposure to these risks by operating in a manner that minimizes its exposure to the extent practical. The Company does not make use of off statement of financial position contracts to manage these risks.

Liquidity Risk

The Company defines liquidity risk as the financial risk that the Company will encounter difficulties meeting its obligations associated with financial liabilities. The Company's objective for managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due. This risk is mitigated by managing the cash flow by controlling receivables and payables to vendors and related parties. At November 30, 2022, the Company had a working capital of $173,139 (deficiency in 2021 – $1,555,025).

The following table provides an analysis of the financial liabilities based on the remaining terms of the liabilities as at:

Foreign currency risk
A portion of the Company's operations are located outside of the U.S. and, accordingly, the related financial assets and liabilities are subject to fluctuations in exchange rates.

November 30, 2022	**≤ 1 year**	**> 1 year ≤ 3 years**	**> 3 years ≤ 4 years**	**> 5 years**	**Total**
Accounts payable and accrued liabilities	**$ 275,477**				**275,477**
Lease liability	**20,277**	**46,439**	**26,535**	**160,761**	**254,012**
Advances from related party	**90,000**	**1,360,312**	**-**	**-**	**1,450,312**
Total	**$ 385,754**	**$1,406,751**	**$ 26,535**	**$ 160,761**	**$ 1,979,801**

November 30, 2021	≤ 1 year	> 1 year ≤ 3 years	> 3 years ≤ 4 years	> 5 years	Total
Accounts payable and accrued liabilities	$ 110,416	$ -	$ -	$ -	$ 110,416
Bank indebtedness	120,500	32,236	-	-	152,736
Advances from related party	1,295,522	-	-	-	1,295,522
Total	$ 1,526,438	$ 32,236	$ -	$ -	$1,558,674

J. Financial instruments-continued

The Company believes its exposure to foreign currency risk to be minimal. At November 30, 2021, the Company had the following balances denominated in CAD. The balances have been translated into U.S. dollars in accordance with the Company's foreign exchange accounting policy.

	U.S Dollar	U.S. Dollar

	November 30,2022	November 30, 2021
Accounts receivable	**$ 3,694**	$ 1,740
Accounts payable and accrued liabilities	**30,278**	25,137

The Company operates with a U.S. dollar functional currency which gives rise to currency exchange rate risk on the Company's Canadian dollar denominated monetary assets and liabilities, such as Canadian dollar bank accounts and accounts payable, as follows:

	Impact on Net Income
U.S. Dollar Exchange Rate – 10% increase	**$ 2,658**
U.S. Dollar Exchange Rate – 10% decrease	**(2,658)**

Credit risk

The Company manages credit risk by dealing with financially sound customers, based on an evaluation of the customer's financial condition. For the nine months ended November 30, 2022, the Company was engaged in contracts for products with two (2021 – one) customers in excess of 10% of revenue, which accounted for $292,984 (2021 - $74,640) or 27% (2021 – 12%) of the Company's total revenue. The maximum exposure to credit risk is the carrying value of accounts receivable and cash. Two (2021 - six) customer had an outstanding balance in excess of 10% of accounts receivable, which accounted for $112,016 (2021 - $69,370) or 67% (2021 - 87%) of the Company's total accounts receivable balance. The table below provides an analysis of the current and past due accounts receivables.

	Total	**Current**	**≤ 30 days**	**> 30 days ≤ 60 days**	**>60 days ≤ 90 days**	**> 90 days**
November 30, 2022	**$ 207,583**	**$ 174,104**	**$ 12,585**	**$ 3,404**	**$ 11,415**	**$ 6,075**
November 30, 2021	$ 77,847	$ 26,804	$ 19,520	$ 17,275	$ 13,825	$ 423

As at November 30, 2022, the average expected credit loss on the Company's accounts receivable was 0% and as a result the provision for expected credit losses is $nil.

Interest rate risk

As at November 30, 2022, the average expected credit loss on the Company's accounts receivable was 0% and as a result the provision for expected credit losses is $nil. All amounts due in the over 90 days category at November 30, 2022 were collected within the subsequent period.

K. Capital Disclosures

The Company manages its capital to maintain its ability to continue as a going concern and to provide returns to shareholders and benefits to other stakeholders. The capital structure of the Company consists of cash and equity comprised of issued capital, contributed surplus and deficit.

The Company manages its capital structure and makes adjustments to it in light of economic conditions. The Company, upon approval from its Board of Directors, will balance its overall capital structure through new share issues or by undertaking other activities as deemed appropriate under the specific circumstances.

The Company is not subject to externally imposed capital requirements and the Company's overall strategy with respect to capital risk management remains unchanged from the nine months ended November 30, 2022.

L. Conferences

CONFERENCES ATTENDED IN 2022

- The Minerals, Metals & Materials (TMS) 2022, Anaheim, CA, exhibitor, March 1-3,2022
- Materials Science & Technology, Pittsburgh, PA, exhibitor, October 9-12, 2022

CONFERENCES ATTENDED IN 2021

- PowderMet 2021, Orlando, CA, exhibitor, June 20-23, 2021
- Advanced Materials Show, Edison, NJ, exhibitor, October 13-14, 2021
- Ceramics Expo, Cleveland, OH, exhibitor, November 30-December 1, 2021
- The Minerals, Metals & Materials (TMS) 2022, Anaheim, CA, exhibitor, February 27-March 3, 2022

M. Intention of management's discussion and analysis

This MD&A is intended to provide an explanation of financial and operational performance compared with prior periods and the Company's prospects and plans. It provides additional information that is not contained in the Company's financial statements.

Additional information

Further information regarding California Nanotechnologies Corp. can be accessed under the Company's public filings found at www.sedar.com.

The information contained in this discussion may be considered to contain forward-looking statements. Such forward-looking statements address future events and conditions and are subject to risks and uncertainties that could cause actual results to differ materially from those contemplated. There is no representation by the Company that actual results will be the same in whole or in part as implied by the forward-looking statements provided.