

NANOPHASE TECHNOLOGIES CORPORATION

Form 10-Q

August 12, 2011

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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: June 30, 2011

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)

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**Delaware** **36-3687863**  
(State or other jurisdiction of **(I.R.S. Employer**  
**incorporation or organization)** **Identification No.)**  
**1319 Marquette Drive, Romeoville, Illinois 60446**  
(Address of principal executive offices, and zip code)

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions 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 August 8, 2011, there were 21,208,162 shares outstanding of common stock, par value \$.01, of the registrant.

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**NANOPHASE TECHNOLOGIES CORPORATION**

**QUARTER ENDED JUNE 30, 2011**

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

	June 30, 2011 (Unaudited)	December 31, 2010
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 3,465,507	\$ 5,744,322
Investments	30,000	30,000
Trade accounts receivable, less allowance for doubtful accounts of \$6,000 on June 30, 2011 and \$3,000 on December 31, 2010, respectively	1,539,341	765,250
Other receivables	77,602	14,260
Inventories, net	1,918,197	1,825,882
Prepaid expenses and other current assets	501,351	346,926
<b>Total current assets</b>	<b>7,531,998</b>	<b>8,726,640</b>
Equipment and leasehold improvements, net	4,233,921	4,721,672
Other assets, net	33,565	34,799
	<b>\$ 11,799,484</b>	<b>\$ 13,483,111</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current liabilities:</b>		
Current portion of capital lease obligations		748
Accounts payable	644,985	918,527
Accrued expenses	589,756	1,047,509
Accrued discount liability	215,460	296,235
<b>Total current liabilities</b>	<b>1,450,201</b>	<b>2,263,019</b>
Long-term deferred rent	641,464	635,523
Asset retirement obligations	144,901	141,407
<b>Total long-term liabilities</b>	<b>786,365</b>	<b>776,930</b>
<b>Contingent liabilities</b>		
<b>Stockholders equity:</b>		
Preferred stock, \$.01 par value, 24,088 shares authorized and no shares issued and outstanding		
Common stock, \$.01 par value, 35,000,000 shares authorized; 21,204,162 shares issued and outstanding on June 30, 2011 and December 31, 2010	212,042	212,042
Additional paid-in capital	92,877,849	92,674,786
Accumulated deficit	(83,526,973)	(82,443,666)

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Total stockholders equity	9,562,918	10,443,162
	\$ 11,799,484	\$ 13,483,111

*See Notes to Financial Statements.*

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## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF OPERATIONS

(Unaudited)

	Three months ended June 30, 2011	2010	Six months ended June 30, 2011	2010
<b>Revenue:</b>				
Product revenue, net	\$ 2,835,357	\$ 3,244,343	\$ 5,541,790	\$ 5,174,945
Other revenue	87,851	85,447	167,104	165,027
Net revenue	2,923,208	3,329,790	5,708,894	5,339,972
<b>Operating expense:</b>				
Cost of revenue	1,943,429	2,128,711	3,805,088	3,655,808
Gross Profit	979,779	1,201,079	1,903,806	1,684,164
Research and development expense	459,996	360,812	861,021	790,075
Selling, general and administrative expense	1,049,892	972,225	2,127,589	2,184,642
Loss from operations	(530,109)	(131,958)	(1,084,804)	(1,290,553)
Interest income	1,444	2,129	3,338	16,264
Interest expense	(900)	(564)	(1,798)	(1,253)
Other, net		3,462	(43)	3,462
Loss before provision for income taxes	(529,565)	(126,931)	(1,083,307)	(1,272,080)
Provisions for income taxes				
Net loss	\$ (529,565)	\$ (126,931)	\$ (1,083,307)	\$ (1,272,080)
Net loss per share basic and diluted	\$ (0.02)	\$ (0.01)	\$ (0.05)	\$ (0.06)
Weighted average number of basic and diluted common shares outstanding	21,204,162	21,204,162	21,204,162	21,204,162

*See Notes to Financial Statements.*

**Table of Contents****NANOPHASE TECHNOLOGIES CORPORATION****STATEMENTS OF CASH FLOWS****(Unaudited)**

	<b>Six months ended June 30,</b>	
	<b>2011</b>	<b>2010</b>
<b>Operating activities:</b>		
Net loss	\$ (1,083,307)	\$ (1,272,080)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	563,764	587,166
Stock compensation expense	201,130	242,840
Allowance for excess inventory quantities		2,728
Changes in assets and liabilities related to operations:		
Trade accounts receivable	(774,091)	(840,497)
Other accounts receivable	(63,342)	455,550
Inventories	(92,315)	(24,805)
Prepaid expenses and other assets	(154,425)	(43,790)
Accounts payable	(240,242)	500,835
Accrued expenses	(530,654)	238,281
Net cash used in operating activities	(2,173,482)	(153,772)
<b>Investing activities:</b>		
Acquisition of equipment and leasehold improvements	(52,141)	(81,191)
Payment of accounts payable incurred for the purchase of equipment and leasehold improvements	(52,444)	(10,873)
Purchases of investments		(3,999,502)
Sales of investments		7,564,106
Net cash (used in) provided by investing activities	(104,585)	3,472,540
<b>Financing activities:</b>		
Principal payment on debt obligations, including capital leases	(748)	(4,137)
Net cash used in financing activities	(748)	(4,137)
(Decrease) increase in cash and cash equivalents	(2,278,815)	3,314,631
Cash and cash equivalents at beginning of period	5,744,322	3,899,393
Cash and cash equivalents at end of period	\$ 3,465,507	\$ 7,214,024
<b>Supplemental cash flow information:</b>		
Interest paid	\$ 1,798	\$ 1,253
<b>Supplemental non-cash investing activities:</b>		
Accounts payable incurred for the purchase of equipment and leasehold improvements	\$ 19,144	\$ 42,224

*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 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 six month periods ended June 30, 2011 are not necessarily indicative of the results that may be expected for the year ending December 31, 2011.

These financial statements should be read in conjunction with the Company s audited financial statements and notes thereto for the year ended December 31, 2010, included in the Company s Annual Report on Form 10-K for the year ended December 31, 2010, as filed with the Securities and Exchange Commission.

**(2) Description of Business**

Nanophase is a nanomaterials developer and commercial manufacturer with an integrated family of nanomaterial technologies. Nanophase produces engineered nanomaterial products for use in a variety of diverse existing and developing markets: sunscreens, personal care, architectural coatings, architectural window cleaning and restoration, industrial coating ingredients, abrasion-resistant applications, plastics additives, medical diagnostics and a variety of polishing applications, including semiconductors and optics. New markets and applications are also being developed. We target markets in which we believe practical solutions may be found using nanoengineered products. We work with leaders in these targeted markets to identify and supply their material and performance requirements. Finally, we have applied our technology and developed a complete window cleaning and polishing product family for the Architectural Windows Market under the trade name NanoUltra . The Company was incorporated in Illinois on November 25, 1989, and became a Delaware corporation on November 30, 1997. The Company s common stock trades on the NASDAQ Capital Market under the symbol NANX. Prior to June 2011, the Company s common stock traded on the NASDAQ Global Market under the same symbol (NANX).

While product sales comprise the majority of our revenue, we also recognize revenue in connection with a technology license 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 Statements of Operations, as it does not represent revenue directly from our nanocrystalline materials.

**(3) Financial Instruments**

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. The three levels are defined as follows:

*Level 1:* Unadjusted quoted prices in active markets for identical assets and liabilities.

*Level 2:* Observable inputs other than those included in Level 1. For example, quoted prices for similar assets or liabilities in active markets or quoted prices for identical assets or liabilities in inactive markets.

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*Level 3:* Unobservable inputs reflecting management's own assumptions about the inputs used in pricing the asset or liability. The Company's 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.

There are no financial assets or liabilities adjusted to fair value on June 30, 2011 and December 31, 2010.

**(4) Investments**

Investments on June 30, 2011 and December 31, 2010 were comprised of certificates of deposit in the amount of \$30,000, pledged as collateral, primarily for the Company's rent in 2011 and 2010, and is restricted as to withdrawal or usage. The Company's investments on June 30, 2011 and December 31, 2010 were as follows:

	June 30, 2011	December 31, 2010
Certificates of deposit	30,000	30,000
	\$ 30,000	\$ 30,000

**(5) Inventories**

Inventories consist of the following:

	June 30, 2011	December 31, 2010
Raw materials	\$ 850,703	\$ 878,671
Finished goods	1,127,660	1,007,377
	1,978,363	1,886,048
Allowance for excess inventory quantities	(60,166)	(60,166)
	\$ 1,918,197	\$ 1,825,882

**(6) Line of Credit**

The Company has a line of credit with a bank in the amount of \$1 million, secured by certain Company assets. The outstanding balance of our line of credit for the periods ended June 30, 2011 and December 31, 2010 was \$0. This line of credit has no defined termination date and we do not pay a penalty for unused balances.

**(7) Share-Based Compensation**

The Company follows FASB ASC Topic 718, Share-Based Payments, in which compensation expense is recognized only for share-based payments expected to vest. The Company recognized compensation expense related to stock options of \$112,638 and \$203,063 for the three and six month periods ended June 30, 2011, respectively, compared to \$117,552 and \$204,061 for the same periods of 2010.

As of June 30, 2011, there was approximately \$751,000 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 2.3 years.



**Table of Contents****Stock Options and Stock Grants**

During the six months ended June 30, 2011 and 2010, no shares of common stock were issued pursuant to option exercises. For the six months ended June 30, 2011, stock options exercisable for 524,500 shares of common stock were granted compared to 309,300 for the same period in 2010. For the six months ended June 30, 2011, stock options exercisable for 82,567 shares of common stock were forfeited compared to 58,125 shares for the same period in 2010.

**Stock Appreciation Rights**

During 2010 and 2009, the Company granted its outside directors stock appreciation rights (SARs) totaling 106,750 shares, under the Company's Amended and Restated 2006 Stock Appreciation Rights Plan. For the three and six month periods ended June 30, 2011, the recovery in valuation of the awards previously granted was (\$20,616) and (\$1,933), respectively, and was included in stock-based compensation expense. The same values for 2010 were (\$30,296) and \$38,779, respectively. The fair value of awards granted during the three and six months ended June 30, 2010 were \$9,103 and \$20,941, respectively, and was included in stock-based compensation expense for those periods. The SARs granted vested immediately and are payable upon a director's removal or resignation from the position of director. These awards are accounted for as liability awards, included in accrued expenses as of June 30, 2011 and 2010, and adjusted to fair value each reporting period. The fair value of the liability on June 30, 2011 is \$79,224, compared to \$81,157 on December 31, 2010.

As of June 30, 2011, the Company does not have any unvested restricted stock or performance shares outstanding.

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

	June 30, 2011	June 30, 2010
For the three months ended		
Weighted-average risk-free interest rates:	2.66%	2.97%
Dividend yield:		
Weighted-average expected life of the option:	7 Years	7 Years
Weighted-average expected stock price volatility:	74.00%	79.05%
Weighted-average fair value of the options granted:	\$ 0.88	\$ 1.25
For the six months ended	June 30, 2011	June 30, 2010
Weighted-average risk-free interest rates:	2.51%	2.97%
Dividend yield:		
Weighted-average expected life of the option:	7 Years	7 Years
Weighted-average expected stock price volatility:	74.21%	79.01%
Weighted-average fair value of the options granted:	\$ 0.89	\$ 1.23

**(8) Significant Customers and Contingencies**

Sales to three customers constituted approximately 54%, 18% and 6%, respectively, of our total revenue for the three months ended June 30, 2011, as compared to 55%, 22% and 6%, respectively, of our total revenue for the six months ended June 30, 2011. Amounts included in accounts receivable on June 30, 2011 relating to these three customers were approximately \$880,000, \$180,000 and \$84,000, respectively. Revenue from these three customers constituted approximately 66%, 6% and 8%,

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respectively, of the Company's total revenue for the three months ended June 30, 2010 as compared to 67%, 7% and 6%, respectively, of our total revenue for the six months ended June 30, 2010. Amounts included in accounts receivable on June 30, 2010 relating to these three customers were approximately \$930,000, \$130,000 and \$80,000, respectively.

We currently have 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, providing capacity sufficient to meet the customer's production needs, from the Company to the customer, if triggered by our failure 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 would trigger a technology transfer right (license and, optionally, an equipment sale) in the event (a) that earnings of our twelve month period ending with its most recently published quarterly financial statements are less than zero and our cash, cash equivalents and certain investments are less than \$2,000,000, 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 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, investment balances and line of credit access (See Liquidity and Capital Resources in Management's Discussion and Analysis for a further discussion) to avoid the first triggering event under one of the supply agreements with BASF for the foreseeable future. If a triggering event were to occur and BASF elected to proceed with the license and related equipment sale mentioned above, the Company would receive royalty payments from this customer for products sold using the Company's 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.

**(9) Business Segmentation and Geographical Distribution**

Revenue from international sources approximated \$277,000 and \$354,000 for the three and six months ended June 30, 2011, compared to \$367,000 and \$596,000 for the same periods in 2010. As part of our revenue from international sources, we recognized approximately \$192,000 in product revenue from several German companies and \$75,000 and \$150,000 in other revenue from a technology license fee from its Japanese licensee for the three and six months ended June 30, 2011. Revenue from these same international sources approximated \$286,000 and \$438,000 and \$75,000 and \$150,000 for the same periods in 2010.

The Company's operations comprise a single business segment and all of the Company's long-lived assets are located within the United States.

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### **(10) Recently Adopted Accounting Pronouncements**

In January 2010, the FASB issued Accounting Standards Update ( ASU ) 2010-06 *Fair Value Measurements and Disclosures (Topic 820): Improving Disclosures about Fair Value Measurements* ( ASU 2010-06 ). ASU 2010-06 amends ASC 820 *Fair Value Measurements and Disclosures* to require new disclosures related to transfers into and out of Levels 1 and 2 of the fair value hierarchy and additional disclosure requirements related to Level 3 measurements. The guidance also clarifies existing fair value measurement disclosures about the level of disaggregation and about inputs and valuation techniques used to measure fair value. The additional disclosure requirements are effective for the first reporting period beginning after December 15, 2009, except for the additional disclosure requirements related to Level 3 measurements which are effective for fiscal years beginning after December 15, 2010. The adoption of ASU No. 2010-06 did not have a material impact on our financial position or results of operations.

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

#### **Overview**

Nanophase is a nanomaterials and applications developer and commercial manufacturer with an integrated family of nanomaterial technologies. Nanophase produces engineered nanomaterials for use in a variety of diverse markets: sunscreens, architectural coatings, industrial coating ingredients, architectural window cleaning and restoration, personal care, abrasion-resistant applications, plastics additives, medical diagnostics and a variety of polishing applications, including semiconductors and optics. We target markets in which we feel practical solutions may be found using nanoengineered 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 expect growth in end-user (manufacturing customers, including customers of our customers) adoption in 2011 and beyond, and revenue growth relative to these new markets to follow thereafter. We further expect that we will attract additional customers to help us achieve growth in certain markets in 2011 and beyond.

#### **Results of Operations**

Total revenue decreased to \$2,923,208 for the three months ended June 30, 2011, compared to \$3,329,790 for the same period in 2010. Total revenue increased to \$5,708,894 for the six months ended June 30, 2011, compared to \$5,339,972 for the same period in 2010. A substantial majority of our revenue for the three and six month periods ended June 30, 2011 is from our two largest customers. See Note 8 to the Financial Statements for additional information regarding the revenue derived from these two customers in the second quarter of 2011. Product revenue decreased to \$2,835,357 for the three months ended June 30, 2011, compared to \$3,244,343 for the same period in 2010. Product revenue increased to \$5,541,790 for the six months ended June 30, 2011, compared to \$5,174,945 for the same period in 2010. Three month product revenue for the period ended June 30, 2011 was greater than three of four quarters in 2010, below only the second quarter of 2010 which benefitted from a spike in orders from our largest customer. The increase in product revenue for the six months ended June 30, 2011 was primarily attributed to an increase in purchases from our second largest customer, partially offset by a decrease from our largest customer.

Other revenue was effectively unchanged, as it increased to \$87,851 and \$167,104 for the three and six months ended June 30, 2011, compared to \$85,447 and \$165,027 for the same periods in 2010.

The majority of the total revenue generated during the three and six months ended June 30, 2011, resulted from sales to our largest customer in healthcare for sunscreens components, as well as to our largest customer specializing in polishing applications.

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We use certain elements classified as Rare Earth elements in some of our processes, specifically cerium oxide in polishing applications. On a worldwide basis, the vast majority of these elements are currently supplied from China. Due to export limitations imposed by China that began during the summer of 2010, the supply of all Rare Earth elements has been drastically reduced during the second half of 2010 and through 2011, as compared to prior periods. This has created significant issues with availability of acceptable materials and, if available, a substantial increase in cost. We have historically been successful in passing material costs through to our customers. While we continue to do so, the supply issue and severity of the price increase will create uncertainty for our polishing business during 2011 and beyond. We have inventory in-house and purchase orders for 2011 fulfillment related to this line of business, but the long-term success of this area will be directly impacted by the supply and cost of Rare Earth elements, specifically cerium oxide.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue decreased to \$1,943,429 for the three months ended June 30, 2011, compared to \$2,128,711 for the same period in 2010. Cost of revenue increased to \$3,805,088 for the six months ended June 30, 2011, compared to \$3,655,808 for the same period in 2010. This increase in cost of revenue was generally attributed to increased revenue volume, net of efficiencies related to this increase in product flow. We expect to continue new nanomaterial development, primarily using our NanoArc<sup>®</sup> synthesis and dispersion technologies, for targeted applications and new markets through 2011 and beyond. At current revenue levels we have generated a positive, and improving, 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, our ability to continue to cut costs and pass commodity market-driven raw materials increases onto customers. As 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 variable product manufacturing costs through 2011 and beyond, with potential offsetting increases in the commodity metals markets, but may or may not continue to realize dollar gross margin growth through 2011 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 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, including window cleaning and 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.

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Research and development expense increased to \$459,996 and \$861,021 for the three and six months ended June 30, 2011, compared to \$360,812 and \$790,075 for the same periods in 2010. The net changes in research and development expense were largely attributed to increased salary expenses and new material development. We do not expect research and development expense to increase significantly during the remainder of 2011.

Selling, general and administrative expense increased to \$1,049,892 for the three months ended June 30, 2011, compared to \$972,225 for the same period in 2010 and decreased to \$2,127,589 for the six months ended June 30, 2011, compared to \$2,184,642 for the same period in 2010. The net decrease for the six month period was primarily attributed to increases in salary expense and consultant fees being more than offset by decreased legal fees.

Interest income decreased to \$1,444 and \$3,338 for the three and six months ended June 30, 2011, compared to \$2,129 and \$16,264 for the same periods in 2010. The decrease was primarily due to decreased investment yields and decreases in funds available for investment.

## **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 2011 and beyond, if we are unable to pass through those 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 \$3,495,507 on June 30, 2011, compared to \$5,774,322 on December 31, 2010 and \$7,244,024 on June 30, 2010. The net cash used in our operating activities was \$2,173,482 for the six months ended June 30, 2011, compared to \$153,772 for the same period in 2010, which is a direct result of a significant increase in working capital (approximately \$1.8 million) that is largely the result of the increase in the cost of cerium oxide and the impact that has had throughout our manufacturing and sales processes. We expect a modest working capital benefit for the remainder of 2011. Net cash used in investing activities amounted to \$104,585 for the six months ended June 30, 2011, compared to \$3,472,540 in cash provided by investing activities for the same period in 2010. Capital expenditures amounted to \$52,141 and \$81,191 for the six months ended June 30, 2011 and 2010, respectively. Net cash used in financing activities decreased to \$748 during the first six months of 2011 from \$4,137 during the first six months of 2010.

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 \$2 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 a potential customer right to transfer certain technology and equipment to that customer at a contractually defined price. We had approximately \$3.5 million in cash, cash equivalents and short-term investments on June 30, 2011, with no debt. This supply agreement and its covenants are more fully described in Note 8 to the Company's Financial Statements.

We believe that cash from operations and cash and cash equivalents, as well as the unutilized credit line, will be adequate to fund our operating plans for at least the next twelve months. Our actual future working capital requirements in 2011 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



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working 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 2011 will be less than \$200,000.

Should events arise that make it appropriate for us to seek additional financing, such additional financing may not be available on acceptable terms or at all, and any such additional financing could be dilutive to our stockholders. 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 supply agreement; or various other circumstances coming to pass that we currently do not anticipate.

On June 30, 2011, we had a net operating loss carryforward of approximately \$83.5 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 2010 and another will expire in 2011. If not utilized, the remaining carryforward will expire at various dates between January 1, 2012 and December 31, 2031. 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. 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. 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 three 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

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relationships; the impact of competitive products and technologies; and our ability to protect our patents and proprietary information. 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.

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

Not required for a smaller reporting company.

### **Item 4. Controls and Procedures**

#### **Disclosure controls**

An evaluation of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rules 13a-15e and 15d-15e under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) as of June 30, 2011 was conducted under the supervision and with the participation of the Company's management, including the Chief Executive Officer (CEO) and Chief Financial Officer (CFO). Based on that evaluation, the CEO and CFO concluded that the Company's disclosure controls and procedures were effective as of such date to ensure that information required to be disclosed in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and that the Company's disclosure controls and procedures are effective to ensure that material information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is accumulated and communicated to the management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosures.

#### **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**

None.

### **Item 1A. Risk Factors**

Not required for a smaller reporting company.

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

None.

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**Item 3. Defaults Upon Senior Securities**

None.

**Item 4. Removed and Reserved**

**Item 5. Other Information**

None.

**Item 6. Exhibits**

- Exhibit 31.1 Certification of Chief Executive Officer pursuant to Rules 13a-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, 2011, 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, tagged as blocks of text.

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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: August 12, 2011

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

Date: August 12, 2011

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