

NANOPHASE TECHNOLOGIES Corp  
Form 10-Q  
August 14, 2018

**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

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**Form 10-Q**

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

For the Quarterly Period Ended: **June 30, 2018**

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) of the Securities Exchange Act of 1934**

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: **000-22333**

**Nanophase Technologies Corporation**

(Exact name of registrant as specified in its charter)

**Delaware** **36-3687863**  
(State or other jurisdiction of (I.R.S. Employer  
incorporation or organization) Identification No.)

**1319 Marquette Drive, Romeoville, Illinois 60446**

(Address of principal executive offices, and zip code)

Registrant's telephone number, including area code: **(630) 771-6708**

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 and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "accelerated filer", "large accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer

Non-accelerated filer Smaller reporting company

Emerging growth company

If an emerging growth company, 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 whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of August 13, 2018, there were 33,847,793 shares outstanding of common stock, par value \$.01, of the registrant.

**NANOPHASE TECHNOLOGIES CORPORATION**

**QUARTER ENDED JUNE 30, 2018**

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## PART I - FINANCIAL INFORMATION

**Item 1. Financial Statements****NANOPHASE TECHNOLOGIES CORPORATION****CONSOLIDATED CONDENSED BALANCE SHEETS****(Unaudited)**

	(in thousands except share and per share data)	
	June 30, <b>2018</b>	December 31, <b>2017</b>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$1,341	\$1,955
Trade accounts receivable, less allowance for doubtful accounts of \$5 on June 30, 2018 and December 31, 2017	1,428	1,115
Inventories, net	1,649	1,385
Prepaid expenses and other current assets	278	169
Total current assets	4,696	4,624
Equipment and leasehold improvements, net	1,640	1,624
Other assets, net	16	18
	<b>\$6,352</b>	<b>\$6,266</b>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Line of credit	\$500	\$300
Current portion of capital lease obligations	145	143
Accounts payable	1,601	1,038
Accrued expenses	677	543
Total current liabilities	2,923	2,024
Long-term portion of capital lease obligations	380	416
Long-term deferred rent	378	410
Asset retirement obligations	187	184
Total long-term liabilities	945	1,010

Stockholders' equity:

Preferred stock, \$.01 par value, 24,088 shares authorized and no shares issued and outstanding	—	—
Common stock, \$.01 par value, 42,000,000 shares authorized; 33,847,793 shares issued and outstanding on June 30, 2018 and December 31, 2017	338	338
Additional paid-in capital	98,651	98,563
Accumulated deficit	(96,505)	(95,669)
Total stockholders' equity	2,484	3,232
	\$6,352	\$6,266

*See Notes to Financial Statements.*

## NANOPHASE TECHNOLOGIES CORPORATION

## CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS

(Unaudited)

(in thousands except share and per share data)

	Three months ended June 30,		Six months ended June 30,	
	2018	2017	2018	2017
Revenue:				
Product revenue	\$4,043	\$3,535	\$6,910	\$7,001
Other revenue	73	47	104	66
Total revenue	4,116	3,582	7,014	7,067
Operating expense:				
Cost of revenue	2,711	2,381	5,199	4,662
Gross profit	1,405	1,201	1,815	2,405
Research and development expense	538	476	1,096	860
Selling, general and administrative expense	770	697	1,535	1,460
Income/(loss) from operations	97	28	(816)	) 85
Interest expense	9	6	20	16
Other, net	—	—	—	—
Income/(loss) before provision for income taxes	88	22	(836)	) 69
Provision for income taxes	—	—	—	—
Net income/(loss)	\$88	\$22	\$(836)	) \$69
Net income/(loss) per basic shares	\$0.00	\$0.00	\$(0.02)	) \$0.00
Weighted average number of basic common shares outstanding	33,847,793	31,234,330	33,847,793	31,232,223
Net income/(loss) per diluted share	\$0.00	\$0.00	\$(0.02)	) \$0.00
Weighted average number of diluted common shares outstanding	34,909,793	32,029,330	33,847,793	32,053,223

*See Notes to Financial Statements.*

## NANOPHASE TECHNOLOGIES CORPORATION

## CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS

(Unaudited)

	(in thousands)	
	<b>Six months ended June 30,</b>	
	2018	2017
Operating activities:		
Net income/(loss)	\$(836 )	\$69
Adjustment to reconcile net income/(loss) to net cash used in operating activities:		
Depreciation and amortization	166	183
Stock compensation expense	88	94
Changes in assets and liabilities related to operations:		
Trade accounts receivable	(313 )	(1,725 )
Inventories	(264 )	9
Prepaid expenses and other assets	(109 )	35
Accounts payable	563	335
Accrued expenses	102	432
Net cash used in operating activities	(603 )	(568 )
Investing activities:		
Proceeds from disposal of equipment	—	96
Acquisition of equipment and leasehold improvements	(132 )	(77 )
Net cash used in investing activities	(132 )	19
Financing activities:		
Principal payments on capital leases	(79 )	(82 )
Proceeds from line of credit	700	—
Payments on line of credit	(500 )	—
Proceeds from exercise of stock options	—	2
Net cash provided by financing activities	121	(80 )

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Decrease in cash and cash equivalents	(614 )	(629 )
Cash and cash equivalents at beginning of period	1,955	1,779
Cash and cash equivalents at end of period	\$1,341	\$1,150
Supplemental cash flow information:		
Interest paid	\$20	\$16
Supplemental non-cash investing activities:		
Receivable from sale of property and equipment	\$—	40
Accounts payable incurred for the purchase of equipment and leasehold improvements	\$8	\$5
Proceeds from capital leases	\$45	\$227

*See Notes to Financial Statements.*

## **NANOPHASE TECHNOLOGIES CORPORATION**

### **NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS**

**(Unaudited)**

**(in thousands, except share and per share data or as otherwise noted herein)**

#### **(1) Basis of Presentation**

The accompanying unaudited consolidated condensed interim financial statements of Nanophase Technologies Corporation (“Nanophase” or the “Company”, including “we”, “our” or “us”) along with its wholly-owned subsidiary Solésence®, reflect all adjustments (consisting of normal recurring adjustments) which, in the opinion of management, are necessary for a fair presentation of our financial position and operating results for the interim periods presented. Operating results for the three and six months ended June 30, 2018 are not necessarily indicative of the results that may be expected for the year ending December 31, 2018 or any interim period.

These financial statements should be read in conjunction with our audited financial statements and notes thereto for the year ended December 31, 2017, included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017, as filed with the Securities and Exchange Commission.

#### **(2) Description of Business**

Nanophase is a leader in nanomaterials technologies and provides nanoengineered solutions for multiple industrial product applications. We produce engineered nano and “non-nano” materials for use in a variety of diverse markets: personal care including sunscreens as active ingredients and in fully formulated cosmetics of our own design, architectural coatings, industrial coating applications, abrasion-resistant additives, plastics additives, medical diagnostics, energy (including solar control) and a variety of surface finishing technologies (polishing) applications, including optics. We have expanded our offerings beyond active ingredients to include targeted full formulations of skin care products, marketed and sold by our wholly-owned subsidiary, Solésence®, LLC.

We target markets in which we believe practical solutions may be found using our products. We work closely with current and potential customers in these target markets to identify their material and performance requirements and market our advanced materials to various end-use applications manufacturers, and our Solésence® solutions to cosmetics and skin care brands. Recently developed technologies have made certain new products possible and opened potential new markets. During 2015 we were granted a patent on a new type of particle surface treatment (coating), which became the cornerstone of our new product development in personal care, with first revenue

recognized during 2016. In addition, through the creation of our Solésence®, LLC subsidiary, we utilize this particle surface treatment to manufacture and sell fully developed solutions to targeted customers in the cosmetics and skin care industry, in addition to the additives we have traditionally sold in the personal care area.

Although our primary strategic focus has been the North American market, we currently sell material to customers overseas and have been working to expand our reach within foreign markets. The Company was incorporated in Illinois on November 25, 1989, and became a Delaware corporation during November 1997. Our common stock trades on the OTCQB marketplace under the symbol NANX.

While product sales comprise the majority of our revenue, we also recognize revenue from other sources from time to time. These activities are not expected to drive the long-term growth of the business. For this reason, we classify such revenue as “other revenue” in our Statements of Operations, as it does not represent revenue directly from our nanocrystalline materials.

### (3) Revenues

On January 1, 2018, we adopted Accounting Standards Updates (“ASU”) 2014-09 and 2015-14, Revenue from Contract with Customers (Topic 606), using the modified retrospective method applied to those contracts that were not completed as of January 1, 2018. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606, while prior period amounts are not adjusted and continue to be reported in accordance with our historical accounting under the Financial Accounting Standards Board (“FASB”) Accounting Standards Codification (“ASC”) Topic 605. Based on our contract evaluation, we determined that there was no need to record any changes to our opening retained earnings due to the impact of our adoption of Topic 606. The adoption of Topic 606 did not have a material impact on our condensed financial statements.

Revenues are recognized at a point in time, typically when control of the promised goods is transferred to customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods.

We generally expense sales commissions when incurred because the amortization period would have been one year or less. These costs are recorded within selling, general and administrative expenses. Customers deposits, deferred revenue and other receipts are deferred and recognized when the revenue is realized and earned. Cash payments to customers are classified as reductions of revenue in our statements of operations.

We do not disclose the value of the unsatisfied performance obligations for contracts with an original expected length of one year or less or contracts for which we recognize revenue which we have the right to invoice for goods completed.

### (4) Earnings (Loss) Per Share

Earnings (Loss) Per Share is computed using the Treasury Stock Method. Options to purchase approximately 1,062,000 shares of common stock that were outstanding as of June 30, 2018 were included in the computation of diluted earnings (loss) per share for the three months ended June 30, 2018, respectively. This had a \$0.00 impact per diluted share for the three months ended June 30, 2018. Options to purchase approximately 795,000 and 821,000 shares of common stock that were outstanding as of June 30, 2017 were included in the computation of earnings per share for the three and six months ended June 30, 2017, respectively. This had an impact \$0.00 per diluted share for the three and six months ended June 30, 2017 respectively. Options to purchase approximately 681,000 shares of common stock that were outstanding as of June 30, 2018 were not included in the computation of diluted earnings (loss) per share for the six months ended June 30, 2018, as the impact of such shares would be both negligible and anti-dilutive.

(5) Financial Instruments

We follow FASB ASC Accounting Standards Codification (“ASC”) Topic 820, *Fair Value Measurements and Disclosures*, which defines fair value, establishes a framework for measuring fair value, and expands disclosures about fair value measurements. The fair value framework requires the categorization of assets and liabilities into three levels based upon the assumptions (inputs) used to price the assets or liabilities. Level 1 provides the most reliable measure of fair value, whereas Level 3 generally requires significant management judgment.

Our financial instruments include cash and cash equivalents, accounts receivable, accounts payable and accrued expenses, along with the promissory note with no related borrowings and any borrowings on the working capital line of credit, each described in Note 6. The fair values of all financial instruments were not materially different from their carrying values. There were no financial assets or liabilities adjusted to fair value on June 30, 2018 or December 31, 2017.

(6) Notes and Line of Credit

During July 2014, we entered into a bank-issued letter of credit and related promissory note for up to \$30 in borrowings to support our obligations under our facility lease agreement. No borrowings have been incurred under this promissory note. Should any borrowings occur in the future, the interest rate would be the prime rate plus 1%, with the bank having the right to “set off” or apply unpaid balances against our checking account if we fail to meet our obligations under any borrowings under the note. It is our intention to renew this note annually, for as long as we need to pursuant to the terms of our facility lease agreement. Because there were no amounts outstanding at any time during 2018 or 2017, we have recorded no related liability on our balance sheet.

During March 2015, we entered into a Business Loan Agreement (the “Line of Credit Agreement”) with Libertyville Bank and Trust Company, a Wintrust Community Bank (“Libertyville”), our primary bank. This Line of Credit Agreement was subsequently amended on April 13, 2015 and was extended on each of March 4, 2016 and February 14, 2017. Under the Line of Credit Agreement, as amended, Libertyville provided a maximum of \$300,000 or 75% of our eligible accounts receivable, whichever was less, of revolving credit, collateralized by a senior priority lien on our accounts receivable, inventory, equipment, general intangibles and fixtures. Interest on any borrowings was the prime rate at the time plus 1%. Availability to draw on the line required us to have at least \$1 million in cash, including any amounts borrowed, at Libertyville on the date of any advance. Advances could only occur at the beginning or end of a fiscal quarter and had to be repaid in full within five days of the advance. Borrowings on this line were \$300,000 on December 31, 2017. These borrowings were repaid in January 2018. The Line of Credit Agreement expired on March 4, 2018.

On March 26, 2018, we executed a new Business Loan Agreement (the “New Line of Credit Agreement”), dated as of March 4, 2018, with Libertyville, which replaces the Line of Credit Agreement with Libertyville that expired on March 4, 2018. Under the New Line of Credit Agreement, Libertyville will provide a maximum of (i) \$500,000 or (ii) two times the sum of (a) 75% our eligible accounts receivables and (b) our cash deposited with Libertyville, whichever is less, of revolving credit to us, collateralized by a senior priority lien on our accounts receivables, inventory, equipment, general intangibles and fixtures. Interest is payable monthly on any advances at a floating interest rate of the prime rate at the time plus 1%. We must have \$1 million in cash, inclusive of the borrowed amount, at Libertyville on the date of any advance. Advances may only occur at the beginning or end of a fiscal quarter and must be repaid in full within five business days of the advance. The New Line of Credit Agreement expires in March 2019. While the New Line of Credit Agreement is in effect, we cannot, among other things, engage in any business activities substantially different than those in which we are presently engaged, and there are limitations imposed on our ability to, among other things, incur additional indebtedness for borrowed money, including capital leases, sell, transfer, mortgage, assign, pledge, lease or grant a security interest in or encumber any of our assets, sell with recourse any of our accounts other than to Libertyville, cease operations, merge, transfer, acquire or consolidate with any other entity, change our name, dissolve or transfer or sell collateral outside the ordinary course of business, pay any cash dividends, loan, invest in or advance money or assets to any other person or entity, purchase, create or acquire any interest in any other entity, or incur any obligation as a surety or guarantor other than in the ordinary course of business, in each case without Libertyville’s prior written consent. We borrowed \$500 on this line on June 29, 2018 and repaid it on July 2, 2018. The amount outstanding on the loan was \$300 on December 31, 2017 which was paid in full on January 9, 2018.



**(7) Inventories**

Inventories consist of the following:

	June 30, 2018	<b>December 31, 2017</b>
Raw materials	\$855	\$ 543
Finished goods	815	863
	1,670	1,406
Allowance for excess inventory quantities	(21 )	(21 )
	<b>\$1,649</b>	<b>\$ 1,385</b>

During the three months ended March 31, 2018, \$246 was reclassified from Prepaid Expenses to Raw Materials. For comparison purposes, \$246 has been reclassified from Prepaid Expenses to Raw Materials as of December 31, 2017 in the table above. Our balance sheet as of December 31, 2017 has also been updated to reflect this reclassification.

**(8) Share-Based Compensation**

We follow FASB ASC Topic 718, *Compensation – Stock Compensation*, in which compensation expense is recognized only for share-based payments expected to vest. We recognized compensation expense related to stock options of \$43 and \$88 for the three and six months ended June 30, 2018, respectively, compared to \$46 and \$94 for the three and six months ended June 30, 2017, respectively.

As of June 30, 2018, there was approximately \$523 of total unrecognized compensation cost related to non-vested share-based compensation arrangements granted under our stock option plans. That cost is expected to be recognized over a remaining weighted-average period of 2.4 years.

**Stock Options and Stock Grants**

No stock options were exercised during the six months ended June 30, 2018. During the six months ended June 30, 2017, 4,334 shares of common stock were issued pursuant to stock option exercises for proceeds of \$2. During the six months ended June 30, 2018, 570,500 stock options were granted compared to 507,600 stock options granted during the same period in 2017. During the six months ended June 30, 2018, 188,504 stock options expired, and no stock options were forfeited compared to 12,568 stock options forfeited and 7,000 stock options expiring during the same period in 2017. We had 3,523,000 stock options outstanding at a weighted average exercise price of \$0.66 on June 30, 2018, compared to 3,141,000 stock options outstanding at a weighted average exercise price of \$0.73 on December

31, 2017.

The following table illustrates the various assumptions used to calculate the Black-Scholes option pricing model for stock options granted during the periods presented:

<b>For the three months ended</b>	<b>June 30, 2018</b>		<b>June 30, 2017</b>
Weighted-average risk-free interest rates:	2.9	%	—
Dividend yield:	—		—
Weighted-average expected life of the option:	7 years		—
Weighted-average expected stock price volatility:	94	%	—
Weighted-average fair value of the options granted:	\$0.66		—

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<b>For the six months ended</b>	<b>June 30,</b>		<b>June 30,</b>	
	<b>2018</b>		<b>2017</b>	
Weighted-average risk-free interest rates:	2.9	%	2.1	%
Dividend yield:	—		—	
Weighted-average expected life of the option:	7 years		7 years	
Weighted-average expected stock price volatility:	94	%	94	%
Weighted-average fair value of the options granted:	\$0.64		\$0.55	

As of June 30, 2018, we did not have any unvested restricted stock or performance shares outstanding.

### **(9) Significant Customers and Contingencies**

Revenue from three customers constituted approximately 66%, 10% and 3%, respectively, of our total revenue for the three months ended June 30, 2018, and approximately 73%, 6% and 4%, respectively, of our total revenue for the six months ended June 30, 2018. Amounts included in accounts receivable on June 30, 2018 relating to these three customers were approximately \$927, \$54 and \$132, respectively. Revenue from these three customers constituted approximately 72%, 1% and 5%, respectively, of our total revenue for the three months ended June 30, 2017, and approximately 70%, 0%, and 5% of our total revenue for the six months ended June 30, 2017. Amounts included in accounts receivable on June 30, 2017 relating to these three customers were approximately \$1,196, \$0 and \$174, respectively. The loss of one of these significant customers, a significant decrease in revenue from one or more of these customers, or the failure to attract new customers could have a material adverse effect on our business, results of operations and financial condition.

We currently have exclusive supply agreements with BASF Corporation (“BASF”), our largest customer, that have contingencies outlined which could potentially result in the license of technology and/or the sale of production equipment from the Company to the customer intended to provide capacity sufficient to meet the customer’s production needs. This outcome may occur if we fail to meet certain performance requirements, certain other obligations and/or certain financial condition covenants. The financial condition covenants in one of our supply agreements with BASF “trigger” a technology transfer right (license and equipment sale at BASF’s option) in the event (a) that earnings for the twelve-month period ending with our most recently published quarterly financial statements are less than zero and our cash, cash equivalents and certain investments are less than \$1 million, or (b) of an acceleration of any debt maturity having a principal amount of more than \$10 million. Our supply agreements with BASF also “trigger” a technology transfer right in the event of our insolvency, as further defined within the agreements. In the event of an equipment sale, upon incurring a triggering event, the equipment would be sold to the customer at either 115% of the equipment’s net book value or the greater of 30% of the original book value of such equipment, and any associated upgrades to it, or 115% of the equipment’s net book value, depending on the equipment and related products.

We believe that we have sufficient cash and credit availability (See Liquidity and Capital Resources in Management’s Discussion and Analysis in Part I, Item 2 of this Form 10-Q for a further discussion, as well as the description of our New Line of Credit Agreement described in Note 6) to operate our business during the remainder of 2018. If a triggering event were to occur and BASF elected to proceed with the license and related equipment sale mentioned

above, we would receive royalty payments from this customer for products sold using our technology; however, we would lose both significant revenue and the ability to generate significant revenue to replace that which was lost in the near term. Replacement of necessary equipment that could be purchased and removed by the customer pursuant to this triggering event could take in excess of twelve months. Any additional capital outlays required to rebuild capacity would probably be greater than the proceeds from the purchase of the assets as dictated by our agreement with the customer. Similar consequences would occur if we were determined to have materially breached certain other provisions of the supply agreement with BASF. Any such event would also likely result in the loss of many of our key staff and line employees due to economic realities. We believe that our employees are a critical component of our success and it could be difficult to replace them quickly. Upon the occurrence of any such event, we might not be able to hire and retain skilled employees given the stigma relating to such an event and its impact on us. Finally, any shortfall in capital needed to operate the business as management intends, including with respect to avoiding this triggering event as described above, may result in a curtailment of certain activities or anticipated investments.

We expect to expend resources on research, development and product testing, and in expanding current capacity or capability for new business. In addition, we may incur significant costs in preparing, filing, prosecuting, maintaining and enforcing our patents and other proprietary rights. We may need additional financing if we were to lose an existing customer or suffer a significant decrease in revenue from one or more of our customers or because of currently unknown capital requirements, new regulatory requirements or the need to meet the cash requirements discussed above to avoid a triggering event under our BASF agreement. Given our expected growth in our Solésence® business, we may also have temporary working capital demands that we cannot fund with existing capital, while remaining in compliance with the covenants included in our BASF agreement described above. If necessary, we may seek funding through public or private financing and through contracts with governmental entities or other companies. Additional financing may not be available on acceptable terms or at all, and any such additional financing could be dilutive to our shareholders. If we are unable to obtain adequate funds, we may be required to delay, scale-back or eliminate some of our manufacturing and marketing operations or we may need to obtain funds through arrangements on less favorable terms. Such circumstances could raise doubt as to our ability to continue as a going concern. If we obtain funding on unfavorable terms, we may be required to relinquish rights to some of our intellectual property.

#### **(10) Business Segmentation and Geographical Distribution**

Revenue from international sources approximated \$164 and \$183 for the three and six months ended June 30, 2018, respectively, compared to \$332 and \$680 for the three and six months ended June 30, 2017, respectively. All of this revenue was product revenue.

Our operations comprise a single business segment and all of our long-lived assets are located within the United States.

#### **(11) New Accounting Pronouncements**

During February 2016, the FASB issued ASU No. 2016-02 (“ASU 2016-02”), *Leases (Topic 842)*. This standard requires the recognition of assets and liabilities arising from lease transactions on the balance sheet and the disclosure of key information about leasing arrangements. Accordingly, a lessee will recognize a lease asset for its right to use the underlying asset and a lease liability for the corresponding lease obligation. Both the asset and liability will initially be measured at the present value of the future minimum lease payments over the lease term. Subsequent measurement, including the presentation of expenses and cash flows, will depend on the classification of the lease as either a finance or an operating lease. Initial costs directly attributable to negotiating and arranging the lease will be included in the asset. For leases with a term of 12 months or less, a lessee can make an accounting policy election by class of underlying asset to not recognize an asset and corresponding liability. Lessees will also be required to provide additional qualitative and quantitative disclosures regarding the amount, timing and uncertainty of cash flows arising

from leases. These disclosures are intended to supplement the amounts recorded in the financial statements and provide additional information about the nature of an organization's leasing activities. The amendments in this standard are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018, which is our first quarter of 2019, with early adoption permitted. We review new accounting standards as issued. We are in the process of evaluating the impact this standard will have on our financial statements.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

### Overview

Nanophase is a leader in nanomaterials technologies and provides nanoengineered solutions for multiple industrial product applications. We produce engineered nano and “non-nano” materials for use in a variety of diverse markets: personal care including sunscreens as active ingredients and in fully formulated cosmetics of our own design, architectural coatings, industrial coating applications, abrasion-resistant additives, plastics additives, medical diagnostics, energy (including solar control) and a variety of surface finishing technologies (polishing) applications, including optics. Finally, we have expanded our offerings beyond active ingredients to include targeted full formulations of skin care products, marketed and sold by our wholly-owned subsidiary, Solésence®, LLC.

We target markets in which we believe practical solutions may be found using our products. We work closely with current and potential customers in these target markets to identify their material and performance requirements and market our materials to various end-use applications manufacturers, and our Solésence® solutions to cosmetics and skin care brands. Recently developed technologies have made certain new products possible and opened potential new markets. For example, we have applied our expertise at producing precisely defined nanomaterials to now create and sell larger, “non-nano” material products. Our focus is on customer need where we believe we have an advantage, as opposed to finding uses for one particular technology. We expect growth in end-user (manufacturing customers, including customers of our customers) adoption in 2018 and beyond. Our initiatives in targeted market areas are progressing at differing rates of speed, but we have been broadly moving through testing and development cycles, and in a number of cases believe we are approaching first revenue or next stage revenue with particular customers in the industries referenced above. For example, during 2015 we were granted a patent on a new type of particle surface treatment (coating), which became the cornerstone of our new product development in personal care, with first revenue recognized during 2016. In addition, through the creation of our Solésence®, LLC subsidiary, we use this particle surface treatment to manufacture and sell fully developed solutions to targeted customers in the cosmetics and skin care industry, in addition to the additives we have traditionally sold in the personal care area. During the second quarter of 2018, Solésence® supported the launch of three fully developed products for its customers. During 2015 and 2016, we developed and began to sell solutions in the energy management (particularly solar control) industry. We believe that the products that we have designed for this industry remain valuable to the market, although we are currently focusing the greatest part of our business development efforts on building and expanding our Solésence® brand and product suite. We believe that successful introduction of our finished skin care products and materials with manufacturers may lead to follow-on orders for other finished products and materials in their applications. We expect that we will both work more deeply with current customers and attract additional customers, which should help us achieve growth in these markets in 2018 and beyond.

At the same time, we look for opportunities to partner with established entities in order to further our mutual goals. During June 2017, we entered into a series of agreements with Eminess Technologies, Inc. (“ETI”), an entity that is well established in selling materials for surface finishing (polishing) applications. We intend to continue serving this market while devoting significant assets to support our Solésence® products. These agreements are intended to accomplish both. ETI will sell our products, in some cases by making and selling those products themselves under an exclusive license and paying us a royalty, and in other cases through an exclusive supply arrangement with us. ETI purchased equipment from us for \$36,000 and paid us a one-time fee of \$250,000 for assisting ETI in its development of dispersion technology relevant to polishing solutions.



## Results of Operations

Total revenue increased to \$4,116,000 for the three months ended June 30, 2018, compared to \$3,582,000 for the same period in 2017. Total revenue decreased slightly to \$7,014,000 for the six months ended June 30, 2018 from \$7,067,000 for same period in 2017. A substantial majority of our revenue for each of the periods was from our largest customers, in particular, sales to our largest customer in personal care and sunscreen applications. Revenue from our top three customers constituted approximately 66%, 10% and 3%, respectively, of our total revenue for the three months ended June 30, 2018, and approximately 73%, 6% and 4%, respectively, of our total revenue for the six months ended June 30, 2018. Revenue from these three customers constituted approximately 72%, 1% and 5%, respectively, of our total revenue for the three months ended June 30, 2017, and approximately 70%, 0%, and 5% of our total revenue for the six months ended June 30, 2017. Product revenue, the primary component of our total revenue, increased to \$4,043,000 for the three months ended June 30, 2018 compared to \$3,535,000 for the three months ended June 30, 2017, primarily due to revenues from our Solésence® products launches in 2018, which represented approximately 10% of our revenues for the second quarter of 2018, and an increase in the market in the demand for minerals-based sunscreen products. Product revenue decreased to \$6,910,000 for the six months ended June 30, 2018, compared to \$7,001,000 for the same period in 2017. The decrease was primarily due to timing of order flow from some of our largest customers.

Other revenue increased to \$73,000 for the three months ended June 30, 2018, compared to \$47,000 for the same period in 2017. Other revenue increased to \$104,000 for the six months ended June 30, 2018, compared to \$66,000 for the same period in 2017. Other revenue was comprised primarily of shipping costs paid by customers and includes fee-based development projects completed during the first half of 2018.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to \$2,711,000 for the three months ended June 30, 2018, compared to \$2,381,000 for the same period in 2017. Cost of revenue increased to \$5,199,000 for the first six months of 2018, compared to \$4,662,000 for the same period in 2017. The increases in cost of revenue were primarily driven by higher wages, price inflation on materials including zinc metal, and manufacturing inefficiencies related to Solésence® product launches. While we typically pass through costs to our customers, we sometimes cannot pass through 100% of pricing increases on raw materials, and even with pass throughs, our gross margin percentage is negatively impacted by higher material costs. We expect to continue new materials development, primarily using our NanoArc® synthesis and dispersion technologies, for targeted applications, new markets, and for our formulated Solésence® products during 2018 and beyond. At current revenue levels we have generated a positive gross margin, though margins have been impeded by not having enough revenue to efficiently absorb manufacturing overhead that is required to work with current customers and expected future customers. We believe that our current fixed manufacturing cost structure is sufficient to support higher levels of revenue volume. The extent to which margins may grow, as a percentage of total revenue, will be dependent upon revenue mix, revenue volume, our ability to manage costs and pass commodity market-driven raw materials increases on to customers, and the speed and efficiency with which we are able to scale up production for our Solésence® products. We expect that product revenue volume increases would result in our fixed manufacturing costs being more efficiently absorbed, which should lead to increased margins. We expect to continue to focus on reducing controllable variable product manufacturing costs, with potential variability related to the commodity metals markets, but may or may not realize absolute dollar gross margin growth through 2018 and beyond, dependent upon the factors discussed above.

Research and development expense, which includes all expenses relating to the technology and advanced engineering groups, primarily consists of costs associated with the development or acquisition of new product applications, and finished product formulations for our Solésence® business. As an example, we have been, and continue to be, engaged in product development work for our new fully-formulated finished skincare products marketed through Solésence®. Much of this work has led to several new products and additional potential new products. We are also engaged in a series of in-vitro, ex-vivo, and in-vivo tests to determine the productivity of our Solésence® products, as well as to provide our customers with support for consumer inquiries.

Research and development expense increased to \$538,000 and \$1,096,000 for the three and six months ended June 30, 2018, respectively, compared to \$476,000 and \$860,000, respectively, for the same periods in 2017. The primary reasons for these increases were increased wages due to personnel added during 2018 and increased outside product testing and evaluation costs related to our Solésence® products. We expect quarterly research and development expense to decline during the remainder of 2018, as we expect the initial effort required to launch the Solésence® solutions to lessen, particularly with respect to external testing and validation costs.

Selling, general and administrative expense increased to \$770,000 and \$1,535,000 for the three and six months ended June 30, 2018, respectively, compared to \$697,000 and \$1,460,000, respectively, for the same periods in 2017. The increased costs were associated with launching the Solésence® brand. We expect selling, general and administrative expense to remain at current levels during the remainder of 2018.

## **Inflation**

We believe inflation has not had a material effect on our operations or financial position. However, supplier price increases and wage and benefit inflation, both of which represent a significant component of our costs of operations, may have a material effect on our operations and financial position in 2018 and beyond if we are unable to pass through any applicable increases under our present contracts or through to our markets in general.

## **Liquidity and Capital Resources**

Our cash and cash equivalents amounted to \$1,341,000 on June 30, 2018, compared to \$1,955,000 on December 31, 2017 and \$1,150,000 on June 30, 2017. The net cash used in our operating activities was \$603,000 for the six months ended June 30, 2018, compared to \$568,000 for the same period in 2017. The net use of cash during both periods was driven primarily by a significant increase in unabsorbed manufacturing costs and an increase in accounts receivable and inventory at the end of the respective period. Net cash used in investing activities was \$132,000 during the six months ended June 30, 2018, compared to net cash provided by investing activities of \$19,000 for the six months ended June 30, 2017. We received \$96,000 during the six months ended June 30, 2017 related to the sale of fixed assets that we no longer utilize. We paid \$79,000 for capital lease obligations during the six months ended June 30, 2018 compared to \$82,000 in the same period in 2017. Net cash provided by financing activities was \$121,000 during the six months ended June 30, 2018, compared to net cash used in financing activities of \$80,000 for the six months ended June 30, 2017. We paid the \$300,000 outstanding balance under our line of credit as of December 31, 2017 on January 9, 2018, the \$200,000 outstanding balance as of March 31, 2018 on April 4, 2018 and the \$500,000 outstanding balance as of June 30, 2018 on July 2, 2018. We entered into a new capital lease during second quarter of 2018 for \$45,000 which will be repaid over five years pursuant to its terms. We entered into a new capital (financing) lease for \$175,000 during the first quarter of 2017, and another lease for \$52,000 during the second quarter of 2017. These leases will be repaid over five years pursuant to their terms.

Our supply agreements with our largest customer, BASF, contain certain financial covenants which could potentially impact our liquidity. The most restrictive financial covenants under these agreements require that we maintain a minimum of \$1 million in cash, cash equivalents and certain investments, and that we not have the acceleration of any debt maturity having a principal amount of more than \$10 million, in order to avoid triggering the customer's potential right to transfer certain technology and equipment to that customer at a contractually-defined price. We had approximately \$1.3 million in cash on June 30, 2018, with \$500,000 in borrowings under our line of credit. This new line of credit was entered into during March 2018 and it will expire in March 2019. This supply agreement and its covenants are more fully described in Note 9, and our line of credit is more fully described in Note 6, to our Financial Statements in Part I, Item 1 of this Form 10-Q.

We believe that cash from operations and cash on hand will be adequate to fund our operations through the remainder of 2018. Given our expected growth in our Solésence® business, we are monitoring the temporary working capital demands that this could create, with timing being the most critical variable. Our actual future capital requirements in 2018 and beyond will depend on many factors, including customer acceptance of our current and potential advanced materials, applications and products, continued progress in research and development activities and product testing programs, the magnitude of these activities and programs, and the costs necessary to increase and expand our manufacturing capabilities and to market and sell our advanced materials, applications and products. Other important issues that will drive future capital requirements will be the development of new markets and new customers as well as the potential for significant unplanned growth with existing customers. Depending on the success of certain projects, we expect that capital spending relating to currently known capital needs for the remainder of 2018 will be between \$400,000 and \$600,000, and we could enter into one or more financing leases to finance these acquisitions, subject to the provisions of our New Line of Credit Agreement. If those projects are delayed or ultimately prove unsuccessful, or if we fail to obtain financing on terms acceptable to us, we would expect our capital spending to be below the lower end of that range. Similarly, substantial success in business development projects may cause the actual capital investment for the remainder of 2018 to exceed the top of this range.

Should events arise that make it appropriate for us to seek additional financing, such additional financing may not be available on acceptable terms or even at all, and any such additional financing could be dilutive to our stockholders. Such financing could be necessitated by such things as the loss of one or more existing customers; a significant decrease in revenue from one or more of our customers; temporary working capital demands resulting from our expected growth in our Solésence® business that we cannot fund with existing capital; currently unknown capital requirements in light of the factors described above; new regulatory requirements that are outside our control; the need to meet previously discussed cash requirements to avoid a triggering event under our BASF agreement, or various other circumstances coming to pass that we currently do not anticipate. The failure to have access to sufficient capital to fund our business plans may result in a curtailment or other change in those plans, and under such circumstances, may raise doubt as to our ability to continue as a going concern.

On June 30, 2018, we had a net operating loss carryforward of approximately \$97 million for income tax purposes. Because we may have experienced "ownership changes" within the meaning of the U.S. Internal Revenue Code in connection with our various prior equity offerings, future utilization of this carryforward may be subject to certain limitations as defined by the Internal Revenue Code. If not utilized, the carryforward will expire at various dates between January 1, 2019 and December 31, 2037. As a result of the annual limitation and uncertainty as to the amount of future taxable income that will be earned prior to the expiration of the carryforward, we have concluded that it is likely that a majority of this carryforward will expire before ultimately becoming available to reduce income tax liabilities. Changes in Illinois state law that began in 2011 will impact net loss carryforward duration and utilization on the state tax level.

### **Off-Balance Sheet Arrangements**

We have not created, and are not party to, any special-purpose or off-balance sheet entities for the purposes of raising capital, incurring debt or operating our business. We do not have any off-balance sheet arrangements or relationships

with entities that are not consolidated into our financial statements that are reasonably likely to materially affect our liquidity or the availability of capital resources.

As more fully described in Note 6 to our Financial Statements, in Part I, Item I of this Form 10-Q, during 2014 we entered into a letter of credit and promissory note for up to \$30,000 supporting our obligations under our facility lease agreement. No borrowings have been incurred under this promissory note.

## Safe Harbor Provision

We want to provide investors with more meaningful and useful information. As a result, this Quarterly Report on Form 10-Q contains and incorporates by reference certain "forward-looking statements", as defined in Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements reflect our current expectations of the future results of our operations, performance and achievements. Forward-looking statements are covered under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. We have tried, wherever possible, to identify these statements by using words such as "anticipates", "believes", "estimates", "expects", "plans", "intends" and similar expressions. These statements reflect management's current beliefs and are based on information now available to it. Accordingly, these statements are subject to certain risks, uncertainties and contingencies that could cause our actual results, performance or achievements in 2018 and beyond to differ materially from those expressed in, or implied by, such statements. These risks, uncertainties and factors include, without limitation: our ability to be consistently profitable despite the losses we have incurred since our incorporation; a decision by a customer to cancel a purchase order or supply agreement in light of our dependence on a limited number of key customers; the terms of our supply agreements with BASF, which could trigger a requirement to transfer technology and/or sell equipment to that customer; our potential inability to obtain working capital when needed on acceptable terms or at all; our ability to obtain materials at costs we can pass through to our customers, including Rare Earth elements, specifically cerium oxide, as well as high purity zinc; uncertain demand for, and acceptance of, our nanocrystalline materials and Solésence® products; our manufacturing capacity and product mix flexibility in light of customer demand; our limited marketing experience, including with our suite of Solésence® products; changes in development and distribution relationships; the impact of competitive products and technologies; our dependence on patents and protection of proprietary information; the resolution of litigation or other legal proceedings in which we may become involved; our ability to maintain an appropriate electronic trading venue for our securities; and the impact of any potential new governmental regulations that could be difficult to respond to or costly to comply with. In addition, our forward-looking statements could be affected by general industry and market conditions and growth rates. Readers of this Quarterly Report on Form 10-Q should not place undue reliance on any forward-looking statements. Except as required by federal securities laws, we undertake no obligation to update or revise these forward-looking statements to reflect new events or uncertainties.

## Item 3. Quantitative and Qualitative Disclosures About Market Risk

Not required for a smaller reporting company.

## Item 4. Controls and Procedures

### Disclosure controls

We are responsible for establishing and maintaining disclosure controls and procedures that are designed to ensure that information required to be disclosed by us in the reports filed by us under the Exchange Act is: (a) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms; and (b) accumulated and communicated to our management, including our principal executive and principal financial officers, to allow timely decisions regarding required disclosures. It should be noted that in designing and evaluating our disclosure controls and procedures, we recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and that our management necessarily was required to apply its judgment regarding the design of our disclosure controls and procedures. As of the end of the period covered by this report, we conducted 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 the design and operation of our disclosure controls and procedures pursuant to Rules 13a-15(e) and 15d-15(e) of the Exchange Act. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at reaching that level of reasonable assurance.

### **Internal control over financial reporting**

The Company's management, including the CEO and CFO, confirm that there was no change in the Company's internal control over financial reporting during the period covered by this report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II – OTHER INFORMATION

**Item 1. Legal Proceedings**

We are not a party to any pending legal proceedings or claims that we believe will result in a material adverse effect on our business, financial condition, or operating results.

**Item 1A. Risk Factors**

In addition to the information set forth in this Quarterly Report on Form 10-Q and before deciding to invest in, or retain, shares of our common stock, you also should carefully review and consider the information contained in our other reports and periodic filings that we make with the Securities and Exchange Commission, including, without limitation, the information contained under the caption Part I, Item 1A “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2017. Those risk factors could materially affect our business, financial condition and results of operations. Additional risks and uncertainties that we do not currently know about, we currently believe are immaterial or we have not predicted may also harm our business operations or adversely affect us. If any of these risks or uncertainties occur, our business, financial condition, results of operations, cash flows or stock price could be materially adversely affected. There have been no material changes from the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017.

**Item 2. Unregistered Sales of Equity Securities and Use of Proceeds**

None.

**Item 3. Defaults Upon Senior Securities**

None.

**Item 4. Mine Safety Disclosures**

Not applicable.

**Item 5. Other Information**

None.

**Item 6. Exhibits**

EXHIBIT INDEX

Exhibit 10.1*	<u>Joint Development &amp; Supply Agreement, dated December 12, 2016, by and between Solésence, LLC and Colorescience Inc., incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 24, 2018.</u>
Exhibit 10.2*	<u>Amended and Restated Joint Development &amp; Supply Agreement, executed by Solésence, LLC on May 18, 2018, by and between Solésence, LLC and Colorescience Inc., incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on May 24, 2018.</u>
Exhibit 10.3	<u>First Amendment to Supply Agreement, dated May 21, 2018, by and between the Company and Hallstar Ester Solutions Corporation (formerly known as Ester Solutions Company), incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 25, 2018.</u>
Exhibit 31.1	<u>Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.</u>
Exhibit 31.2	<u>Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.</u>
Exhibit 32	<u>Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350.</u>
Exhibit 101	The following materials from Nanophase Technologies Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, formatted in XBRL (Extensible Business Reporting Language): (1) the Balance Sheets, (2) the Statements of Operations, (3) the Statements of Cash Flows, and (4) the Notes to Unaudited Financial Statements.

\* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

NANOPHASE TECHNOLOGIES  
CORPORATION

Date: August 14, 2018 By: /s/ JESS A. JANKOWSKI  
Jess A. Jankowski  
President and Chief Executive Officer

Date: August 14, 2018 By: /s/ JAIME ESCOBAR  
Jaime Escobar  
Chief Financial Officer