

NANOPHASE TECHNOLOGIES CORPORATION

Form 10-Q

November 12, 2013

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**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**Form 10-Q**

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

**For the Quarterly Period Ended: September 30, 2013**

**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**  
**(State or other jurisdiction of**  
**incorporation or organization)**

**36-3687863**  
**(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  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, or a smaller reporting company. See definition of "accelerated filer," "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer   
Non-accelerated filer  Smaller Reporting Company

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 November 5, 2013, there were 28,468,162 shares outstanding of common stock, par value \$.01, of the registrant.

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QUARTER ENDED SEPTEMBER 30, 2013

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Table of Contents**PART I - FINANCIAL INFORMATION****Item 1. Financial Statements****NANOPHASE TECHNOLOGIES CORPORATION****BALANCE SHEETS**

|  | <b>September 30,<br/>2013<br/>(Unaudited)</b> | <b>December 31,<br/>2012</b> |
|--|---|------------------------------|
| <b>ASSETS</b>  |   |                              |
| <b>Current assets:</b>   |   |                              |
| Cash and cash equivalents  | \$ 3,307,104                                  | \$ 4,124,234                 |
| Investments  | 30,000  | 30,000                       |
| Trade accounts receivable, less allowance for doubtful accounts of \$6,000 on September 30, 2013 and December 31, 2012 | 988,304                                       | 1,031,405                    |
| Other receivables  | 844   | 27,167                       |
| Inventories, net   | 990,756                                       | 1,138,482                    |
| Prepaid expenses and other current assets  | 226,894                                       | 240,870                      |
| <b>Total current assets</b>  | <b>5,543,902</b>                              | <b>6,592,158</b>             |
| Equipment and leasehold improvements, net  | 2,629,851                                     | 3,027,671                    |
| Other assets, net  | 27,971  | 29,829                       |
|  | <b>\$ 8,201,724</b>                           | <b>\$ 9,649,658</b>          |
| <b>LIABILITIES AND STOCKHOLDERS EQUITY</b>   |   |                              |
| <b>Current liabilities:</b>  |   |                              |
| Current portion of capital lease obligations   | \$ 30,052                                     | \$ 34,526                    |
| Accounts payable   | 583,424                                       | 680,452                      |
| Accrued expenses   | 553,685                                       | 484,460                      |
| <b>Total current liabilities</b>   | <b>1,167,161</b>                              | <b>1,199,438</b>             |
| Long-term portion of capital lease obligations   | 18,397  | 62,755                       |
| Long-term deferred rent  | 633,646                                       | 636,628                      |
| Asset retirement obligations   | 158,424                                       | 153,967                      |
| <b>Total long-term liabilities</b>   | <b>810,467</b>                                | <b>853,350</b>               |
| <b>Contingent liabilities</b>  |   |                              |
| <b>Stockholders equity:</b>  |   |                              |
| Preferred stock, \$.01 par value, 24,088 shares authorized and no shares issued and outstanding                        |   |                              |

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|  |                  |                  |
|--|------------------|------------------|
| Common stock, \$.01 par value, 35,000,000 shares authorized; 28,468,162 and 28,458,162 shares issued and outstanding on September 30, 2013 and December 31, 2012, respectively | 284,682          | 284,582          |
| Additional paid-in capital   | 95,707,861       | 95,512,065       |
| Accumulated deficit  | (89,768,447)     | (88,199,777)     |
| <b>Total stockholders' equity</b>  | <b>6,224,096</b> | <b>7,596,870</b> |
|  | \$ 8,201,724     | \$ 9,649,658     |

*See Notes to Financial Statements.*

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## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF OPERATIONS

(Unaudited)

|  | Three months ended September 30, |              | Nine months ended September 30, |                |
|--|----------------------------------|--------------|---------------------------------|----------------|
|  | 2013                             | 2012         | 2013                            | 2012           |
| <b>Revenue:</b>  |                                  |              |                                 |                |
| Product revenue, net   | \$ 2,156,844                     | \$ 2,028,529 | \$ 7,810,058                    | \$ 7,061,504   |
| Other revenue  | 7,106                            | 72,435       | 16,356                          | 231,591        |
| Net revenue  | 2,163,950                        | 2,100,964    | 7,826,414                       | 7,293,095      |
| <b>Operating expense:</b>  |                                  |              |                                 |                |
| Cost of revenue  | 1,648,417                        | 1,571,575    | 5,555,601                       | 5,349,594      |
| Gross profit   | 515,533                          | 529,389      | 2,270,813                       | 1,943,501      |
| Research and development expense                                       | 375,442                          | 396,503      | 1,257,263                       | 1,210,168      |
| Selling, general and administrative expense                            | 772,644                          | 789,169      | 2,590,596                       | 2,546,334      |
| Loss from operations   | (632,553)                        | (656,283)    | (1,577,046)                     | (1,813,001)    |
| Interest income  | 379                              |              | 1,123                           |                |
| Interest expense   | (1,623)                          | (2,056)      | (10,748)                        | (5,093)        |
| Other, net   | 901                              |              | 18,001                          | 7,199          |
| Loss before provision for income taxes                                 | (632,896)                        | (658,339)    | (1,568,670)                     | (1,810,895)    |
| Provision for income taxes   |                                  |              |                                 |                |
| Net loss   | \$ (632,896)                     | \$ (658,339) | \$ (1,568,670)                  | \$ (1,810,895) |
| Net loss per share - basic and diluted                                 | \$ (0.02)                        | \$ (0.02)    | \$ (0.06)                       | \$ (0.08)      |
| Weighted average number of basic and diluted common shares outstanding | 28,468,162                       | 26,960,880   | 28,467,686                      | 23,139,731     |

*See Notes to Financial Statements.*

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## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF CASH FLOWS

(Unaudited)

|   | <b>Nine months ended September 30,</b> |                |
|---|--|----------------|
|   | <b>2013</b>                            | <b>2012</b>    |
| <b>Operating activities:</b>  |  |                |
| Net loss  | \$ (1,568,670)                         | \$ (1,810,895) |
| Adjustment to reconcile net loss to net cash used in operating activities:                    |  |                |
| Depreciation and amortization   | 674,082                                | 749,666        |
| Stock compensation expense  | 191,872                                | 222,673        |
| Gain on disposal of equipment   | (18,001)                               |                |
| Allowance for excess inventory quantities   | 47,017                                 |                |
| Changes in assets and liabilities related to operations:                                      |  |                |
| Trade accounts receivable   | 43,101                                 | 8,940          |
| Other receivables   | 26,323                                 | 13,712         |
| Inventories   | 100,709                                | 46,221         |
| Prepaid expenses and other current assets   | 13,976                                 | 123,120        |
| Accounts payable  | (168,920)                              | 289,032        |
| Accrued expenses  | 67,268                                 | 87,742         |
| Deferred other revenue  |  | 67,998         |
| Net cash used in operating activities   | (591,243)                              | (201,791)      |
| <b>Investing activities:</b>  |  |                |
| Proceeds from disposal of equipment   | 18,001                                 |                |
| Acquisition of equipment and leasehold improvements   | (177,652)                              | (116,969)      |
| Payment of accounts payable incurred for the purchase of equipment and leasehold improvements | (20,404)                               | (14,941)       |
| Net cash used in investing activities   | (180,055)                              | (131,910)      |
| <b>Financing activities:</b>  |  |                |
| Principal payments on capital leases  | (48,832)                               | (14,796)       |
| Proceeds from stockholder rights offering, net of costs                                       |  | 2,220,432      |
| Proceeds from exercise of stock options   | 3,000                                  |                |
| Net cash (used in) / provided by financing activities   | (45,832)                               | 2,205,636      |
| (Decrease) / increase in cash and cash equivalents  | (817,130)                              | 1,871,935      |
| Cash and cash equivalents at beginning of period  | 4,124,234                              | 2,693,623      |
| Cash and cash equivalents at end of period  | \$ 3,307,104                           | \$ 4,565,558   |

**Supplemental cash flow information:**

|               |    |        |    |       |
|---------------|----|--------|----|-------|
| Interest paid | \$ | 10,748 | \$ | 5,093 |
|---------------|----|--------|----|-------|

**Supplemental non-cash investing activities:**

|  |    |        |    |        |
|--|----|--------|----|--------|
| Accounts payable incurred for the purchase of equipment and leasehold improvements | \$ | 92,296 | \$ | 11,677 |
|--|----|--------|----|--------|

|   |    |  |    |         |
|---|----|--|----|---------|
| Capital lease obligations incurred in the purchase of equipment | \$ |  | \$ | 120,359 |
|---|----|--|----|---------|

*See Notes to Financial Statements.*



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**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS**

**(Unaudited)**

**(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 the financial position and operating results of the Company for the interim periods presented. Operating results for the three and nine month periods ended September 30, 2013 are not necessarily indicative of the results that may be expected for the year ending December 31, 2013.

These financial statements should be read in conjunction with the Company s audited financial statements and notes thereto for the year ended December 31, 2012, included in the Company s Annual Report on Form 10-K for the year ended December 31, 2012, as filed with the Securities and Exchange Commission.

**(2) Description of Business**

Nanophase is a nanomaterials and applications developer and commercial manufacturer with an integrated family of nanomaterial and related technologies. Nanophase produces engineered nano and sub-micron materials for use in a variety of diverse existing and developing markets: personal care including sunscreens, architectural coatings, architectural window cleaning and restoration, industrial coating ingredients, abrasion-resistant additives, plastics additives, medical diagnostics, energy and a variety of polishing applications, including semiconductors and optics. 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. 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 in foreign markets.

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

While product sales comprise the majority of our revenue, we also recognized revenue in connection with a technology license (through 2012) and 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 Statement of Operations, as it does not represent revenue directly from our nanocrystalline materials.

**(3) 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, accounts receivable, accounts payable and accrued expenses. The fair values of all financial instruments were not materially different from their carrying values.

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Investments on September 30, 2013 and December 31, 2012 were comprised of certificates of deposit in the amount of \$30,000, pledged as collateral for the Company's rent and restricted as to withdrawal or usage.

**(5) Inventories**

Inventories consist of the following:

|   | <b>September 30,<br/>2013</b> | <b>December 31,<br/>2012</b> |
|---|-------------------------------|------------------------------|
| Raw materials                             | \$ 184,492                    | \$ 199,257                   |
| Finished goods                            | 853,281                       | 999,391                      |
|   | 1,037,773                     | 1,198,648                    |
| Allowance for excess inventory quantities | (47,017)                      | (60,166)                     |
|   | <b>\$ 990,756</b>             | <b>\$ 1,138,482</b>          |

**(6) Share-Based Compensation**

We follow FASB ASC Topic 718, *Share-Based Payments*, in which compensation expense is recognized only for share-based payments expected to vest. We recognized compensation expense related to stock options of \$54,141 and \$192,896 for the three and nine month periods ended September 30, 2013, compared to \$62,203 and \$225,104 for the same periods in 2012.

As of September 30, 2013, there was approximately \$289,000 of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the Company's stock option plans. That cost is expected to be recognized over a remaining weighted-average period of 1.7 years.

**Stock Options and Stock Grants**

During the nine months ended September 30, 2013, proceeds of \$3,000 were realized, and 10,000 shares of common stock were issued pursuant to option exercises compared to none for the same period in 2012. During the nine months ended September 30, 2013, 553,000 stock options were granted compared to 547,000 stock options granted during the same period in 2012. During the nine months ended September 30, 2013, 112,799 stock options were forfeited, compared to 168,732 stock options forfeited during the same period in 2012.

**Stock Appreciation Rights**

Prior to 2011, we granted outside directors stock appreciation rights (SARs). The change in fair value of the awards granted during prior years is included in non-cash compensation expense for the three and nine months ended September 30, 2013 and 2012. The SARs granted vested immediately and are payable upon the directors' removal or resignation from the position of director. These awards are accounted for as liability awards, included in accrued expenses as of September 30, 2013 and 2012, and adjusted to fair value each reporting period. The fair value of the liability on September 30, 2013 was \$7,725 compared to \$8,749 on December 31, 2012.

As of September 30, 2013, we did not have any unvested restricted stock or performance shares outstanding.

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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 nine months ended                              | September 30,<br>2013 | September 30,<br>2012 |
|--|-----------------------|-----------------------|
| Weighted-average risk-free interest rates:             | 1.5%                  | 1.1%                  |
| Dividend yield:  |                       |                       |
| Weighted-average expected life of the option:          | 7 Years               | 7 Years               |
| Weighted-average expected stock price<br>volatility:   | 92%                   | 85%                   |
| Weighted-average fair value of the options<br>granted: | \$ 0.33               | \$ 0.23               |

**(7) Significant Customers and Contingencies**

Sales to three customers constituted approximately 74%, 5% and 8%, respectively, of our total revenue for the three months ended September 30, 2013, and 71%, 7% and 5%, respectively, of our total revenue for the nine months ended September 30, 2013. Amounts included in accounts receivable on September 30, 2013 relating to these three customers were approximately \$624,000, \$111,000 and \$178,000, respectively. Revenue from these three customers constituted approximately 62%, 5% and 7%, respectively, of our total revenue for the three months ended September 30, 2012, as compared to 68%, 5% and 4%, respectively, of our total revenue for the nine months ended September 30, 2012. Amounts included in accounts receivable on September 30, 2012 relating to these three customers were approximately \$602,000, \$97,000 and \$88,000, respectively.

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 covenants. The most restrictive financial 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 of 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 \$1,000,000, or (b) of an acceleration of any debt maturity having a principal amount of more than \$10,000,000. 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.

We believe that we have sufficient cash (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) to operate our business during 2013. 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 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.

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

Revenue from international sources approximated \$278,000 and \$735,000 for the three and nine months ended September 30, 2013 compared to \$187,000 and \$466,000 for the same periods in 2012. Other revenue recognized from a Japanese licensee was \$0 for the three and nine months ended September 30, 2013, compared to \$68,000 and \$211,000 for the same periods of 2012. The agreement expired during March of 2013.

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

## **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. Nanophase produces engineered nano and sub-micron materials for use in a variety of diverse markets: personal care including sunscreens, architectural coatings, industrial coating ingredients, abrasion-resistant additives, plastics additives, medical diagnostics, energy, architectural window cleaning and restoration, and a variety of polishing applications, including semiconductors and optics. We target markets in which we feel 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 sub-micron material products. Our focus is on customer need where we believe we have an advantage, as opposed to pushing one particular technology. We expect growth in end-user (manufacturing customers, including customers of Nanophase's customers) adoption in 2014 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, our largest customer launched a new product in 2012 that featured material we developed. We also developed new solutions in the polishing and energy-management areas during 2013. 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 2014 and beyond.

### **Results of Operations**

Total revenue increased to \$2,163,950 and \$7,826,414 for the three and nine months ended September 30, 2013, compared to \$2,100,964 and \$7,293,095 for the same periods in 2012. A substantial majority of our revenue for the three and nine month periods ended September 30, 2013 was from our largest customer in personal care and sunscreen applications. Revenue from our top three customers was approximately 74%, 5% and 8%, respectively, during the three months ended September 30, 2013, as compared to 71%, 7% and 5%, respectively, for the nine months ended September 30, 2013. Revenue from these three customers constituted approximately 62%, 5% and 7%, respectively, of the Company's total revenue for the three months ended September 30, 2012 as compared to 68%, 5% and 4%, respectively, of our total revenue for the nine months ended September 30, 2012. The loss of any of these significant customers would have a negative impact on our financial performance and condition. Product revenue increased to \$2,156,844 and \$7,810,058 for the three and nine months ended September 30, 2013, compared to \$2,028,529 and \$7,061,504 for the same periods in 2012, as sales to our largest customer occurred earlier during 2013 as compared with 2012.

Other revenue decreased to \$7,106 and \$16,356 for the three and nine months ended September 30, 2013, compared to \$72,435 and \$231,591 for the same periods in 2012. The substantial majority of other revenue recognized during 2012 related to a license agreement that expired during March 2013.



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Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to \$1,648,417 and \$5,555,601 for the three and nine months ended September 30, 2013, compared to \$1,571,575 and \$5,349,594 for the same periods in 2012. The increase in cost of revenue in both periods was generally attributed to increased revenue volume. We expect to continue new nanomaterial development, primarily using our NanoArc<sup>®</sup> synthesis and dispersion technologies, for targeted applications and new markets. At current revenue levels we have generated a positive gross margin. Our margins have been impeded by not having enough revenue to absorb the 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 our margins grow, as a percentage of total revenue, will be dependent upon revenue mix, revenue volume, and our ability to continue to cut costs and pass commodity market-driven raw materials increases onto customers. To the extent product revenue volume increases, this should result in more of our fixed manufacturing costs being absorbed, leading to increased margins. We expect to continue to focus on reducing controllable manufacturing costs through 2014 and beyond, with potential variability resulting from the commodity metals markets, but may or may not continue to realize absolute dollar gross margin growth based 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 our 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, as well as polishing products. 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 once application viability and firm demand are established. 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 was \$375,442 and \$1,257,263 for the three and nine months ended September 30, 2013, compared to \$396,503 and \$1,210,168 for the same periods in 2012. The net changes in research and development expense were largely attributed to fluctuations in new material development expenses. We do not expect research and development expense to change significantly during the fourth quarter of 2013.

Selling, general and administrative expense was \$772,644 and \$2,590,596 for the three and nine months ended September 30, 2013, compared to \$789,169 and \$2,546,334 for the same periods in 2012. The net changes were primarily attributed to increased business development costs offset in part by reduced depreciation and employee-related charges.

Interest income increased to \$379 and \$1,123 for the three and nine months ended September 30, 2013, compared to \$0 for the same periods in 2012. The negligible amounts were due to the lack of investment yields in excess of bank related fees.



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### **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 the remainder of 2013 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 \$3,337,104 on September 30, 2013, compared to \$4,154,234 on December 31, 2012 and \$4,595,558 on September 30, 2012. The net cash used in our operating activities was \$591,243 for the nine months ended September 30, 2013, compared to \$201,791 for the same period in 2012 primarily due to a temporary working capital benefit of nearly \$0.5 million recognized during the first nine months of 2012. Net cash used in investing activities amounted to \$180,055 for the nine months ended September 30, 2013, compared to \$131,910 for the same period in 2012. Capital expenditures, including those under capital leases amounted to \$177,652 and \$237,328 for the nine months ended September 30, 2013 and 2012, respectively. Net cash used in financing activities was \$45,832 for the nine months ended September 30, 2013 compared to net cash provided by financing activities of \$2,205,636 for the same period in 2012, primarily due to net proceeds from a stockholder rights offering during 2012.

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 \$3.3 million in cash, cash equivalents and short-term investments on September 30, 2013, with no debt. This supply agreement and its covenants are more fully described in Note 7 to our Financial Statements in Part I, Item 1 of this Form 10-Q.

We believe that cash from operations and cash and cash equivalents will be adequate to fund our operating plans through 2013 and 2014. Our actual future capital requirements 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. We expect that capital spending relating to currently known capital needs for the remainder of 2013 will be approximately \$100,000. Actual capital spending may be higher or lower, depending on the particular facts and circumstances involved in business development activities.

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 shareholders. Such a financing could be necessitated by such things as the loss of existing 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 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.

On September 30, 2013, we had a net operating loss carryforward of approximately \$77 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. A layer of our carryforward expired in 2012. If not utilized, the remaining carryforward will expire at various dates between January 1, 2018 and December 31, 2032. As a result of the annual limitation and

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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. During 2011, the state of Illinois suspended the utilization of NOL carryforwards for four years, extending their duration by an equivalent number of years.

### **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.

### **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 future reporting periods to differ materially from those expressed in, or implied by, such statements. These risks, uncertainties and factors include, without limitation: our ability to become profitable despite the losses we have incurred since our incorporation; our dependence on our principal customers and the terms of our supply agreement 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; uncertain demand for, and acceptance of, our nanocrystalline materials; our limited 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 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, the Company undertakes no obligation to update or revise these forward-looking statements to reflect new events or uncertainties.

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**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.

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**PART II OTHER INFORMATION**

**Item 1. Legal Proceedings**

None.

**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, 2012. 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, 2012.

**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 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

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The following materials from Nanophase Technologies Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013, 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.



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**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: November 12, 2013

By: /s/ JESS A. JANKOWSKI  
Jess A. Jankowski  
President, Chief Executive Officer (principal executive officer) and a Director

Date: November 12, 2013

By: /s/ FRANK J. CESARIO  
Frank J. Cesario  
Chief Financial Officer (principal financial and chief accounting officer)