

NANOPHASE TECHNOLOGIES CORPORATION

Form 10-Q

November 07, 2006

**SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**Form 10-Q**

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

**For the Quarterly Period Ended: September 30, 2006**

**Commission File Number: 0-22333**

**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 is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12B-2 of the Exchange Act. (Check one):

Large accelerated filer  Accelerated filer  Non-accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).  
Yes  No

On November 3, 2006, there were 18,964,753 shares of common stock outstanding, par value \$.01, of the registrant.

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**NANOPHASE TECHNOLOGIES CORPORATION**  
**QUARTER ENDED September 30, 2006**  
**INDEX**

	<b>Page</b>
<b>PART I FINANCIAL INFORMATION</b>	<b>3</b>
Item 1. Financial Statements	3
Unaudited Balance Sheets on September 30, 2006 and December 31, 2005	3
Unaudited Statements of Operation for the three months ended September 30, 2006 and 2005 and the nine months ended September 30, 2006 and 2005	4
Unaudited Statements of Cash Flows for the nine months ended September 30, 2006 and 2005	5
Notes to Unaudited Financial Statements	6
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	11
Item 3. Quantitative and Qualitative Disclosures About Market Risk	16
Item 4. Controls and Procedures	16
<b>PART II OTHER INFORMATION</b>	<b>17</b>
Item 1. Legal Proceedings	
Item 1A. Risk Factors	17
Item 5. Other Information	17
Item 6. Exhibits and Reports on Form 8-K	17
<b>SIGNATURES</b>	<b>18</b>
Certification	
Certification	
Certification	

**PART I FINANCIAL INFORMATION****Item 1. Financial Statements**

**NANOPHASE TECHNOLOGIES CORPORATION**  
**BALANCE SHEETS**  
(Unaudited)

<b>ASSETS</b>	<b>September 30, 2006</b>	<b>December 31, 2005</b>
<b>Current assets:</b>		
Cash and cash equivalents	\$ 702,669	\$ 340,860
Investments	9,516,137	8,168,092
Trade accounts receivable, less allowance for doubtful accounts of \$22,195 and \$23,533 on September 30, 2006 and December 31, 2005, respectively	1,098,164	1,180,117
Other receivable, net	32,175	
Inventories, net	950,467	801,217
Prepaid expenses and other current assets	273,628	414,363
<b>Total current assets</b>	<b>12,573,240</b>	<b>10,904,649</b>
Equipment and leasehold improvements, net	7,755,373	6,587,787
Other assets, net	656,042	680,908
	<b>\$ 20,984,655</b>	<b>\$ 18,173,344</b>
 <b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current liabilities:</b>		
Current portion of long-term debt	\$	\$ 200,254
Current portion of deferred other revenue	127,273	56,757
Current portion of capital lease obligations	32,242	
Accounts payable	694,000	285,076
Accrued expenses	1,513,673	1,152,127
<b>Total current liabilities</b>	<b>2,367,188</b>	<b>1,694,214</b>
Long-term debt, less current maturities and unamortized debt discount	1,353,014	1,265,875
Long-term portion of capital lease obligations	59,074	
Deferred other revenue, less current portion	222,727	293,243
	<b>1,634,815</b>	<b>1,559,118</b>

**Contingent liabilities:****Stockholders equity:**

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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; 18,929,477 and 17,976,592 shares issued and outstanding on September 30, 2006 and December 31, 2005, respectively

Additional paid-in capital

Accumulated deficit

Total stockholders' equity

189,295	179,766
77,958,955	72,307,887
(61,165,598)	(57,567,641)
16,982,652	14,920,012
\$ 20,984,655	\$ 18,173,344

*See Notes to Financial Statements.*

**NANOPHASE TECHNOLOGIES CORPORATION**  
**STATEMENTS OF OPERATIONS**  
(Unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2006	2005	2006	2005
<b>Revenue:</b>				
Product revenue, net	\$ 2,329,738	\$ 1,579,552	\$ 6,546,100	\$ 5,105,312
Other revenue	96,052	95,062	276,161	267,409
<b>Total revenue</b>	<b>2,425,790</b>	<b>1,674,614</b>	<b>6,822,261</b>	<b>5,372,721</b>
<b>Operating expense:</b>				
Cost of revenue	1,705,725	1,466,790	5,220,154	4,505,554
<b>Gross profit</b>	<b>720,065</b>	<b>207,824</b>	<b>1,602,107</b>	<b>867,167</b>
Research and development expense	550,208	486,346	1,584,487	1,457,026
Selling, general and administrative expense	1,143,530	1,043,907	3,772,388	3,381,243
Lease accounting adjustment		279,810		279,810
<b>Loss from operations</b>	<b>(973,673)</b>	<b>(1,602,239)</b>	<b>(3,754,768)</b>	<b>(4,250,912)</b>
Interest income	90,563	73,054	248,045	209,471
Interest expense	(32,275)	(5,309)	(93,889)	(26,022)
Other (expense) income, net	(328)	(213)	2,655	29,253
<b>Loss before provision for income taxes</b>	<b>(915,713)</b>	<b>(1,534,707)</b>	<b>(3,597,957)</b>	<b>(4,038,210)</b>
Provisions for income taxes				
<b>Net loss</b>	<b>\$ (915,713)</b>	<b>\$ (1,534,707)</b>	<b>\$ (3,597,957)</b>	<b>\$ (4,038,210)</b>
<b>Net loss per share basic and diluted</b>	<b>\$ (0.05)</b>	<b>\$ (0.09)</b>	<b>\$ (0.20)</b>	<b>\$ (0.23)</b>
<b>Weighted average number of common shares outstanding</b>	<b>18,380,334</b>	<b>17,954,371</b>	<b>18,128,994</b>	<b>17,925,256</b>

*See Notes to Financial Statements.*

**NANOPHASE TECHNOLOGIES CORPORATION**  
**STATEMENTS OF CASH FLOWS**  
(Unaudited)

	<b>Nine months ending</b>	
	<b>September 30,</b>	
	<b>2006</b>	<b>2005</b>
<b>Operating activities:</b>		
Net loss	\$ (3,597,957)	\$ (4,038,210)
Adjustment to reconcile net loss to net cash (used in) operating activities:		
Depreciation and amortization	921,366	940,933
Amortization of debt discount	87,139	
Stock compensation expense	444,901	43,150
Allowance for excess inventory quantities	(247,841)	(14,163)
Equipment write-off	6,128	41,784
Patent write-off	111,162	
Changes in assets and liabilities related to operations:		
Trade accounts receivable	(118,301)	(523,360)
Other receivable	(32,175)	3,498
Inventories	98,591	(24,358)
Prepaid expenses and other assets	140,735	256,312
Accounts payable	299,720	199,754
Accrued liabilities	357,670	291,462
Net cash (used in) operating activities	(1,528,862)	(2,823,198)
<b>Investing activities:</b>		
Acquisition of equipment and leasehold improvements	(1,970,394)	(405,346)
Acquisition of patents	(112,023)	(79,752)
Payment of accounts payable incurred for the purchase of equipment and leasehold improvements	14,121	
Purchases of held-to-maturity investments	(60,851,356)	(140,113,213)
Sales of held-to maturity investments	59,503,311	142,984,131
Net cash (used in) provided by investing activities	(3,416,341)	2,385,820
<b>Financing activities:</b>		
Principal payment on debt obligation, including capital leases	(11,284)	(11,826)
Proceeds from borrowing	102,600	
Proceeds from sale of common stock, net, and exercise of stock options	5,215,696	233,183
Net cash provided by financing activities	5,307,012	221,357
Increase (decrease) in cash and cash equivalents	361,809	(216,021)
Cash and cash equivalents at beginning of period	340,860	475,185

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Cash and cash equivalents at end of period	\$	702,669	\$	259,164
<b>Supplemental cash flow information:</b>				
Interest paid	\$	2,262	\$	26,022
<b>Supplemental non-cash investing and financing activities:</b>				
Accounts receivable paid through offset of long-term debt	\$	220,254	\$	343,723
Accounts payable incurred for the purchase of equipment and leasehold improvements	\$	95,083	\$	59,322

*See Notes to Financial Statements.*



**NANOPHASE TECHNOLOGIES CORPORATION**  
**NOTES TO FINANCIAL STATEMENTS**  
**(Unaudited)**

**(1) Basis of Presentation**

The accompanying unaudited interim financial statements of Nanophase Technologies Corporation (the Company) 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, 2006 are not necessarily indicative of the results that may be expected for the year ended December 31, 2006.

These financial statements should be read in conjunction with the Company's audited financial statements and notes thereto for the year ended December 31, 2005, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2005, as filed with the Securities and Exchange Commission.

**(2) Description of Business**

The Company was incorporated on November 30, 1989, for the purpose of developing nanocrystalline materials for commercial production and sale in domestic and international markets.

Nanophase Technologies is a nanocrystalline materials developer and commercial manufacturer with an integrated family of nanomaterial technologies. Nanophase produces engineered nanomaterials for use in a variety of diverse existing and developing markets: personal care, sunscreens, abrasion-resistant applications, antimicrobial products and a variety of polishing applications, including semiconductors and optics. New markets and applications are also being developed. The Company targets markets in which it feels practical solutions may be found using nanoengineered products. The Company works with leaders in these target markets to identify and supply their material and performance requirements.

The Company also recognizes regular other revenue from a technology license. This activity is not expected to drive the long-term growth of the business. License revenue is recognized as other revenue in the Company's Statement of Operations, as it does not represent revenue directly from the Company's nanocrystalline materials.

**(3) Inventories**

Inventories consist of the following:

	<b>September 30, 2006</b>	<b>December 31, 2005</b>
Raw materials	\$ 188,920	\$ 498,144
Finished goods	1,105,046	894,413
	1,293,966	1,392,557
Allowance for excess inventory quantities	(343,499)	(591,340)
	\$ 950,467	\$ 801,217

**(4) Share-Based Compensation**

Prior to January 1, 2006, the Company accounted for its stock option plan under the recognition and measurement provisions of APB Opinion No. 25, Accounting for Stock Issued to Employees and related Interpretations, as permitted by FASB Statement No. 123, Accounting for Stock-Based Compensation. No stock option-based employee compensation cost was recognized in the Statement of Operations for the three or nine months ended September 30, 2005, as all options granted under those plans had an exercise price equal to the market value of the underlying common stock on date of grant. Effective January 1, 2006, the Company adopted the fair value recognition provisions of FASB Statement No. 123(R), Share-Based Payment, using the modified-prospective-transition method. Under that transition method, compensation cost recognized for the three and nine months ended September 30, 2006 includes: (a) compensation cost for all share-based payments granted prior to, but not yet vested on January 1, 2006, based on the grant date fair value estimated in accordance with the original provisions of Statement 123, and (b) compensation cost for all share-based payments granted subsequent to January 1, 2006, based on the grant-date fair value estimated in accordance with the provisions of Statement 123(R). Results for the prior period have not been restated.

As a result of adopting Statement 123(R) on January 1, 2006 the Company's loss before provision for income taxes and net loss for the three and nine months ended September 30, 2006 were \$68,704 and \$251,102 greater than if it had continued to account for share-based compensation under Opinion 25. Basic and diluted earnings per share for the three and nine months ended September 30, 2006 would have been (\$.05) and (\$.18), if the Company had not adopted Statement 123(R), compared to reported basic and diluted earnings per share of (\$.05) and (\$.20) respectively.

Compensation expense is recognized only for share-based payments expected to vest. The Company estimates forfeitures at the date of grant based on the Company's historical experience and future expectations. Prior to the adoption of SFAS 123(R), the effect of forfeitures on the pro forma expense was recognized based on estimated forfeitures.

As of September 30, 2006, there was approximately \$1,000,000 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 weighted-average period of 9.34 years.

The following table illustrates the effect on net income and earning per share if the Company had applied the fair value recognition provisions of SFAS No. 123 to options granted under the Company's stock option plan presented on September 30, 2005. For purposes of this pro forma disclosure, the value of the options is estimated using a Black-Scholes option-pricing formula and amortize to expense over the option vesting periods.

	Three months ended September 30, 2005	Nine months ended September 30, 2005
Net Loss:		
As reported	(\$1,534,707)	(\$4,038,210)
Deduct total stock-based employee compensation expense determined under fair value based method for all awards	(115,122)	(349,126)
Pro forma net loss	(\$1,649,829)	(\$4,387,336)
Loss per share:		
Basic As reported	(0.09)	(0.23)
Basic Pro forma	(0.09)	(0.24)

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Diluted	As reported	(0.09)	(0.23)
Diluted	Pro forma	(0.09)	(0.24)

The following table illustrates the various assumptions used to calculate the Black-Scholes option pricing model:

	Three months ended		Nine months ended	
	September 30, 2006	September 30, 2005	September 30, 2006	September 30, 2005
Weighted-average risk-free interest rate:	4.76%	4.21%	4.76%	4.21%
Dividend yield:	0.00%	0.00%	0.00%	0.00%
Weighted-average expected life of the option:	7 years	7 years	7 years	7 years
Weighted-average expected stock price volatility:	60.13%	78.72%	60.13%	78.72%
Weighted-average fair value of the options granted:	\$ 3.60	\$ 4.90	\$ 3.60	\$ 4.90

#### Employees Stock Options and Stock Grants

During the nine months ended September 30, 2006, 88,485 shares of Common Stock were issued pursuant to option exercises compared to 77,110 shares in the same period in 2005. For the nine months ended September 30, 2006, 201,000 shares of stock options were granted.

The following table summarizes the Company's option activity for Nanophase Technologies Corporation employees and directors during the nine months ended September 30, 2006:

Options	Shares	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Outstanding on January 1, 2006	1,744,232	\$5.92		
Granted	201,000	\$5.99		
Exercised	(88,485)	\$3.20		
Forfeited or expired	(6,396)	\$4.76		
Outstanding on September 30, 2006	1,850,351	\$6.06	5.19	\$1,644,887
Exercisable on September 30, 2006	1,511,490	\$6.09	4.26	\$1,590,245

The aggregate intrinsic value in the table above is before income taxes, based on Nanophase's closing stock price of \$6.03 on the last business day for the period ended September 30, 2006.

During the three and nine months ended September 30, 2006, the total intrinsic value of Nanophase stock options exercised was \$204,264 and \$315,461, respectively.

#### Restricted Stock

On October 2, 2006, the Company was to grant each outside director 1,007 shares of deferred common stock totaling 6,042 shares 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 \$36,000 for the restricted share rights and is included in stock-based compensation expense for the three months ending September 30, 2006 compared to \$0 for the same period in 2005.

In September 2005 and October 2004, the Company granted a total of 66,666 shares of restricted stock at market value consisting of 33,332 restricted share rights and 33,334 performance share rights, respectively. For the three and nine months ended September 30, 2006, the stock-based compensation expense was \$14,581 and \$43,585 for the restricted share rights compared to \$7,914 and \$22,943 for the same periods in 2005. For the three and nine months ended September 30, 2006, the stock-based compensation expense was \$0 and \$42,214 for the performance share rights compared to \$7,202 and \$20,207 for the same periods in 2005.

#### (5) Significant Customers and Contingencies

Revenue from three customers constituted approximately 44%, 36% and 10% for the three months ended September 30, 2006, compared to 24%, 57% and 8% of the Company's total revenue for the nine months ended September 30, 2006. Amounts included in accounts receivable on September 30, 2006 relating to these three customers were approximately \$0, \$547,000 and \$248,000, respectively. Revenue from these three customers constituted approximately 0%, 74% and 12% of the Company's total revenue for the three months ended September 30, 2005, compared to 1%, 76% and 5% for the nine months ended September 30, 2005. Amounts included in accounts receivable on September 30, 2005 relating to these three customers were approximately \$0, \$481,000 and \$195,000, respectively.

The Company currently has supply agreements with BASF Corporation ( "BASF" ), the Company's largest customer, and Rohm and Haas Electronic Materials CMP, Inc. ( "RHEM" ), 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 and/or certain financial condition covenants. The financial condition covenants in one of the Company's supply agreements with its largest customer, as amended, triggers a technology transfer (license or, 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, cash equivalents and investments 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 through at least 2007. If a triggering event were to occur and BASF elected to proceed with the license and related 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. Such an event would also 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 could be difficult to replace and train quickly. Given the occurrence of such an 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.

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

Revenue from international sources approximated \$455,000 and \$734,000 for the nine months ended September 30, 2006 and 2005, respectively. As part of its revenue from international sources, the Company recognized approximately \$191,000 in product revenue from several German companies and \$225,000 in other revenue from a technology license fee from its Japanese licensee for the nine months ended September 30, 2006 compared to \$431,000 and \$225,000 for the same period in 2005, respectively.

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

#### **(7) Administrative Actions**

In February 2004, an unidentified party filed a Petition to Request a Reexamination of US Patent No. 6,669,823 B1 in the U.S. Patent and Trademark Office, or USPTO. US Patent No. 6,669,823 B1 relates to certain parts of one of the Company's nanoparticle manufacturing processes, NanoArc Synthesis. The Company subsequently received notice that the USPTO had granted the Request for Reexamination. The reexamination process is provided for by law and requires the USPTO to consider the scope and validity of the patent based on substantial new questions of patentability raised by a third party or the USPTO. On September 7, 2005, the Company's representatives conducted an interview with the Examiner assigned to the Reexamination at the USPTO, resulting in the Examiner preparing an interview summary indicating that the Examiner agreed all the issued claims were patentable. A response, including further remarks about the interview and two new claims, was submitted shortly thereafter. However, prior to the USPTO issuing a formal notice confirming patentability, the same unidentified party referenced above filed a second Petition to Request Reexamination of the patent. Although the second Petition was denied, an amendment to all patent claims was made. The same unidentified party subsequently filed a third Request for Reexamination, which the USPTO granted and to which the Company has responded. It is not feasible to predict whether the Company ultimately will succeed in maintaining all the claims of this patent during reexamination. If the patent claims in this patent ultimately are narrowed substantially by the USPTO, the patent coverage afforded to certain parts of the Company's NanoArc Synthesis nanoparticle manufacturing process could be impaired. While the Company intends to vigorously defend its patent protection against such claims, it does not believe that a narrowing of these patent claims would pose a risk of material harm to the Company's business prospects or competitive positions. If the scope of the Company's claims protected by the patent in question were ultimately reduced through the pending re-examination proceedings before the USPTO, the Company would still continue to be able to conduct its business as currently conducted, including the use of the technology that is the subject of the patented claims. A reduction in the scope of the claims protected by the Company's patent in question would limit the Company's ability to assert





infringement claims and suits against other parties using the same or sufficiently similar technology. The Company believes that while patent protection is a valuable asset, a reduction in the scope of the claims protected by the Company's patent in question would not materially alter the competitive environment in which the Company operates or result in a material loss and the Company believes that the likelihood of a material loss arising from this matter is remote.

#### **(8) 2005 Lease Accounting Adjustment**

Along with many other companies with leased properties, Nanophase has recently reviewed its policies with respect to leasing transactions. Following this review, the Company corrected an error in its prior accounting practices to conform the lease term used in calculating straight-line rent expense with the useful lives used to amortize improvements on leased property. The result of this correction was primarily to accelerate the recognition of rent expense under its lease for the Romeoville headquarters that includes fixed rent escalations by revising the computation of straight-line rent expense to include these escalations for certain option periods. As the correction relates solely to accounting treatment, it has no effect on Nanophase's historical or future cash flows or the timing of payments under the related lease. Had the Company, from the inception of the lease in June 2000, correctly calculated its straight-line rent expense, the effect would have been an increase in rent of approximately \$13,220 per quarter. This quarterly effect, and the annualized effect, of this adjustment is immaterial to the Company's current or prior year's earnings per share or shareholders' equity. The total amount of this expense was \$279,810 and was expensed in the three month period ended September 30, 2005.

#### **(9) New Accounting Pronouncement**

In September 2006, the FASB issued SFAS 157, *Fair Value Measurements*. SFAS 157 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements. The requirements of SFAS 157 are effective for financial statements issued for fiscal years beginning after November 15, 2007. The Company does not believe that adoption of SFAS 157 will have a material effect on its financial statements.

In June 2006, the FASB issued Interpretation No. 48 (FIN 48), *Accounting for Uncertainty in Income Taxes* an interpretation of SFAS 109, *Accounting for Income Taxes*. FIN 48 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 developed a two-step process to evaluate a tax position and also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. This interpretation is effective for fiscal years beginning after December 15, 2006. Management has not yet determined the impact that adoption will have on the Company's financial statements.

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

#### **Overview**

Nanophase Technologies is a nanocrystalline materials developer and commercial manufacturer with an integrated family of nanomaterial technologies. Nanophase produces engineered nanomaterials for use in a variety of diverse markets: sunscreens, personal care, abrasion-resistant applications, antimicrobial products and a variety of polishing applications, including semiconductors and optics. The Company targets markets in which it feels practical solutions may be found using nanoengineered products. The Company works closely with leaders in these target markets to identify their material and performance requirements. Newer developed technologies have made certain new products possible and opened potential new markets. With the commercialization of the Company's NanoArc synthesis and new dispersion technologies in 2002, and the expansion of these capabilities in 2003 and 2004, Nanophase is focusing on penetrating the chemical-mechanical-planarization (CMP) and fine polishing markets. CMP is the process of polishing various types of integrated circuits or chips to be used in various commercial electronics applications. Management believes that the Company's inroads in the CMP and fine polishing markets would have been very difficult without the Company being able to produce its materials to exacting specifications verified by in-house and customer-based testing. Management expects growth in end-user (customers of Nanophase's

customers) adoption in 2006 and revenue growth to continue in 2006 in both of these areas. Additionally, the Company feels that its exclusive relationship with Altana Chemie ( Altana ), a global ingredients supplier to various coatings industries, will lead to growth in several of its abrasion-resistant applications in the marketplace. Management expects this relationship to continue to develop in 2006. In May of 2005, BASF announced the introduction of a new coated sunscreen material. This material incorporated a new coating developed by Nanophase which, management believes, should help to expand sales in the European and Asian markets with revenue growth expected in 2007.

On August 25, 2006, the Company sold, in a private placement to Rohm and Haas Electronic Materials CMP, Inc., 847,918 shares of common stock at \$5.8968 per share and received gross proceeds of \$5.0 million.

On November 3, 2005, BYK-Chemie USA, a subsidiary of Altana and a customer of Nanophase, lent \$1,597,420 to Nanophase pursuant to the terms of a Promissory Note received effective October 27, 2005. This loan was for the purchase and installation of additional dispersion capacity and an additional NanoArc synthesis reactor to allow both for quicker material and application development, which should help to speed market penetration, and the ability to fulfill orders on a commercial scale for additional materials in varying media.

From its inception in November 1989 through December 1996, the Company was in the development stage. During that period, the Company primarily focused on the development of its manufacturing processes in order to transition from laboratory-scale to commercial-scale production. As a result, the Company developed an operating capacity to produce significant quantities of its nanocrystalline materials for commercial sale. The Company was also engaged in the development of commercial applications and formulations and the recruiting of marketing, technical and administrative personnel. Since January 1997, the Company has been engaged in commercial production and sales of its nanocrystalline materials, and the Company no longer considers itself in the development stage. From inception through September 30, 2006, the Company was primarily capitalized through the private offering of approximately \$32.0 million of equity securities prior to its initial public offering, its initial public offering of \$28.8 million of common stock in November 1997, its private offering of \$6.2 million of common stock in May of 2002, its private offering of \$1.95 million of common stock in September of 2003, its equity investment of \$9.2 million in March 2004, its private offering of \$1.95 million of common stock in September of 2004 (through the conversion of warrants that were attached to its September 2003 offering) and its equity investment of \$4.9 million in August 2006, each net of issuance costs. The Company has incurred cumulative losses of \$61.2 million from inception through September 30, 2006.

### **Results of Operations**

Total revenue increased to \$2,425,790 and \$6,822,261 for the three and nine months ended September 30, 2006, compared to \$1,674,614 and \$5,372,721 for the same period in 2005. A substantial majority of the Company's revenue for the nine months ended September 30, 2006 is from the Company's largest customer. See Note 5 to the Financial Statements for additional information regarding the revenue the Company derived from this customer for the three and nine months ended September 30, 2006. Product revenue increased to \$2,329,738 and \$6,546,100 for the three and nine months ended September 30, 2006, compared to \$1,579,552 and \$5,105,312 for the same period in 2005. The increase in product revenue was primarily attributed to increased sales to a new significant customer in architectural coatings and increased sales of CMP materials to Rohm and Haas Electronic Materials CMP, Inc. ( RHEM, formerly known as Rodel, Inc.) The Company and BASF currently have a technology agreement in place that has led to the joint development of the second generation of sunscreen nanomaterials for other potential personal care applications. Management anticipates the launch of one or more new sunscreen or personal care applications this year, with related revenue to begin building in 2007.

Other revenue increased to \$96,052 and \$276,161 for the three and nine months ended September 30, 2006, compared to \$95,062 and \$267,409 for the same period in 2005. This increase was primarily attributed to increased shipping revenue partially offset by decreases in purchased supplies.

The majority of the total revenue generated during the period ended September 30, 2006 was from the Company's largest customer in the healthcare (sunscreens) market and its new significant customer (2006's second largest customer thus far) for application in architectural coatings as described above.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to \$1,705,725 and \$5,220,154 for the three and nine months ended September 30, 2006, compared to \$1,466,790 and \$4,505,554 for the same period in 2005. The increase in cost of revenue was generally attributed to increased revenue volume and was partially offset by the Company's continued efficiencies in reducing its variable manufacturing costs on nanomaterials. Improvements to gross margins were primarily due to increased revenue volume, favorable product mix and the completion of a series of process improvements that increased PVS reactor output by 38% in conjunction with a re-engineering program that had reduced the expected operational labor cost by 24% on high volume PVS-produced nanomaterials in 2005. These gains were somewhat offset by increases in commodity metal prices, a major component of the Company's raw material costs. Nanophase expects to maintain an aggressive schedule for new nanomaterial development, primarily using its NanoArc synthesis and dispersion technologies, for targeted applications and new markets throughout 2006. At current revenue levels the Company has generated a positive gross margin. The Company's margins have been somewhat impeded by not having enough revenue to absorb the manufacturing overhead that is required to work with current customers and the new ones the Company expects to have. Management believes that the current fixed manufacturing cost structure is sufficient to support significantly higher levels of production and resultant product revenue. The extent to which the Company's margins continue to grow, as a percentage of total revenue, will be dependent upon revenue mix, revenue volume, the Company's ability to continue to cut costs and the Company's ability to pass market raw materials increases on to its customers. As product revenue volume increases, this will result in more of the Company's fixed manufacturing costs being absorbed, leading to increased margins. The Company expects to continue reducing its variable product manufacturing costs in 2007 but may or may not continue to see gross margin growth in 2007, 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 Company's development or acquisition of new product applications and coating formulations and the cost of enhancing the Company's manufacturing processes. The May 2005 development of BASF's new sunscreen was an example of this work. In another example, the Company has been and continues to be engaged in research to enhance its ability to disperse its material in a variety of organic and inorganic media for use as coatings and polishing materials. Much of this work has led to new potential products for use by Altana. Now that the Company has demonstrated the capability to produce pilot quantities of mixed-metal oxides in a single crystal phase, the Company does 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. This development has been driven largely by customer demand. Management is now working on several related commercial applications. The Company expects that this technique should not be difficult to scale to large quantity commercial volumes once application viability and firm demand are established. The Company also has an ongoing advanced engineering effort that is primarily focused on the development of new nanomaterials as well as the refinement of existing nanomaterials. The Company is not certain when or if any significant revenue will be generated from the production of the materials described above. Research and development expense increased to \$550,208 and \$1,584,487 for the three and nine months ended September 30, 2006, compared to \$486,346 and \$1,457,026 for the same period in 2005. The increase in research and development expense was largely attributed to the enhancement of existing processes, stock compensation expense (non-cash) and outside testing expenses. These increases were partially offset by the capitalization of payroll related to the installation of dispersion equipment and a NanoArc Synthesis Reactor supported by the previously discussed loan from BYK-Chemie USA and decreases in materials and supplies expense. The Company does not expect research and development expense to increase significantly in 2007.

Selling, general and administrative expense increased to \$1,143,530 and \$3,772,388 for the three and nine months ended September 30, 2006, compared to \$1,043,907 and \$3,381,243 for the same period in 2005. The net increase was primarily attributed to increases in stock compensation expense (non-cash), professional fees and the abandonment of

two United States patent applications. These increases were partially offset by decreases in directors and officers insurance and audit fees.

There was a lease accounting adjustment of \$279,810 for the three and nine months ended September 30, 2005. This charge was due to the Company correcting an error in its prior accounting practices to conform the lease term used in calculating straight-line rent expense with the useful lives used to amortize improvements on leased property. See Note 8 to the Financial Statements for additional information.

Interest income increased to \$90,563 and \$248,045 for the three and nine months ended September 30, 2006, compared to \$73,054 and \$209,471 for the same period in 2005. These increases were primarily due to increases in investment yields in 2006 and to a lesser extent funds available for investment, largely composed of the August 25, 2006 equity investment from Rohm and Haas Electronic Materials CMP, Inc. which resulted in net proceeds of approximately \$4.9 million.

### **Liquidity and Capital Resources**

The Company's cash, cash equivalents and investments amounted to \$10,218,806 on September 30, 2006, compared to \$8,508,952 on December 31, 2005. The net cash used in the Company's operating activities was \$1,528,862 for the nine months ended September 30, 2006, compared to \$2,823,198 for the same period in 2005. Net cash used in investing activities, which is due to purchases of securities and capital expenditures and partially offset by sales of securities, amounted to \$3,416,341 for the nine months ended September 30, 2006 compared to \$2,385,820 of net cash provided by investing activities for the same period in 2005. Capital expenditures amounted to \$1,970,394 and \$405,346 for the nine months ended September 30, 2006 and 2005, respectively. The majority of the capital spending for the nine months ended September 30, 2006 relates to the \$1,597,420 loan from BYK-Chemie USA for the purchase and installation of additional dispersion capacity and an additional NanoArc synthesis reactor. During the second quarter in 2005 the Company completed implementation of a PVS process innovation started in late 2003, within the current capital budget, that has increased PVS reactor output by approximately 38% in conjunction with a re-engineering program that had reduced the expected operational labor cost by 24% on high volume PVS-produced nanomaterials. The Company expects that this innovation should result in the need for less future capital as the Company's PVS reactor-produced business grows. Currently, all sunscreen and personal care nanomaterials are manufactured via the PVS process. Net cash provided by financing activities is primarily due to the Company securing financing through an equity investment in August 2006 and, to a lesser extent, by the issuance of shares of common stock pursuant to the exercise of stock options and borrowings for equipment, partially offset by principal payments on debt and capital lease obligations amounting, in total, to \$5,307,012 for the nine months ended September 30, 2006, compared to \$221,357 for the same period in 2005.

On August 25, 2006, the Company sold, in a private placement to Rohm and Haas Electronic Materials CMP, Inc., 847,918 shares of common stock at \$5.8968 per share and received gross proceeds of \$5.0 million.

On November 3, 2005, BYK-Chemie USA, a customer of Nanophase, lent \$1,597,420 to Nanophase pursuant to the terms of a Promissory Note received effective October 27, 2005. The commission date on this equipment is expected to be November 1, 2006. The proceeds of the Promissory Note are to be used to buy, install and commission certain equipment which is then to be used for fulfillment of orders by BYK-Chemie USA and other uses. The outstanding principal balance of the Promissory Note is payable in three equal installments on January 30, 2009, April 30, 2009 and December 31, 2009. Interest accrues and is payable on a quarterly basis one year after installation and commissioning of the equipment referenced above has been completed at the rate of 100 basis points over the average daily London Inter-Bank Offered Rate for the preceding quarter.

On March 23, 2004, the Company sold, in a private placement to Altana Chemie AG (Altana), 1,256,281 shares of common stock at \$7.96 per share and received gross proceeds of \$10.0 million. While the Company has registration obligation to Altana in connection with such private placement, Altana would not have the ability to settle such shares in cash if such shares are not registered and, accordingly, the Company has treated the shares purchased by Altana as permanent equity on its balance sheet (i.e., as additional paid-in capital). On September 8, 2003, the Company secured equity funding through a private placement offering with Grace Brothers, Ltd., its largest investor. The Company issued 453,001 shares of additional common stock at \$4.415 per share and received gross proceeds of

\$2.0 million. Grace Brothers, Ltd. also had the right to purchase an additional 453,001 shares for an additional \$2.0 million pursuant to the terms of a warrant issued in such private placement. In accordance with the terms of such private placement, on June 7, 2004, the Company filed a registration statement for such 453,001 shares and the additional 453,001 shares issuable upon exercise of the warrant which registration statement was declared effective on August 13, 2004. On September 2, 2004, Grace Brothers, Ltd. exercised its warrant rights to acquire 453,001 newly issued shares of common stock and the Company received \$2.0 million in gross proceeds. On May 29, 2002, the Company secured equity funding through a private placement offering. The Company issued 1.37 million shares of additional common stock at \$5.00 per share and received gross proceeds of \$6.85 million. Net proceeds were approximately \$6.2 million after commissions, legal, accounting and other costs. The Company intends to use the remaining proceeds from the foregoing offerings to fund expected growth in new markets as well as to provide for expanded working capital needs expected to arise as sales volume grows and pay existing debts.

The Company's supply agreement with BASF contains several financial covenants which could potentially impact the Company's liquidity. The most restrictive financial covenants under this agreement require the Company to maintain a minimum of \$2.0 million in cash, cash equivalents and investments and that the Company not have 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 the Company's largest customer. The Company had approximately \$10.2 million in cash, cash equivalents and investments and debt net of unamortized debt discount of less than \$1.5 million on September 30, 2006. This supply agreement and its covenants are more fully described in Note 5 to the Company's Financial Statements. See "Risk Factors - We may need to raise additional capital in the future" in our Annual Report on Form 10-K for the year ended December 31, 2005.

In November 2000, the Company executed a three-year promissory note, held by the Company's largest customer, in the amount of \$1,293,895 for the construction of additional production capabilities at the Company's Romeoville, Illinois facility. This debt has been fully paid in the second quarter in 2006.

The Company believes that cash from operations, the proceeds of \$5 million equity investment from RHEM and the \$1,597,420 loan from BYK-Chemie USA (subject to the restrictions on the use of such proceeds set forth in the Promissory Note evidencing such loan), and cash, cash equivalents and investments on hand and interest income thereon, will be adequate to fund the Company's operating plans through at least 2007. The Company's actual future capital requirements in 2007 and beyond will depend, however, on many factors, including customer acceptance of the Company's current and potential nanocrystalline materials and product applications, continued progress in the Company's research and development activities and product testing programs, the magnitude of these activities and programs, and the costs necessary to increase and expand the Company's manufacturing capabilities and to market and sell the Company's 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 the Company's existing customers. The Company expects that capital spending relating to currently known capital needs for 2006 will be approximately \$2,000,000, but could be even greater due to the factors discussed above.

Should events arise that make it appropriate for the Company to seek additional financing, it should be noted that additional financing may not be available on acceptable terms or at all, and any such additional financing could be dilutive to the Company's 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 the Company's control; the need to meet previously discussed cash requirements to avoid a triggering event; or various other circumstances coming to pass that are currently not anticipated by the Company.

On September 30, 2006, the Company had a net operating loss carryforward of approximately \$61.2 million for income tax purposes. Because the Company may have experienced ownership changes within the meaning of the U.S. Internal Revenue Code in connection with its various prior equity offerings, future utilization of this carryforward may be subject to certain limitations as defined by the Internal Revenue Code. If not utilized, the carryforward expires at various dates between 2006 and 2025. 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, the Company has concluded that it is likely that some portion of this carryforward will expire before ultimately becoming available to reduce income tax liabilities. On September 30, 2006, the Company also had a foreign tax credit carryforward of \$156,000, which could be used as an offsetting tax credit to reduce U.S. income taxes. The foreign tax credit will expire in 2014, if not utilized before that date.

#### **Safe Harbor Provision**

Nanophase Technologies Corporation wants 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 the Company's current expectations of the future results of its operations, performance and achievements. Forward-looking statements are covered under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The Company has tried, wherever possible, to identify these statements by using words such as "anticipates," "believes," "estimates," "expects," "plans," "intends" and similar expressions. These statements are 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 the Company's actual results, performance or achievements in 2006 and beyond to 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 the Company's dependence on a limited number of key customers; uncertain demand for, and acceptance of, the Company's nanocrystalline materials; the Company's limited manufacturing capacity and product mix flexibility in light of customer demand; the Company's limited marketing experience; changes in development and distribution relationships; the impact of competitive products and technologies; the Company's dependence on patents and protection of proprietary information; the resolution of litigation in which the Company may become involved; and other risks set forth under the caption "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2005. 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**

The only financial instruments that the Company holds are investments of a short-term duration. Management does not believe that the Company currently has material market risk relating to its investments.

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

As of the end of the period covered by this report, the Company conducted an evaluation, under the supervision and with the participation of the principal executive officer and principal financial officer, of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934 (the "Exchange Act"). Based on this evaluation, the principal executive officer and principal financial officer concluded that the Company's disclosure controls and procedures are effective to ensure that information required to be disclosed by the Company in 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 made known to management and others, as appropriate, to allow timely decisions regarding required disclosures. There was no change in the Company's internal control over financial reporting during the Company's most recently completed fiscal quarter 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

As of the end of our third quarter, there were no additional material risks and no material changes to the risk factors discussed in our Annual Report on Form 10-K for the year ended December 31, 2005.

### Item 5. Other Information

None.

### Item 6. Exhibits and Reports on Form 8-K

#### A. Exhibits.

31.1 Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.

31.2 Certification of the Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.

32 Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350.

#### B. Reports on Form 8-K.

On August 25, 2006, the Company furnished a Current Report on Form 8-K reporting under Items 1.01, 3.02 and 9.01 that on August 25, 2006, the Company entered into a Stock Purchase Agreement with Rohm and Haas Electronic Materials CMP Holdings, Inc. (Rohm and Haas), pursuant to which the Company issued 847,918 shares of its common stock to Rohm and Haas at a purchase price of \$5.8968 per share for an aggregate consideration of \$5,000,000. A copy of the Stock Purchase Agreement is being filed as Exhibit 99.1 and is incorporated herein by reference.

On July 27, 2006, the Company furnished a Current Report on Form 8-K reporting under Items 1.01, 2.02, 5.03 and 9.01 that on July 24, 2006, the Company executed an amendment to the Company's 2004 Equity Compensation Plan pursuant to which the Company (a) increased to 1,200,000 the aggregate number of shares available to be issued under the Plan, (b) increased the annual limit on the number of shares available to be issued under the Plan to 300,000 (subject to existing exceptions contained in the Plan), and (c) decreased the cap on the grants to any individual in any year to 10% of any class. A copy of the First Amendment to 2004 Equity Compensation Plan is being filed as Exhibit 99.1 to this report and is incorporated herein by reference.

On July 27, 2006, the Company issued a press release announcing financial results for the quarterly fiscal period ended June 30, 2006.

On July 27, 2006, the Company amended its Certificate of Incorporation to increase the authorized number of shares of common stock from 25,000,000 to 30,000,000. A copy of the First Amendment to the Certificate of the Company is being filed as Exhibit 99.3 to this report and is incorporated herein by reference.

On July 21, 2006, the Company furnished a Current Report on Form 8-K reporting under Items 2.02 and 9.01 that on July 20, 2006, the Company issued a press release announcing financial results for the quarterly fiscal period ended June 30, 2006.



**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 7, 2006

By: /s/ JOSEPH E. CROSS  
Joseph E. Cross  
President, Chief Executive Officer  
(principal executive officer) and a  
Director

Date: November 7, 2006

By: /s/ JESS A. JANKOWSKI  
Jess A. Jankowski  
Chief Financial Officer  
(principal financial and chief accounting  
officer)