NANOPHASE TECHNOLOGIES Corp
Form 10-Q
August 11, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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, 2017**

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 incorporation or organization)	(I.R.S. Employer 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 R 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 R 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 R
	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 R

As of August 4, 2017, there were 31,234,330 shares outstanding of common stock, par value $.01, of the registrant.

NANOPHASE TECHNOLOGIES CORPORATION

QUARTER ENDED JUNE 30, 2017

INDEX

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

NANOPHASE TECHNOLOGIES CORPORATION

BALANCE SHEETS

	(in thousands except share and per share data) June 30, **2017** **(Unaudited)**	**December 31, 2016**
ASSETS		
Current assets:		
Cash and cash equivalents	$1,150	$1,779
Trade accounts receivable, less allowance for doubtful accounts of $5 on June 30, 2017 and December 31, 2016	2,199	434
Inventories, net	763	772
Prepaid expenses and other current assets	407	442
Total current assets	4,519	3,427
Equipment and leasehold improvements, net	1,387	1,395
Other assets, net	18	20
	$5,924	$4,842
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of capital lease obligations	$57	$107
Accounts payable	1,004	669
Accrued expenses	984	521
Total current liabilities	2,045	1,297
Long-term portion of capital lease obligations	305	110
Long-term deferred rent	438	466
Asset retirement obligations	181	178
Total long-term liabilities	924	754

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; 31,234,330 and 31,229,996 shares issued and outstanding on June 30, 2017 and December 31, 2016, respectively	312	312
Additional paid-in capital	97,454	97,359
Accumulated deficit	(94,811)	(94,880)
Total stockholders’ equity	2,955	2,791
	$5,924	$4,842

See Notes to Financial Statements.

3

NANOPHASE TECHNOLOGIES CORPORATION

STATEMENTS OF OPERATIONS

(Unaudited)

(in thousands except share and per share data)

	Three months ended June 30,		Six months ended June 30,	
	2017	2016	2017	2016
Revenue:				
Product revenue	$3,535	$3,678	$7,001	$5,867
Other revenue	47	5	66	27
Total revenue	3,582	3,683	7,067	5,894
Operating expense:				
Cost of revenue	2,381	2,170	4,662	3,925
Gross profit	1,201	1,513	2,405	1,969
Research and development expense	476	372	860	673
Selling, general and administrative expense	697	675	1,460	1,436
Income/(loss) from operations	28	466	85	(140)
Interest expense	(6)	(3)	(16)	(8)
Other, net	—	—	—	—
Income/(loss) before provision for income taxes	22	463	69	(148)
Provisions for income taxes	—	—	—	—
Net income/(loss)	$22	$463	$69	$(148)
Net income/(loss) per share – basic and diluted	$0.00	$0.01	$0.00	$(0.00)
Weighted average number of basic and diluted common shares outstanding	31,234,330	31,185,496	31,232,223	30,599,782

See Notes to Financial Statements.

NANOPHASE TECHNOLOGIES CORPORATION

STATEMENTS OF CASH FLOWS

(Unaudited)

	(in thousands)	
	Six months ended June 30,	
	2017	2016
Operating activities:		
Net income/(loss)	$69	$(148)
Adjustment to reconcile net income/(loss) to net cash used in operating activities:		
Depreciation and amortization	183	361
Stock compensation expense	94	88
Changes in assets and liabilities related to operations:		
Trade accounts receivable	(1,725)	(1,197)
Inventories	9	65
Prepaid expenses and other assets	35	(195)
Accounts payable	335	156
Accrued expenses	432	178
Net cash used in operating activities	(568)	(692)
Investing activities:		
Proceeds from disposal of equipment	96	—
Acquisition of equipment and leasehold improvements	(77)	(63)
Payment of accounts payable incurred for the purchase of equipment and leasehold improvements	—	(37)
Net cash provided by/(used in) investing activities	19	(100)
Financing activities:		
Principal payments on capital leases	(82)	(47)
Proceeds from common stock issuance	—	988
Proceeds from exercise of stock options	2	—
Net cash (used in)/provided by financing activities	(80)	941
(Decrease)/increase in cash and cash equivalents	(629)	149
Cash and cash equivalents at beginning of period	1,779	1,275
Cash and cash equivalents at end of period	$1,150	$1,424
Supplemental cash flow information:		

Interest paid	$16	$8
Supplemental non-cash investing activities:		
Receivable from sale of property and equipment	$40	—
Accounts payable incurred for the purchase of equipment and leasehold improvements	$5	$11
Proceeds from capital leases	$227	$—

See Notes to Financial Statements.

5

NANOPHASE TECHNOLOGIES CORPORATION

NOTES TO FINANCIAL STATEMENTS

(Unaudited)

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

(1) Basis of Presentation

The accompanying unaudited interim financial statements of Nanophase Technologies Corporation ("Nanophase" or the "Company", including "we", "our" or "us") 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, 2017 are not necessarily indicative of the results that may be expected for the year ending December 31, 2017.

These financial statements should be read in conjunction with our audited financial statements and notes thereto for the year ended December 31, 2016, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission.

(2) Description of Business

Nanophase is an advanced materials and applications developer and commercial manufacturer with an integrated family of materials technologies. We produce engineered nano and larger, sub-micron, materials for use in a variety of diverse markets: personal care including sunscreens, 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 recently 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 ("Solésence" ™). 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. Recently developed technologies have made certain new products possible and opened potential new markets. We recently developed new material solutions in the light energy-management (particularly solar control) market that have been taken to potential customers, and have experienced early-stage revenue growth. We also developed a new solution for surface treatments (coatings) which we used to launch new products in personal care, including those of our subsidiary, Solésence ™, in the fall of 2016. 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.

During June 2017, we entered into a series of agreements with Eminess Technologies, Inc. (“ETI”). ETI is an established entity in the polishing area, and we believed ETI could more effectively bring our products to market while allowing us to focus on the launch of Solésence ™. We provided ETI with the necessary know-how and exclusive license to make and sell some of our products in this space, for which ETI will pay us a royalty. For other products, we will continue to make them for ETI under an exclusive supply agreement. ETI paid us $36,000 for certain equipment used in product testing. Finally, in exchange for a one-time payment of $250,000, we are assisting ETI in its development of dispersion capabilities relevant to the polishing materials field. This $250,000 is recorded as deferred revenue in the accrued liabilities section of our balance sheet as of June 30, 2017.

The Company was incorporated in Illinois on November 25, 1989, and became a Delaware corporation in November 1997. Our common stock trades on the OTCQB marketplace under the symbol NANX.

While product sales comprise the overwhelming 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) Earnings Per Share

Options to purchase approximately 795,000 and 821,000 shares of common stock that were outstanding as of June 30, 2017 were not included in the computation of earnings per share for the three and six months ended June 30, 2017, respectively, as the impact of such shares would be negligible. Options to purchase approximately 550,000 and 432,000 shares of common stock that were outstanding as of June 30, 2016 were not included in the computation of earnings per share for the three and six months ended June 30, 2016, respectively, as the impact of such shares would be negligible.

(4) Financial Instruments

We follow the Financial Accounting Standards Board (“FASB”) 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 5. 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, 2017 or December 31, 2016.

(5) 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 2017 or 2016, 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. Under the Line of Credit Agreement, as amended, Libertyville will provide a maximum of $300, or 75% of our eligible accounts receivable, whichever is less, of revolving credit, collateralized by a senior priority lien on our accounts receivable, inventory, equipment, general intangibles and fixtures. Interest on any borrowings would be the prime rate at the time plus 1%. Availability to draw on the line requires us to have at least $1 million in cash, including any amounts borrowed, 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 days of the advance. The Line of Credit Agreement was originally to expire on March 4, 2016, but during March 2016 was extended until March 4, 2017. During February 2017, this agreement was further extended to March 2018. No borrowing on this line was outstanding on either June 30, 2017 or December 31, 2016.

(6) Inventories

Inventories consist of the following:

	June 30, 2017	**December 31, 2016**
Raw materials	$216	$ 283
Finished goods	568	510
	784	793
Allowance for excess inventory quantities	(21)	(21)
	$763	$ 772

(7) 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 $46 and $94 for the three and six months ended June 30, 2017, respectively, compared to $41 and $88 for the three and six months ended June 30, 2016, respectively.

As of June 30, 2017, there was approximately $362 of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under our stock option plans. That cost is expected to be recognized over a remaining weighted-average period of 1.9 years.

<u>Stock Options and Stock Grants</u>

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, 2016, no shares of common stock were issued pursuant to stock option exercises. During the six months ended June 30, 2017, 507,600 stock options were granted compared to 419,390 stock options granted during the same period in 2016. During the six months ended June 30, 2017, 19,568 stock options were forfeited compared to 15,000 stock options forfeited during the same period in 2016. We had 3,417,000 stock options outstanding at a weighted average exercise price of $0.79 on June 30, 2017, compared to 2,933,000 stock options outstanding at a weighted average exercise price of $0.81 on December 31, 2016.

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

For the three months ended	June 30, 2017	June 30, 2016
Weighted-average risk-free interest rates:	—	—
Dividend yield:	—	—
Weighted-average expected life of the option:	—	—
Weighted-average expected stock price volatility:	—	—
Weighted-average fair value of the options granted:	—	—

For the six months ended	June 30, 2017		June 30, 2016	
Weighted-average risk-free interest rates:	2.1	%	1.4	%
Dividend yield:	—		—	
Weighted-average expected life of the option:	7 Years		7 Years	
Weighted-average expected stock price volatility:	94	%	95	%
Weighted-average fair value of the options granted:	$0.55		$0.34	

As of June 30, 2017, we did not have any unvested restricted stock or performance shares outstanding.

(8) Significant Customers and Contingencies

Revenue from three customers constituted approximately 72%, 7% and 5%, respectively, of our total revenue for the three months ended June 30, 2017, and 70%, 7% and 5%, respectively, 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 $1,410, $212 and $174, respectively. Revenue from these three customers constituted approximately 71%, 1% and 6%, respectively, of our total revenue for the three months ended June 30, 2016, and 71%, 2% and 6%, respectively, of our total revenue for the six months ended June 30, 2016. Amounts included in accounts receivable on June 30, 2016 relating to these three customers were approximately $1,064, $28 and $212, 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 Line of Credit Agreement described in Note 5) to operate our business during the remainder of 2017. 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. Given 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.

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 financing could be dilutive to our stockholders. Such a financing could be necessitated by such things as the loss of one or more significant customers or a significant decline in revenue from those customers, currently unknown capital requirements, new regulatory requirements, the need to meet cash requirements under our BASF agreement to avoid a triggering event, or other circumstances not currently anticipated by us. The failure to obtain sufficient capital may impair or curtail our business plans and under such circumstances may raise doubt regarding our ability to continue as a going concern.

(9) Business Segmentation and Geographical Distribution

Revenue from international sources approximated \$332 and \$680 for the three and six months ended June 30, 2017, respectively, compared to \$351 and \$475 for the same periods in 2016. 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.

(10) Recently Adopted and New Accounting Pronouncements

During May 2014, the FASB issued Accounting Standards Update (“ASU”) No. 2014-09 (“ASU 2014-09”), *Revenue from Contracts with Customers*, and several related updates including ASU No. 2016-08 and ASU No. 2016-10, which supersede nearly all existing revenue recognition guidance under U.S. generally accepted accounting principles. The new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. Additionally, the guidance requires certain disclosures designed to help users of financial statements better understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, which is our first quarter of 2018. The new standard allows application either retrospectively to each prior reporting period presented or retrospectively as a cumulative-effect adjustment as of the date of adoption. We are evaluating the effect that ASU 2014-09 will have on our financial statements and related disclosures, but do not expect it to have a material impact on our financial position, results of operations, or cash flows.

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 are currently evaluating the impact its adoption will have on the presentation of our financial statements and related disclosures.

During March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which amends ASC Topic 718, *Compensation - Stock Compensation*. The objective of this update is part of the FASB’s Simplification Initiative as it applies to several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The update became effective for fiscal years beginning after December 15, 2016 and interim periods within that reporting period, or January 1, 2017 for us. The adoption did not have a material impact on the presentation of our financial statements, financial position, results of operations, cash flows and related disclosures.

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

Overview

Nanophase is an advanced materials and applications developer and commercial manufacturer with an integrated family of materials technologies. We produce engineered nano and sub-micron materials for use in a variety of diverse markets: personal care including sunscreens, 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 recently 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 (“Solésence“™). 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. Recently developed technologies have made certain new products possible and opened potential new markets. For example, we have applied our skills at producing precisely defined nanomaterials to now create and sell larger, sub-micron 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 2017 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, and for the creation of our Solésence ™ subsidiary to manufacture and sell fully developed solutions to targeted customers in the skin care industry, in addition to the additives we have traditionally sold in the personal care area. During 2015 and 2016, we developed and began to sell new material solutions in the light energy management (particularly solar control) market. We believe that successful introduction of our materials with manufacturers may lead to follow-on orders for other materials in their applications.

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 behind the launch of Solésence™. With these agreements, we 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. 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.

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 2017 and beyond.

Results of Operations

Total revenue decreased to $3,582,000 for the three months ended June 30, 2017, compared to $3,683,000 for the same period in 2016. Total revenue increased to $7,067,000 for the six months ended June 30, 2017, compared to $5,894,000 for the same period of 2016. A substantial majority of our revenue for both periods was from our largest customer in personal care and sunscreen applications. The increase during the first six months of 2017 was primarily due to increased order flow from many of our largest customers, including our largest customer in personal care and sunscreen applications. The decrease during the three months ended June 30, 2017 related to more order volatility during 2016, featuring lower first quarter but higher second quarter activity, while 2017 was more balanced between the first two quarters and an overall increase in revenue during the six-month period. Product revenue, the primary component of our total revenue, decreased to $3,535,000 for the three months ended June 30, 2017, compared to $3,678,000 for the same period in 2016. Product revenue increased to $7,001,000 for the six months ended June 30, 2017, compared to $5,867,000 for the same period in 2016. Revenue from our top three customers was approximately 72%, 7% and 5%, respectively, during the three months ended June 30, 2017, compared to 71%, 1% and 6%, respectively, for the same customers during the same period in 2016. Revenue from our top three customers was approximately 70%, 7% and 5%, respectively, during the six months ended June 30, 2017, compared to 71%, 2% and 6%, respectively, for the same customers during the same period in 2016.

Other revenue was $47,000 and $66,000 for the three and six months ended June 30, 2017, compared to $5,000 and $27,000 for the same periods in 2016. This was comprised primarily of shipping costs paid by customers, as well as non-recurring project-based fees paid by customers. During the three months ended June 30, 2017, other revenue included $30,000 of non-recurring project-based fees paid by customers.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to $2,381,000 for the three months ended June 30, 2017, compared to $2,170,000 for the same period in 2016. Cost of revenue increased to $4,662,000 for the six months ended June 30, 2017, compared to $3,925,000 for the same period in 2016. The increases in cost of revenue were primarily driven by the increase in six month revenue volume. We expect to continue new nanomaterial development, primarily using our NanoArc® synthesis and dispersion technologies, for targeted applications and new markets during 2017 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 significantly higher levels of production. The extent to which margins grow, as a percentage of total revenue, will be dependent upon revenue mix, revenue volume, and our ability to manage costs and pass commodity market-driven raw materials increases on to customers. We expect that product revenue volume increases would result in our fixed manufacturing costs being more efficiently absorbed, leading 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 2017 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 coating formulations and the cost of enhancing our manufacturing processes. As an example, we have been, and continue to be, engaged in research to enhance our ability to disperse material in a variety of organic and inorganic media for use as coatings and polishing materials. Much of this work has led to several new products and additional potential new products.

Having demonstrated the capability to produce pilot quantities of mixed-metal oxides in a single crystal phase, we do not expect development of further variations on these materials to present material technological challenges. Many of these materials exhibit performance characteristics that can enable them to serve in various catalytic applications. We are now working on several related commercial opportunities using the same materials. We expect that this technique should enable us to scale to large quantity commercial volumes. We also have an ongoing advanced engineering effort that is primarily focused on the development of new nanomaterials as well as the refinement of existing nanomaterials, as dictated by our customer-driven marketing strategy. We are not certain when or if any significant revenue will be generated from the production of the materials described above.

Research and development expense increased to $476,000 and $860,000 for the three and six months ended June 30, 2017, compared to $372,000 and $673,000 for the same periods in 2016. We added personnel during 2016 and have increased outside product testing and evaluation during 2017 related to our Solésence™ products. We expect quarterly research and development expense to remain at current levels during the remainder of 2017 due to staffing and related expenses primarily due to the launch of Solésence ™ and energy-management solutions.

Selling, general and administrative expense increased to $697,000 and $1,460,000 for the three and six month periods ended June 30, 2017, compared to $675,000 and $1,436,000 for the same periods in 2016. We experienced minor fluctuations in professional fees, personnel, facility and marketing costs. We expect quarterly selling, general and administrative expense to remain at current levels during the remainder of 2017.

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 2017 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, cash equivalents and short-term investments amounted to $1,150,000 on June 30, 2017, compared to $1,779,000 on December 31, 2016 and $1,424,000 on June 30, 2016. The net cash used in our operating activities was $568,000 for the six months ended June 30, 2017, compared to $692,000 for the same period in 2016. The net use of cash during both periods was driven primarily by a significant increase in accounts receivable at the end of the period related to significant customer shipments during June of each year. Net cash provided by investing activities was $19,000 during the six months ended June 30, 2017, as opposed to cash used in investing activities of $100,000 for the six months ended June 30, 2016. We received $96,000 during 2017 related to the sale of fixed assets that we no longer utilize. Capital expenditures amounted to $77,000 and $63,000 for the six months ended June 30, 2017 and 2016, respectively. Net cash used in financing activities was $80,000 during the six months ended June 30, 2017, as opposed to cash provided by financing activities of $941,000 for the six months ended June 30, 2016. We paid off a financing lease in the amount of $60,000 during 2017 related to certain fixed assets that we sold. On February 10, 2016, we sold 2.6 million shares of our common stock to our largest stockholder for $988,000 in proceeds. We have used, and intend to continue to use, the proceeds from the sale of shares for working capital and general corporate purposes. 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. We had no new capital leases during the first six months of 2016.

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 $1.1 million in cash and cash equivalents on June 30, 2017, with no outstanding borrowings on our Line of Credit. This supply agreement and its covenants are more fully described in Note 8, and our line of credit is more fully described in Note 5, to our Financial Statements in Part I, Item 1 of this Form 10-Q.

We believe that cash from operations and cash, cash equivalents and unused borrowing capacity will be adequate to fund our operating plans through 2017. Our actual future capital requirements in 2017 and beyond will depend, however, on many factors, including customer acceptance of our current and potential nanomaterials and product applications, 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 materials and product applications. 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 2017 will be between $100,000 and $300,000. 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. If certain projects are successful, the total capital spending may end up higher than that range for the remainder of 2017.

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 or a significant decrease in revenue from those customers; 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 agreements; or various other circumstances coming to pass that we currently do not anticipate. The failure to obtain 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, 2017, we had a net operating loss carryforward of approximately $82 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, 2018 and December 31, 2036. 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 some portion 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 5 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 (the “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 2017 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; our manufacturing capacity and product mix flexibility in light of customer demand; our limited marketing experience; 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

We implemented a new enterprise resource planning (“ERP”) system across the organization during April 2017 and discontinued the use of our prior ERP system. We expect the new ERP system to improve the efficiency of our business transaction processes and relevant analytics. We have considered changes associated with this conversion in the design of our internal control over financial reporting and testing for the effectiveness of our internal control over financial reporting. We have concluded that the implementation of the new ERP has not materially impacted the effectiveness of our 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, 2016. 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 actually occurs, 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, 2016.

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 10.1*	Know-How License Agreement, executed by the Company on June 26, 2017, by and between the Company and Eminess Technologies, Inc., incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 29, 2017.
Exhibit 10.2*	Exclusive Supply Agreement, executed by the Company on June 26, 2017, by and between the Company and Eminess Technologies, Inc., incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on June 29, 2017.
Exhibit 10.3	Technology Development Agreement, executed by the Company on June 26, 2017, by and between the Company and Eminess Technologies, Inc., incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on June 29, 2017.
Exhibit 31.1	Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.

Exhibit 31.2	Certification of Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.
Exhibit 32	Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350.
Exhibit 101	The following materials from Nanophase Technologies Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, 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.

17

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 11, 2017	By: /s/ JESS A. JANKOWSKI Jess A. Jankowski President and Chief Executive Officer
Date: August 11, 2017	By: /s/ FRANK J. CESARIO Frank J. Cesario Chief Financial Officer