

NANOPHASE TECHNOLOGIES CORPORATION

Form 10-Q

August 09, 2010

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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, 2010

or

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

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

Commission File Number: 000-22333

**Nanophase Technologies Corporation**

(Exact name of registrant as specified in its charter)

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 6, 2010, there were 21,204,162 shares outstanding of common stock, par value \$.01, of the registrant.

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**NANOPHASE TECHNOLOGIES CORPORATION**

**QUARTER ENDED JUNE 30, 2010**

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

	<b>June 30, 2010 (Unaudited)</b>	<b>December 31, 2009</b>
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 7,214,024	\$ 3,899,393
Investments	30,000	3,594,604
Trade accounts receivable, less allowance for doubtful accounts of \$9,000 on June 30, 2010 and December 31, 2009	1,699,203	858,706
Other receivable	22,439	477,989
Inventories, net	906,403	884,326
Prepaid expenses and other current assets	338,528	294,738
<b>Total current assets</b>	<b>10,210,597</b>	<b>10,009,756</b>
Equipment and leasehold improvements, net	5,098,585	5,557,832
Other assets, net	36,048	37,283
	<b>\$ 15,345,230</b>	<b>\$ 15,604,871</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current liabilities:</b>		
Current portion of capital lease obligations	5,081	8,470
Accounts payable	735,161	202,975
Accrued expenses	815,387	509,206
Accrued severance		38,060
<b>Total current liabilities</b>	<b>1,555,629</b>	<b>758,711</b>
Long-term portion of capital lease obligations		748
Long-term deferred rent	626,583	617,642
Asset retirement obligations	138,029	134,763
<b>Total long-term liabilities</b>	<b>764,612</b>	<b>753,153</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, 30,000,000 shares authorized; 21,204,162 shares issued and outstanding on June 30, 2010 and December 31, 2009	212,042	212,042
Additional paid-in capital	92,450,839	92,246,777
Accumulated deficit	(79,637,892)	(78,365,812)
<b>Total stockholders equity</b>	<b>13,024,989</b>	<b>14,093,007</b>

\$ 15,345,230      \$ 15,604,871

*See Notes to Financial Statements.*

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## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF OPERATIONS

(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2010	2009	2010	2009
<b>Revenue:</b>				
Product revenue, net	\$ 3,244,343	\$ 1,500,733	\$ 5,174,945	\$ 2,797,546
Other revenue	85,447	109,930	165,027	218,275
Net revenue	3,329,790	1,610,663	5,339,972	3,015,821
<b>Operating expense:</b>				
Cost of revenue	2,128,711	1,430,363	3,655,808	2,745,287
Gross Profit	1,201,079	180,300	1,684,164	270,534
Research and development expense	360,812	381,075	790,075	785,119
Selling, general and administrative expense	972,225	1,051,343	2,184,642	2,051,510
Severance charges				794,069
Loss from operations	(131,958)	(1,252,118)	(1,290,553)	(3,360,164)
Interest income	2,129	24,291	16,264	58,294
Interest expense	(564)	(12,379)	(1,253)	(33,286)
Other, net	3,462	1,652	3,462	(12,052)
Loss before provision for income taxes	(126,931)	(1,238,554)	(1,272,080)	(3,347,208)
Provisions for income taxes				
Net loss	\$ (126,931)	\$ (1,238,554)	\$ (1,272,080)	\$ (3,347,208)
Net loss per share basic and diluted	\$ (0.01)	\$ (0.06)	\$ (0.06)	\$ (0.16)
Weighted average number of common shares outstanding	21,204,162	21,204,162	21,204,162	21,200,791

*See Notes to Financial Statements.*

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

	<b>Six months ended June 30,</b>	
	<b>2010</b>	<b>2009</b>
<b>Operating activities:</b>		
Net loss	\$ (1,272,080)	\$ (3,347,208)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	587,166	640,065
Amortization of debt discount		25,304
Amortization of deferred revenue		(63,635)
Stock compensation expense	242,840	230,871
Charges for accelerated vesting of stock options		210,694
Allowance for excess inventory quantities	2,728	
Loss on disposal of equipment		13,451
Changes in assets and liabilities related to operations:		
Trade accounts receivable	(840,497)	175,736
Other accounts receivable	455,550	7,749
Inventories	(24,805)	58,812
Prepaid expenses and other assets	(43,790)	46,106
Accounts payable	500,835	97,294
Accrued expenses	238,281	(228,395)
Net cash used in operating activities	(153,772)	(2,133,156)
<b>Investing activities:</b>		
Proceeds from disposal of equipment		24,000
Acquisition of equipment and leasehold improvements	(81,191)	(88,663)
Acquisition of trademarks		(1,341)
Payment of accounts payable incurred for the purchase of equipment and leasehold improvements	(10,873)	(35,625)
Purchases of investments	(3,999,502)	(72,813,032)
Sales of investments	7,564,106	76,057,502
Net cash provided by investing activities	3,472,540	3,142,841
<b>Financing activities:</b>		
Principal payment on debt obligations, including capital leases	(4,137)	(1,083,208)
Net cash used in financing activities	(4,137)	(1,083,208)
Increase (decrease) in cash and cash equivalents	3,314,631	(73,523)
Cash and cash equivalents at beginning of period	3,899,393	723,069
Cash and cash equivalents at end of period	\$ 7,214,024	\$ 649,546
<b>Supplemental cash flow information:</b>		
Interest paid	\$ 1,253	\$ 19,994

**Supplemental non-cash investing activities:**

Accounts payable incurred for the purchase of equipment and leasehold improvements	\$	42,224	\$	5,726
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*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, 2010 are not necessarily indicative of the results that may be expected for the year ending December 31, 2010.

These financial statements should be read in conjunction with the Company's audited financial statements and notes thereto for the year ended December 31, 2009, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2009, 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, industrial coating ingredients, abrasion-resistant applications, plastic additives, water filtration, DNA biosensors 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 Global Market under the 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 Statement 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 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 as of June 30, 2010.

As of December 31, 2009, the fair values of our financial assets were approximately categorized as follows:

	Total	Level 1	Level 2	Level 3
<b>Financial Assets</b>				
Auction rate securities <sup>(a)</sup>	\$ 3,560,000	\$	\$	\$ 3,560,000
Other available-for-sale securities	4,604	4,604		
	\$ 3,564,604	\$ 4,604	\$	\$ 3,560,000

There were no financial liabilities adjusted to fair value as of December 31, 2009.

(a) Based on appraisal net of any mark to market adjustments (see Note 4).

**(4) Investments**

Investments on June 30, 2010 and December 31, 2009 were comprised of United States Treasury Bills and related accrued interest, certificates of deposit and auction rate securities. Included in these investments are certificates of deposit in the amount of \$30,000, which are pledged as collateral, primarily for our rent in 2010 and 2009, and is restricted as to withdrawal or usage. Our investments on June 30, 2010 and December 31, 2009 were as follows:

	June 30, 2010	December 31, 2009
United States treasury bills	\$	\$ 4,065
Certificates of deposit	30,000	30,000
Accrued interest		539
	30,000	34,604
Auction rate securities		3,560,000
	\$ 30,000	\$ 3,594,604

On March 26, 2010, the Company entered into an agreement to sell its remaining auction rate securities ( ARS ) for \$4 million to Credit Suisse. This sale was completed and funds were received on April 1, 2010.

We accounted for this agreement as a subsequent event and classified these securities as current assets on our December 31, 2009 balance sheet. We also recorded a recovery in our December 31, 2009

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statement of operations equal to the \$440,000 other than temporary impairment taken during 2008 related to these securities, and recorded a current other receivable for this amount.

**(5) Inventories**

Inventories consist of the following:

	<b>June 30, 2010</b>	<b>December 31, 2009</b>
Raw materials	\$ 189,910	\$ 138,567
Finished goods	776,659	803,197
	966,569	941,764
Allowance for excess inventory quantities	(60,166)	(57,438)
	<b>\$ 906,403</b>	<b>\$ 884,326</b>

**(6) 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. We recognized compensation expense related to stock options of \$117,552 and \$204,061 for the three and six month periods ended June 30, 2010, compared to \$113,619 and \$207,415 for the same periods in 2009. During the three and six months ended June 30, 2010, we did not recognize any stock compensation expense related to accelerated vesting of stock options pursuant to severance agreements compared to \$0 and \$210,694 for the same periods in 2009.

As of June 30, 2010, there was approximately \$721,000 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 2.09 years.

**Employees Stock Options and Stock Grants**

During the six months ended June 30, 2010 and 2009, no shares of common stock were issued pursuant to option exercises. For the six months ended June 30, 2010, 309,300 stock options were granted compared to 310,500 for the same period in 2009. For the six months ended June 30, 2010, 58,125 stock options were forfeited, compared to 173,400 for the same period in 2009.

**Stock Appreciation Rights**

On April 1, 2010, the Company granted its outside directors stock appreciation rights (SARs) totaling 15,250 shares, under the Company's Amended and Restated 2006 Stock Appreciation Rights Plan. The fair value of the awards granted was \$9,103 and is included in stock-based compensation expense for the three months ended June 30, 2010. The SARs granted vested immediately and are payable upon the directors removal or resignation from the position of director.

On January 4, 2010, the Company granted its outside directors stock appreciation rights (SARs) totaling 15,250 shares, under the Company's Amended and Restated 2006 Stock Appreciation Rights Plan. The liability of the awards granted was \$11,838 and is included in stock-based compensation expense and is adjusted to fair value for the six months ended June 30, 2010. The SARs granted vested immediately and are payable upon the directors removal or resignation from the position of director.

On October 1, 2009, the Company granted its outside directors stock appreciation rights (SARs) totaling 15,250 shares, under the Company's Amended and Restated 2006 Stock Appreciation Rights Plan. The liability of the awards granted was \$10,478 and is included in stock-based compensation



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expense and is adjusted to fair value for the six months ended June 30, 2010. The SAR s granted vested immediately and are payable upon the directors removal or resignation from the position of director.

On July 1, 2009, the Company granted its outside directors stock appreciation rights (SAR s) totaling 15,250 shares, under the Company s Amended and Restated 2006 Stock Appreciation Rights Plan. The liability of the awards granted was \$10,727 and is included in stock-based compensation expense and is adjusted to fair value for the six months ended June 30, 2010. The SAR s granted vested immediately and are payable upon the directors removal or resignation from the position of director.

On April 8, 2009, the Company granted its outside directors stock appreciation rights (SAR s) totaling 15,250 shares, under the Company s Amended and Restated 2006 Stock Appreciation Rights Plan. The liability of the awards granted was \$11,182 and is included in stock-based compensation expense and is adjusted to fair value for the six months ended June 30, 2010 and 2009, respectively. The SAR s granted vested immediately and are payable upon the directors removal or resignation from the position of director.

For the six months ended June 30, 2010, the fair value of SAR s awards granted and adjusted to fair value was \$38,779 compared to \$11,866 for the same period in 2009, and is included in stock-based compensation expense.

For the six months ended June 30, 2010 and 2009, the Company was to grant its outside directors shares of restricted common stock totaling 0 and 15,250 shares, respectively, under the Company s 2005 Non-Employee Director Restricted Stock Plan. However, each outside director elected to defer receipt of the restricted stock until the termination of their services to the Company. The deferral of restricted stock is being accounted for under the Company s Non-Employee Director Deferred Compensation Plan. The fair value of the awards granted was \$0 and \$11,590, respectively, for the restricted share rights and is included in stock-based compensation expense for the six months ended June 30, 2009.

As of June 30, 2010, the Company does not have any unvested restricted stock or performance shares outstanding.

For the six months ended June 30, 2010, 309,300 options were granted. The following table illustrates the various assumptions used to calculate the Black-Scholes option pricing model for the periods presented:

	June 30, 2010	June 30, 2009
<b>For the three months ended</b>		
Weighted-average risk-free interest rates:	2.97%	2.81%
Dividend yield:		
Weighted-average expected life of the option:	7 Years	7 Years
Weighted-average expected stock price volatility:	79.05%	78.50%
Weighted-average fair value of the options granted:	\$ 1.25	\$ .75
<b>For the six months ended</b>		
Weighted-average risk-free interest rates:	2.97%	2.81%
Dividend yield:		
Weighted-average expected life of the option:	7 Years	7 Years
Weighted-average expected stock price volatility:	79.01%	78.50%
Weighted-average fair value of the options granted:	\$ 1.23	\$ .75

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**(7) Significant Customers and Contingencies**

Sales to three customers constituted approximately 66%, 8% and 8%, respectively, of our total revenue for the three months ended June 30, 2010, as compared to 67%, 8% 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 \$926,000, \$280,000 and \$82,000, respectively. Revenue from these three customers constituted approximately 62%, 0% and 1% respectively, of the Company's total revenue for the three months ended June 30, 2009 as compared to 58%, 6% and 1%, respectively, of our total revenue for the six months ended June 30, 2009. Amounts included in accounts receivable on June 30, 2009 relating to these three customers were approximately \$502,000, \$0 and \$0, respectively.

The Company currently has a supply agreement with BASF Corporation ( "BASF" ), the Company's largest customer, and a technology development agreement with Altana Chemie, that have contingencies outlined in them 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 the Company's failure to meet certain performance requirements, certain other obligations and/or certain financial condition covenants. The financial condition covenants in one of the Company's supply agreements with its largest customer, as amended, trigger a technology transfer (license and, optionally, an equipment sale) in the event (a) that earnings of the Company for a twelve month period ending with its most recently published quarterly financial statements are less than zero and its cash and cash equivalents are less than \$2,000,000, (b) of an acceleration of any debt maturity having a principal amount of more than \$10,000,000, or (c) of the Company's insolvency, as further defined within the agreement. In the event of an equipment sale, upon incurring a triggering event, the equipment would be sold to the customer at 115% of the equipment's net book value. Under another of the Company's supply agreements with BASF, upon the Company's breach of its contractual obligations to BASF, the Company would be required to sell BASF certain production equipment 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.

The Company believes that it has sufficient cash and investment balances to avoid the first triggering event under the supply agreement 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, the Company 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 the Company's agreement with the customer. Similar consequences would occur if the Company were determined to have materially breached certain other provisions of its supply agreement with BASF or the Company's technology development agreement with Altana Chemie. Any such event would also likely result in the loss of many of the Company's key staff and line employees due to economic realities. The Company believes that its employees are a critical component of its success and potential replacements for these employees could be difficult to find, attract and retain, and/or train quickly. Given the occurrence of any such event, the Company might not be able to hire and retain skilled employees given the stigma relating to such an event and its impact on the Company.

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

Revenue from international sources approximated \$367,000 and \$596,000 for the three and six months ended June 30, 2010 compared to \$80,000 and \$328,000 for the same periods in 2009. As part of its

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revenue from international sources, we recognized approximately \$438,000 in product revenue from several German companies and \$150,000 in other revenue from a technology license fee from its Japanese licensee for the six months ended June 30, 2010. Revenue from these same international sources approximated \$172,000 and \$150,000 for the same period in 2009.

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

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

In January 2010, the Financial Accounting Standards Board ( 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 Accounting Standards Codification ( 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. We do not currently have any fair value measurements, therefore, the additional disclosure requirements for 2010 have been taken into consideration and we do not believe the adoption of ASU No. 2010-06 will have a material impact on our financial position or results of operations.

In February 2010, the FASB issued ASU 2010-09 *Subsequent Events (Topic 855): Amendments to Certain Recognition and Disclosure Requirements* ( ASU 2010-09 ). ASU 2010-09 amends ASC 855 *Subsequent Events* to no longer require public filers to disclose the date through which subsequent events have been evaluated. We do not believe the adoption of ASU No. 2010-09 will 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 coatings, ingredients, personal care, abrasion-resistant applications, plastics additives, medical diagnostics and a variety of polishing applications, including semiconductors, optics and window cleaning and polishing applications. 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. Newer developed technologies have made certain new products possible and opened potential new markets. We expect growth in end-user (manufacturing customers, including customers of Nanophase's customers) adoption in 2010 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 2010 and beyond.

### **Results of Operations**

Total revenue increased to \$3,329,790 and \$5,339,972 for the three and six months ended June 30, 2010, compared to \$1,610,663 and \$3,015,821 for the same periods in 2009. A substantial majority of

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our revenue for the three and six month periods ended June 30, 2010 is from our three largest customers. See Note 7 to the Financial Statements for additional information regarding the revenue derived from these three customers in the second quarter of 2010. Product revenue increased to \$3,244,343 and \$5,174,945 for the three and six months ended June 30, 2010, compared to \$1,500,733 and \$2,797,546 for the same periods in 2009. The increase in product revenue was primarily attributed to an increase in purchases from these largest customers.

Other revenue decreased to \$85,447 and \$165,027 for the three and six months ended June 30, 2010, compared to \$109,930 and \$218,275 for the same periods in 2009. This decrease was primarily attributed to the cessation of deferred revenue that was associated with a customer note until it was fully repaid during July 2009.

The majority of the total revenue generated during the three and six months ended June 30, 2010 resulted from sales to our largest customer in healthcare for sunscreens components, as well as to our customer specializing in medical diagnostics and to our customer in industrial coating ingredients.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to \$2,128,711 and \$3,655,808 for the three and six months ended June 30, 2010, compared to \$1,430,363 and \$2,745,287 for the same periods in 2009. The 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 2010 and beyond. At current revenue levels we have generated a positive gross margin, though our margins have been impeded by not having enough revenue to efficiently 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, given current revenue mix and resultant product revenue. The extent to which 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 on to customers. As product revenue volume increases, this should 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 through 2010 and beyond, with potential offsetting increases in the commodity metals markets, but may or may not continue to realize absolute dollar gross margin growth through 2010 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 the Company's 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 decreased to \$360,812 for the three months ended June 30, 2010, compared to \$381,075 for the same period in 2009 and increased to \$790,075 for the six months ended June 30, 2010, compared to \$785,119 for the same period in 2009. The net changes in research and development expense were largely attributed to increased legal expenses associated with patent applications partially offset by decreased depreciation expense (non-cash). We do not expect research and development expense to increase significantly in 2010.

Selling, general and administrative expense decreased to \$972,225 for the three months ended June 30, 2010, compared to \$1,051,343 for the same period in 2009 and increased to \$2,184,642 for the six months ended June 30, 2010, compared to \$2,051,510 for the same period in 2009. The net increase for the six month period was primarily attributed to increases in salary expense, legal fees, exhibition and tradeshows and marketing material expenses.

Interest income decreased to \$2,129 and \$16,264 for the three and six months ended June 30, 2010, compared to \$24,291 and \$58,294 for the same period in 2009. 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 2010 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 \$7,244,024 on June 30, 2010, compared to \$7,493,997 on December 31, 2009. The net cash used in our operating activities was \$153,772 for the six months ended June 30, 2010, compared to \$2,133,156 for the same period in 2009, which is a direct result of a significant increase in revenue (approximately \$2.3 million), bolstered by certain cost savings initiatives. Net cash provided by investing activities, which is due to maturities of securities offset by capital expenditures amounted to \$3,472,540 for the six months ended June 30, 2010 compared to \$3,142,841 for the same period in 2009. Capital expenditures amounted to \$81,191 and \$88,663 for the six months ended June 30, 2010 and 2009, respectively. Net cash used in financing activities decreased substantially, from \$1.1 million during the first six months of 2009 to only \$4,000 during the first six months of 2010, due to principal payments on an equipment loan from BYK-Chemie being fully repaid in 2009.

Our supply agreement with our largest customer contains several financial covenants which could potentially impact our liquidity. The most restrictive financial covenants under this agreement require us to maintain a minimum of \$2 million in cash and cash equivalent investments and not permit the acceleration of any debt maturity having a principal amount of more than \$10,000,000, in order to avoid triggering a transfer of technology and equipment to our largest customer. We had approximately \$7.2 million in cash, cash equivalents and investments on June 30, 2010, with no debt. This supply agreement and its covenants are more fully described in Note 7 to our Financial Statements.

We believe that cash from operations and cash, cash equivalents and investments on hand and interest income thereon, will be adequate to fund our operating plans for the foreseeable future. Our actual future capital requirements in 2010 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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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 2010 will be approximately \$220,000 but could be even greater due to the factors discussed above.

On March 26, 2010, we entered into an agreement to sell our remaining auction rate securities ( ARS ) for \$4 million to Credit Suisse. This sale was completed and funds received on April 1, 2010.

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 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, 2010, we had a net operating loss carryforward of approximately \$80 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 2009. If not utilized, the remaining carryforward will expire at various dates between January 1, 2010 and December 31, 2029. 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 remaining carryforward will expire before ultimately becoming available to reduce income tax liabilities.

## **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.

## **Credit Environment**

The credit markets continue to be volatile and have experienced a shortage in overall liquidity due to the sub-prime lending industry. The Company neither engages in any business activities in the mortgage industry, nor has it held mortgage-backed securities in its investment portfolio. The Company believes it has sufficient liquidity from its cash and investment accounts to satisfy 2010 operational needs. See Notes 3 and 4 to the financial statements and Liquidity and Capital Resources in Management's Discussion and Analysis for a further discussion of liquidity issues.

## **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 2010 and beyond to

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differ materially from those expressed in, or implied by, such statements. These risks, uncertainties and factors include, without limitation: 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; 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; and the resolution of litigation in which we may become involved. Readers of this 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, 2010 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.

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

None.

**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.

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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 9, 2010

By: /s/ JESS A. JANKOWSKI  
Jess A. Jankowski  
President, Chief Executive Officer

(principal executive officer) and a Director

Date: August 9, 2010

By: /s/ FRANK J. CESARIO  
Frank J. Cesario  
Chief Financial Officer

(principal financial and chief accounting officer)