

NANOPHASE TECHNOLOGIES CORPORATION  
Form 10-Q  
August 08, 2007  
Table of Contents

---

## 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, 2007**

**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)

**1319 Marquette Drive, Romeoville, Illinois 60446**

(Address of principal executive offices, and zip code)

**36-3687863**  
(I.R.S. Employer  
Identification No.)

**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

Edgar Filing: NANOPHASE TECHNOLOGIES CORPORATION - Form 10-Q

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, 2007, there were 20,994,096 shares outstanding of common stock, par value \$.01, of the registrant.

---

**Table of Contents**

**NANOPHASE TECHNOLOGIES CORPORATION**

**QUARTER ENDED JUNE 30, 2007**

**INDEX**

	<b>Page</b>
<b><u>PART I - FINANCIAL INFORMATION</u></b>	<b>3</b>
Item 1. <u>Financial Statements</u>	3
<u>Unaudited Balance Sheets as of June 30, 2007 and December 31, 2006</u>	3
<u>Unaudited Statements of Operations for the three months ended June 30, 2007 and 2006 and the six months ended June 30, 2007 and 2006</u>	4
<u>Unaudited Statements of Cash Flows for the six months ended June 30, 2007 and 2006</u>	5
<u>Notes to Unaudited Financial Statements</u>	6
Item 2. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	10
Item 3. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	15
Item 4. <u>Controls and Procedures</u>	15
<b><u>PART II - OTHER INFORMATION</u></b>	<b>16</b>
Item 1. <u>Legal Proceedings</u>	16
Item 1A. <u>Risk Factors</u>	16
Item 2. <u>Unregistered Sales of Equity Securities and Use of Proceeds</u>	16
Item 3. <u>Defaults Upon Senior Securities</u>	16
Item 4. <u>Submission of Matters to a Vote of Security Holders</u>	16
Item 5. <u>Other Information</u>	16
Item 6. <u>Exhibits</u>	17
<b><u>SIGNATURES</u></b>	<b>23</b>

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

	<b>June 30,</b>	<b>December 31,</b>
	<b>2007</b>	<b>2006</b>
<b>ASSETS</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 982,685	\$ 132,387
Investments	5,608,520	8,434,793
Trade accounts receivable, less allowance for doubtful accounts of \$13,000 and \$22,000 on June 30, 2007 and December 31, 2006, respectively	2,504,645	1,459,391
Inventories, net	1,365,898	923,223
Prepaid expenses and other current assets	541,289	534,407
Total current assets	11,003,037	11,484,201
Equipment and leasehold improvements, net	7,389,405	7,608,326
Other assets, net	744,064	651,218
	<b>\$ 19,136,506</b>	<b>\$ 19,743,745</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current liabilities:</b>		
Current portion of deferred other revenue	127,273	127,273
Current portion of capital lease obligations	41,212	32,972
Accounts payable	1,003,554	478,694
Accrued expenses	1,426,502	1,643,585
Total current liabilities	2,598,541	2,282,524
Long-term debt, less current maturities and unamortized debt discount	1,446,151	1,383,707
Long-term portion of capital lease obligations	53,471	50,552
Deferred other revenue, less current portion	137,879	201,515
	1,637,501	1,635,774
<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; 19,080,495 and 18,995,581 shares issued and outstanding on June 30, 2007 and December 31, 2006, respectively	190,805	189,956
Additional paid-in capital	78,920,583	78,380,962
Accumulated deficit	(64,210,924)	(62,745,471)
Total stockholders equity	14,900,464	15,825,447

\$ 19,136,506      \$ 19,743,745

*See Notes to Financial Statements.*

Table of Contents

## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF OPERATIONS

(Unaudited)

	Three months ended		Six months ended	
	June 30, 2007	June 30, 2006	June 30, 2007	June 30, 2006
<b>Revenue:</b>				
Product revenue, net	\$ 4,015,275	\$ 2,298,315	\$ 6,809,416	\$ 4,216,362
Other revenue	110,233	92,587	222,529	180,109
Net revenue	4,125,508	2,390,902	7,031,945	4,396,471
<b>Operating expense:</b>				
Cost of revenue	2,611,249	1,846,678	4,804,524	3,514,429
Gross Profit	1,514,259	544,224	2,227,421	882,042
Research and development expense	450,005	487,133	974,169	1,034,279
Selling, general and administrative expense	1,360,957	1,241,403	2,771,217	2,628,857
Loss from operations	(296,703)	(1,184,312)	(1,517,965)	(2,781,094)
Interest income	89,202	74,769	188,829	157,482
Interest expense	(34,173)	(30,391)	(67,220)	(61,615)
Other, net	248	943	(69,097)	2,983
Loss before provision for income taxes	(241,426)	(1,138,991)	(1,465,453)	(2,682,244)
Provisions for income taxes				
Net loss	\$ (241,426)	\$ (1,138,991)	\$ (1,465,453)	\$ (2,682,244)
Net loss per share - basic and diluted	\$ (0.01)	\$ (0.06)	\$ (0.08)	\$ (0.15)
Weighted average number of common shares outstanding	19,070,236	18,009,155	19,038,217	18,001,238

*See Notes to Financial Statements.*

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

	<b>Six months ended June 30,</b>	
	<b>2007</b>	<b>2006</b>
<b>Operating activities:</b>		
Net loss	\$ (1,465,453)	\$ (2,682,244)
Adjustment to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	710,931	613,251
Amortization of debt discount	62,445	57,125
Amortization of deferred revenue	(63,636)	
Stock compensation expense	315,778	325,646
Allowance for excess inventory quantities	(12)	(245,464)
Loss on disposal of equipment		6,128
Write-down of equipment	69,587	
Abandonment of pending patents		111,162
Changes in assets and liabilities related to operations:		
Trade accounts receivable	(1,045,254)	22,603
Inventories	(442,663)	162,910
Prepaid expenses and other assets	(6,882)	69,671
Accounts payable	498,417	401,406
Accrued liabilities	(219,799)	160,418
Net cash used in operating activities	(1,586,541)	(997,388)
<b>Investing activities:</b>		
Proceeds from disposal of equipment	8,100	
Acquisition of equipment and leasehold improvements	(429,425)	(1,433,168)
Acquisition of Patents	(113,159)	(68,070)
Payment of accounts payable incurred for the purchase of equipment and leasehold improvements	(60,900)	14,121
Purchases of investments	(34,352,973)	(39,626,957)
Sales of investments	37,179,246	42,169,475
Net cash provided by investing activities	2,230,889	1,055,401
<b>Financing activities:</b>		
Principal payment on debt obligations, including capital leases	(18,742)	(3,665)
Proceeds from borrowings		102,600
Proceeds from sale of common stock, net, and exercise of stock options	224,692	45,154
Net cash provided by financing activities	205,950	144,089
Increase in cash and cash equivalents	850,298	202,102
Cash and cash equivalents at beginning of period	132,387	340,860
Cash and cash equivalents at end of period	\$ 982,685	\$ 542,962
<b>Supplemental cash flow information:</b>		
Interest paid	\$ 4,776	\$ 4,490

Edgar Filing: NANOPHASE TECHNOLOGIES CORPORATION - Form 10-Q

**Supplemental non-cash investing activities:**

Accounts receivable paid through offset of long-term debt	\$		\$	200,254
Capital lease obligation incurred for purchase of equipment	\$	29,900	\$	
Accounts payable incurred for the purchase of equipment and leasehold improvements	\$	87,343	\$	149,425

*See Notes to Financial Statements.*

**Table of Contents****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 six month periods ended June 30, 2007 are not necessarily indicative of the results that may be expected for the year ended December 31, 2007.

These financial statements should be read in conjunction with the Company's audited financial statements and notes thereto for the year ended December 31, 2006, included in the Company's Annual Report on Form 10-K for the year ended December 31, 2006, 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, antimicrobial products and a variety of polishing applications, including semiconductors and optics. New markets and applications are also being developed. Nanophase targets markets in which it feels practical solutions may be found using nanoengineered products. The Company works with leaders in these targeted markets to identify and supply their material and performance requirements. 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.

The Company also recognizes regular other revenue in connection with its promissory note to BYK Chemie and from a technology license. These activities are not expected to drive the long-term growth of the business. Both the deferred and license revenue are recognized as other revenue in the Company's Statement of Operations, as they do not represent revenue directly from the Company's Nanocrystalline materials.

**(3) Inventories**

Inventories consist of the following:

	<b>June 30, 2007</b>	<b>December 31, 2006</b>
Raw materials	\$ 284,720	\$ 173,750
Finished goods	1,424,520	1,092,827
	1,709,240	1,266,577
Allowance for excess inventory quantities	(343,342)	(343,354)
	<b>\$ 1,365,898</b>	<b>\$ 923,223</b>

**Table of Contents**

**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

**(Unaudited)**

**(4) Income Taxes**

In July 2006, the Financial Accounting Standards Board (the "FASB") issued Interpretation No. 48 ("FIN 48"), Accounting for Uncertainty in Income Taxes, an interpretation of FASB Statement No. 109. FIN 48 clarifies the accounting for income taxes by prescribing the minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. FIN 48 also provides guidance on derecognition, measurement, classification, interest and penalties, accounting in interim periods, disclosure and transition. FIN 48 applies to all tax positions related to income taxes. On January 1, 2007, the Company adopted the provisions of FIN 48. The Company has not recorded a reserve for any tax positions for which the ultimate deductibility is highly certain but for which there is uncertainty about the timing of such deductibility. The Company files tax returns in all appropriate jurisdictions, which include a federal tax return and Illinois state tax return. Open tax years for both jurisdictions are 2003 to 2005, which statutes expire in 2007 to 2009, respectively. When and if applicable, potential interest and penalty costs are expensed as incurred. As of June 30, 2007, the Company has no liability for unrecognized tax benefits. The adoption and implementation of FIN 48 had no effect on the Company's loss from operations, net loss or basic and diluted loss per share for the period ended June 30, 2007.

**(5) Share-Based Compensation**

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. The fair value of restricted stock awards is based on the fair value of the Company's stock on date of grant. The Company recognizes compensation expense on a straight-line basis.

**Employees Stock Options and Stock Grants**

During the six months ended June 30, 2007, 72,800 shares of Common Stock were issued pursuant to option exercises compared to 21,386 shares for the same period in 2006. For the six months ended June 30, 2007, 110,000 shares of stock options were granted compared to none for the same period in 2006. For the six months ended June 30, 2007, 229,299 shares of stock options were forfeited compared to 4,080 shares for the same period in 2006. For the six months ended June 30, 2007, 12,114 shares were issued in the form of restricted stock grant to the Company's outside directors compared to 11,370 shares for the same period in 2006.

**Restricted Stock**

For the three months ended June 30, 2007 and 2006, the Company was to grant each outside director 1,031 and 814 shares of deferred common stock totaling 6,186 and 4,884 shares compared to 12,114 and 11,370 shares for the six months ended June 30, 2007 and 2006, 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 \$36,000 and \$72,000 for the restricted share rights and is included in stock-based compensation expense for the three and six months ending June 30, 2007 and 2006, respectively.

On September 27, 2005, the Company granted 33,333 shares of restricted stock rights at market value consisting of 16,666 restricted share rights and 16,667 performance share rights. The restricted share rights vest in lump sum or cliff vest on September 27, 2008, provided the grantee has not

**Table of Contents**

terminated service prior to the vesting date. The performance share rights also vest in lump sum or cliff vest on January 30, 2009 provided a certain performance goal or milestone is achieved on or before January 30, 2009 and the grantee has not terminated service prior to January 30, 2009. For the three and six months ended June 30, 2007, the stock-based compensation (income) expense was (\$2,306) and \$5,305 for the restricted share rights compared to \$7,656 and \$15,227 for the same periods in 2006. For the three and six months ended June 30, 2007, the stock-based compensation (income) expense was (\$2,138) and \$4,116 for the performance share rights compared to \$7,162 and \$17,690 for the same periods in 2006 totaling \$9,421 and \$32,917 in stock-based compensation expense for the six months ending June 30, 2007 and 2006, respectively.

On October 11, 2004, the Company granted 33,333 shares of restricted stock rights at market value consisting of 16,666 restricted share rights and 16,667 performance share rights. The restricted share rights vest in lump sum or cliff vest on October 30, 2007, provided the grantee has not terminated service prior to the vesting date. The performance share rights also vest in lump sum or cliff vest upon achievement of certain performance goals or milestones on or before October 30, 2007, provided the grantee has not terminated service prior to the vesting date. For the three and six months ended June 30, 2007, the stock-based compensation (income) expense was (\$4,053) and \$2,833 for the restricted share rights compared to \$6,926 and \$13,776 for the same periods in 2006. For the three and six months ended June 30, 2007, the stock-based compensation (income) expense was (\$1,734) and \$4,783 for the performance share rights compared to \$5,581 and \$24,555 for the same periods in 2006 totaling \$7,616 and \$38,331 in stock-based compensation expense for the six months ending June 30, 2007 and 2006, respectively.

The following table summarizes the Company's share-based compensation awards during the three and six months ended June 30, 2007 and 2006:

	For the three months		For the six months	
	ended June 30,		ended June 30,	
	2007	2006	2007	2006
Total share-based compensation expense	\$ 83,079	\$ 67,093	\$ 224,642	\$ 182,398
Weighted average grant date fair value, options	\$ 4.60		\$ 4.50	
Weighted average grant date fair value, restricted stock				
Total unrecognized compensation cost	\$ 1,176,000	\$ 376,000	\$ 1,105,000	\$ 267,000
Remaining weighted average period cost will be recognized over	7.0 years	6.68 years	6.72 years	8.78 years
Proceeds from option exercises	\$ 124,082	\$ 763	\$ 224,692	\$ 45,154
Intrinsic value of option exercises	\$ 77,404	\$ 690	\$ 148,886	\$ 111,196

**(6) Significant Customers and Contingencies**

Revenue from three customers constituted approximately 41%, 36% and 14% for the three months ended June 30, 2007, compared to 32%, 44% and 14% of the Company's total revenue for the six months ended June 30, 2007. Amounts included in accounts receivable on June 30, 2007 relating to these three customers were approximately \$742,000, \$1,038,000 and \$414,000, respectively. Revenue from these three customers constituted approximately 23%, 59% and 3% of the Company's total revenue for the three months ended June 30, 2006, compared to 12%, 69% and 2% for the six months ended June 30, 2006. Amounts included in accounts receivable on June 30, 2006 relating to these three customers were approximately \$161,000, \$435,000 and \$40,000, 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

---

**Table of Contents**

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 agreement 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 for the foreseeable future. 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.

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

Revenue from international sources approximated \$406,000 and \$319,000 for the six months ended June 30, 2007 and 2006, respectively. As part of its revenue from international sources, the Company recognized approximately \$175,000 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, 2007 compared to \$156,000 and \$150,000 for the same period in 2006, 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.

**(8) Administrative Actions**

In February 2004, an unidentified party filed a Request for 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 provides that the USPTO consider the validity of the patent based on substantial new questions of patentability raised by a third party or the USPTO. After the Company filed a patent owner's statement and the third party filed its reply, the USPTO issued an Office Action rejecting all the claims of the patent. In September 2005, the Company submitted its response to the Office Action, including two new claims. Thereafter, the same unidentified third party referenced above filed a second Request for Reexamination, which the USPTO dismissed on procedural grounds. Subsequently, the Company filed certain amendments to the patent claims. A third Request for

## **Table of Contents**

Reexamination then was filed by the same unidentified third party. The USPTO granted the third request and merged the first and third Reexamination proceedings. After the Company filed a patent owner's statement and the third party filed its reply, the USPTO issued an Office Action rejecting all the claims in the patent. The Company then filed its response to the Office Action in November 2006. On June 14, 2007, the USPTO issued a Final Office Action in which the Examiner rejected all the claims of the patent. The Company has until August 14, 2007, to file its Notice of Appeal to appeal the Examiner's final rejection of the claims to the USPTO Board of Patent Appeals and Interferences.

It is not feasible to predict whether the Company ultimately will succeed in maintaining all or any of the claims of this patent following reexamination. If the claims in this patent are ultimately narrowed substantially or rejected, the patent coverage afforded to certain parts of the Company's NanoArc Synthesis nanoparticle manufacturing process could be impaired, which could impede the extent of Nanophase's legal protection of the invention that is subject to this patent and potentially harm its business and operating results. However, the Company believes that the likelihood of a material loss arising from this matter is remote.

### **(9) New Accounting Pronouncements**

In February 2007, the FASB issued SFAS 159, *The Fair Value Option for Financial Assets and Financial Liabilities*. SFAS 159 permits entities to choose to measure many financial instruments and certain other items at fair value at specified election dates. Under SFAS 159, a business entity shall report unrealized gains and losses on items for which the fair value option has been elected in earnings (or another performance indicator if the business entity does not report earnings) at each subsequent reporting date. SFAS 159 also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. This Statement is effective for fiscal years beginning after November 15, 2007. The Company does not believe that adoption of SFAS 159 will have a material effect on its financial statements.

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.

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

### **Overview**

Nanophase is a nanomaterials 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, antimicrobial products, plastics additives, water filtration, DNA biosensors 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

## **Table of Contents**

expects growth in end-user (customers of Nanophase's customers) adoption in 2007 and revenue growth in both of these areas to follow in 2008. Additionally, the Company feels that its exclusive relationship with Altana Chemie AG (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 2007. 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 future revenue growth expected. Management further expects that we will develop additional customers to help us achieve growth in 2007 and beyond.

On August 25, 2006, the Company sold, in a private placement to Rohm and Haas Electronic Materials CMP Holdings, 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 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. The equipment was commissioned on November 1, 2006.

From its inception in November 1989 through December 31, 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 nanomaterials 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 1, 1997, the Company has been engaged in commercial production and sales of its nanomaterials, and the Company no longer considers itself in the development stage. From inception, the Company was primarily capitalized through the private offerings 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 of 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 receipt of a customer's equity investment of \$9.3 million in March 2004 and 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), its receipt of a customer's equity investment of \$4.9 million in August 2006 and its offering of \$10.6 million of common stock in July 2007 pursuant to a registration statement declared effectively by the SEC on May 31, 2007, each net of issuance costs. The Company has incurred cumulative losses of \$64 million from inception through June 30, 2007.

## **Results of Operations**

Total revenue increased to \$4,125,508 and \$7,031,945 for the three and six months ended June 30, 2007, compared to \$2,390,902 and \$4,396,471 for the same periods in 2006. A substantial majority of the Company's revenue for the three and six month periods ended June 30, 2007 is from the Company's three largest customers. See Note 6 to the Financial Statements for additional information regarding the revenue the Company derived from these three customers for the three and six month periods ended June 30, 2007. Product revenue increased to \$4,015,275 and \$6,809,416 for the three and six months ended June 30, 2007, compared to \$2,298,315 and \$4,216,362 for the same periods in 2006. The increase in

**Table of Contents**

product revenue was primarily attributed to increased sales in architectural coatings as well as increased sales to BYK-Chemie. The Company and its largest customer 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 in the near future, with related revenue subsequently to begin increasing.

Other revenue increased to \$110,233 and \$222,529 for the three and six months ended June 30, 2007, compared to \$92,587 and \$180,109 for the same periods in 2006. This increase was primarily attributed to the Company recognizing deferred revenue in connection with its promissory note to BYK Chemie partially offset by decreases in shipping revenue.

The majority of the total revenue generated during the six-month period ended June 30, 2007 was from the Company's largest customer in healthcare (sunscreens), from an application in architectural coatings (the Company's second largest customer) and from sales to BYK-Chemie for a variety of materials.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to \$2,611,249 and \$4,804,524 for the three and six months ended June 30, 2007, compared to \$1,846,678 and \$3,514,429 for the same periods in 2006. The increase in cost of revenue was generally attributed to increased revenue volume and, to a lesser extent, inefficiencies due to an abundance of smaller lots produced consisting of a series of products to support initial volume growth in BYK-Chemie. Improvements to gross margins were primarily due to increased revenue volume and favorable product mix. Nanophase expects to continue new nanomaterial development, primarily using its NanoArc synthesis and dispersion technologies, for targeted applications and new markets in 2007. 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, given current revenue mix 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 controllable variable product manufacturing costs in 2007, with potential offsetting increases in the commodity metals markets but may or may not continue to see absolute dollar gross margin growth in 2007, dependent upon the factors discussed above. Additionally, the Company's overall margin growth has been slowed by the fact that, while commodity metal prices have increased and the Company is able to recover that price increase, the Company has not been able to collect typical overhead and profit that the Company otherwise would without the increases in the commodity metal prices.

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 several new products and additional potential new products for use by BYK-Chemie. 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

## **Table of Contents**

working on several related commercial opportunities. 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 decreased to \$450,005 and \$974,169 for the three and six months ended June 30, 2007, compared to \$487,133 and \$1,034,279 for the same period in 2006. The decrease in research and development expense was largely attributed to decreases in expenses relating to technical and new materials development and depreciation expenses. These decreases were partially offset by increased salary expense. The Company does not expect research and development expense to increase significantly in 2007.

Selling, general and administrative expense increased to \$1,360,957 and \$2,771,217 for the three and six months ended June 30, 2007, compared to \$1,241,403 and \$2,628,857 for the same periods in 2006. The net increase was primarily attributed to increases in salary expense, consulting fees and investor relations expense. These increases were partially offset by decreases in recruiting and relocation expenses, directors and officers insurance and audit and license fees.

Interest income increased to \$89,202 and \$188,829 for the three and six month periods, respectively, ended June 30, 2007, compared to \$74,769 and \$157,482 for the same periods in 2006. This increase was primarily due to increased investment yields.

## **Inflation**

Management believes inflation has not had a material effect on the Company's operations or on its financial position. However, supplier price increases may have a material effect on the Company's operations and financial position in the remainder of 2007, if the Company is unable to pass through those increases under its present contracts.

## **Liquidity and Capital Resources**

The Company's cash, cash equivalents and investments amounted to \$6,591,205 on June 30, 2007, compared to \$8,567,180 on December 31, 2006 and \$6,168,536 on June 30, 2006. The net cash used in the Company's operating activities was \$1,586,541 for the six months ended June 30, 2007, compared to \$997,388 for the same period in 2006. Net cash provided by investing activities, which is due to maturities of securities and to a lesser extent capital expenditures offset partially by purchases of securities, amounted to \$2,230,889 for the six months ended June 30, 2007 compared to \$1,055,401 for the same period in 2006. Capital expenditures amounted to \$429,425 and \$1,433,168 for the six months ended June 30, 2007 and 2006, respectively. Net cash provided by financing activities is due to the issuance of shares of common stock pursuant to the exercise of options, partially offset by principal payments on capital lease obligations, amounting, in total, to \$205,950 for the six months ended June 30, 2007 compared to \$144,089 for the same period in 2006.

On June 30, 2007, the Company issued and sold 1,900,000 shares of common stock pursuant to a registration statement filed on May 22, 2007 and declared effective by the SEC on May 31, 2007 to certain institutional investors at a purchase price of \$5.92 per share, for an aggregate purchase price of \$11.2 million and net proceeds of approximately \$10.6 million after deducting the placement agency commission and all estimated offering expenses that are payable by the Company.

## **Table of Contents**

The Company's supply agreement with its largest customer 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 certain technology and sale of related equipment to the Company's largest customer. The Company had approximately \$6.6 million in cash, cash equivalents and investments and debt net of unamortized debt discount of less than \$1.6 million on June 30, 2007. This supply agreement and its covenants are more fully described in Note 6 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, 2006.

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 was fully paid in the second quarter in 2006.

The Company believes that cash from operations, the net proceeds of \$10.6 million from its July 2, 2007 Shelf Offering, and cash, cash equivalents and investments on hand and interest income thereon, will be adequate to fund the Company's operating plans for the foreseeable future. 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 nanomaterials 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 2007 will be approximately \$2,500,000, 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 June 30, 2007, the Company had a net operating loss carryforward of approximately \$71.5 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 2007 and 2026. 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. During the year ended December 31, 2006, the Company's foreign tax credit carryforward of \$156,000 expired.

## **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

## **Table of Contents**

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 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 the Company's actual results, performance or achievements in 2007 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 above. 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**

#### **Disclosure controls**

An evaluation 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), of the effectiveness of the design and operation of the Company's disclosure controls and procedures as of December 31, 2006. 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 made known to management and others, 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 quarter ended June 30, 2007 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

**Table of Contents****PART II OTHER INFORMATION****Item 1. Legal Proceedings**

None.

**Item 1A. Risk Factors**

As of the end of our second 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, 2006.

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

None.

**Item 3. Defaults Upon Senior Securities**

None.

**Item 4. Submissions of Matters to a Vote of Security Holders**

- a) The 2007 Annual Meeting of Stockholders of the Company was held on July 30, 2007.
- b) The stockholders voted to re-elect three Class I directors to the Company's Board of Directors. Results of the voting were as follows:

<b>Directors</b>	<b>For</b>	<b>Authority Withheld</b>	<b>Abstentions</b>	<b>Broker Non-Votes</b>
James A. McClung	15,200,210	369,394		
James A. Henderson	15,200,992	368,612		
R. Janet Whitmore	15,186,312	383,292		

Joseph E. Cross, Jerry K. Pearlman, Donald S. Perkins and Richard W. Siegel, Ph D continued their terms of office as directors of the Company after the 2007 Annual Meeting of Stockholders.

- c) To ratify the appointment by the Company's Audit and Finance Committee of McGladrey & Pullen, LLP as the independent auditors of the Company's financial statements for the year ended December 31, 2007. Results of the voting were as follows:

<b>For</b>	<b>Against</b>	<b>Abstentions</b>	<b>Broker Non-Votes</b>
15,293,191	243,916	32,497	

**Item 5. Other Information**

On May 22, 2007, the Company filed a registration statement with the SEC to register 2,000,000 shares of its common stock for sale by the Company. Such registration statement was declared effective by the SEC on May 31, 2007. On June 30, 2007, the Company issued and sold 1,900,000 shares of common stock to certain institutional investors at a purchase price of \$5.92 per share, for an aggregate purchase price of \$11.2 million and net proceeds of approximately \$10.6 million after deducting the placement agency commission and all estimated offering expenses that are payable by the Company. On July 9, 2007, the Company filed a post-effective amendment no. 1 to the registration statement to remove from registration the 100,000 shares of common stock that remained unsold under the registration statement.



**Table of Contents**

**Item 6. Exhibits**

- Exhibit 2 Plan and Agreement of Merger dated as of November 25, 1997 by and between the Company and its Illinois predecessor, incorporated by reference to Exhibit 2 to the Company's Annual Report on Form 10-K for the year ended December 31, 1997 (the 1997 10-K ).
- Exhibit 3(I).1 Certificate of Incorporation of the Company, incorporated by reference to Exhibit 3.1 to the 1997 10-K.
- Exhibit 3(I).2 First Amendment to the Certificate of Incorporation of Nanophase Technologies Corporation dated July 27, 2006, incorporated by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K filed July 27, 2006.
- Exhibit 3(II).1 Bylaws of the Company, incorporated by reference to Exhibit 3.2 to the 1997 10-K.
- Exhibit 4.1 Specimen stock certificate representing common stock, incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-1 (File No. 333-36937) (the IPO S-1 ).
- Exhibit 4.2 Form of Warrants, incorporated by reference to Exhibit 4.2 to the IPO S-1.
- Exhibit 4.3 Rights Agreement dated as of October 28, 1998 by and between the Company and LaSalle National Bank, incorporated by reference to Exhibit 1 to the Company's Registration Statement on Form 8-A, filed October 28, 1998.
- Exhibit 4.4 Certificate of Designation of Series A Junior Participating Preferred Stock incorporated by reference to Exhibit 4.4 to the Company's Annual Report on Form 10-K for the year ended December 31, 1998 (the 1998 10-K ).
- Exhibit 4.5 Amendment to Rights Agreement dated August 1, 2001 between the Company and LaSalle National Association, as Rights Agent, incorporated by reference to Exhibit 4.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.
- Exhibit 4.6 2001 Nanophase Technologies Corporation Equity Compensation Plan, incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-8 (File No. 333-74170).
- Exhibit 4.7 Second Amendment to Rights Agreement dated May 24, 2002 between the Company and LaSalle National Association, as Rights Agent, incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-3 (File No. 333-90326) filed June 12, 2003.

**Table of Contents**

Exhibit 4.8	Third Amendment to Rights Agreement dated September 5, 2003 between the Company and LaSalle National Association, as Rights Agent, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed September 10, 2003.
Exhibit 4.9	Subscription Agreement dated September 8, 2003 between the Company and Grace Brothers, Ltd., incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed September 10, 2003.
Exhibit 4.10	Stock Purchase Agreement dated March 23, 2004 between the Company and Altana Chemie AG, incorporated by reference to Exhibit 4.10 to the Company's Annual Report on Form 10-K filed March 30, 2004.
Exhibit 4.11	Registration Rights Agreement dated March 23, 2004 between the Company and Altana Chemie AG, incorporated by reference to Exhibit 4.11 to the Company's Annual Report on Form 10-K filed March 30, 2004.
Exhibit 4.12	2004 Nanophase Technologies Corporation 2004 Equity Compensation Plan, ( "2004 Equity Plan" ) incorporated by reference to Exhibit 4 to the Company's Registration Statement on Form S-8 (File No. 333-119466).
Exhibit 4.13	Form of Stock Option Agreement under the 2004 Equity Plan, incorporated by reference to Exhibit 4.13 to the Company's Annual Report on Form 10-K filed March 15, 2005.
Exhibit 4.14	Form of Restricted Share Grant Agreement under the 2004 Equity Plan, incorporated by reference to Exhibit 4.14 to the Company's Annual Report on Form 10-K filed March 15, 2005.
Exhibit 4.15	Form of Performance Share Grant Agreement under the 2004 Equity Plan, incorporated by reference to Exhibit 4.15 to the Company's Annual Report on Form 10-K filed March 15, 2005.
Exhibit 4.16	2005 Nanophase Technologies Corporation Equity Compensation Plan, incorporated by reference to Exhibit 4 to the Company's Non-Employee Director Restricted Stock Plan, incorporated by reference to Exhibit A to the Company's Definitive Proxy Statement on Form DEF14A filed May 17, 2005.
Exhibit 4.17	First Amendment to the Nanophase Technologies Corporation 2005 Non-Employee Director Restricted Stock Plan, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed January 9, 2006.
Exhibit 10.1	The Nanophase Technologies Corporation Amended and Restated 1992 Stock Option Plan, as amended (the "Stock Option Plan" ), incorporated by reference to Exhibit 10.1 to the IPO S-1.
Exhibit 10.2	Form of Indemnification Agreement between the Company and each of its directors and executive officers, incorporated by reference to Exhibit 10.2 to the IPO S-1.

**Table of Contents**

Exhibit 10.3	Amended and Restated Registration Rights Agreements dated as of March 16, 1994, as amended, incorporated by reference to Exhibit 10.2 to the IPO S-1.
Exhibit 10.4	License Agreement dated June 1, 1990 between the Company and ARCH Development Corporation, as amended, incorporated by reference to Exhibit 10.7 to the IPO S-1.
Exhibit 10.5	License Agreement dated October 12, 1994 between the Company and Hitachi, incorporated by reference to Exhibit 10.8 to the IPO S-1.
Exhibit 10.6	License Agreement dated May 31, 1996 between the Company and Research Development Corporation of Japan, incorporated by reference to Exhibit 10.9 to the IPO S-1.
Exhibit 10.7	License Agreement dated April 1, 1996 between the Company and Cornell Research Foundation, incorporated by reference to Exhibit 10.10 to the IPO S-1.
Exhibit 10.8*	Consulting and Stock Purchase Agreement between Richard W. Siegel and the Company dated as of May 9, 1990, as amended February 13, 1991, November 21, 1991 and January 1, 1992, incorporated by reference to Exhibit 10.11 to the IPO S-1.
Exhibit 10.9	Lease Agreement between the Village of Burr Ridge and the Company, dated September 15, 1994, incorporated by reference to Exhibit 10.12 to the IPO S-1.
Exhibit 10.10	Distribution Agreement between the Company and C.I. Kasei, Ltd., (a subsidiary of Itochu Corporation) dated as of October 30, 1996, incorporated by reference to Exhibit 10.15 to the IPO S-1.
Exhibit 10.11	Supply Agreement between the Company and Schering-Plough HealthCare Products, Inc. dated as of March 15, 1997, incorporated by reference to Exhibit 10.17 to the IPO S-1.
Exhibit 10.12	License Agreement between the Company and C.I. Kasei Co., Ltd. (a subsidiary of Itochu Corporation) dated as of December 30, 1997, incorporated by reference to Exhibit 10.17 to the 1997 10-K.
Exhibit 10.13*	Employment Agreement dated as of November 9, 1999 between the Company and Joseph Cross, incorporated by reference to Exhibit 10.15 to the 1999 10-K.
Exhibit 10.14*	Employment Agreement dated as of March 15, 1999 between the Company and Daniel S. Bilicki, incorporated by reference to Exhibit 10.19 to the 1998 10-K.
Exhibit 10.15*	Form of Options Agreement under the Stock Option Plan, incorporated by reference to Exhibit 4.5 to the Company's Registration Statement on Form S-8 (File No. 333-53445).

**Table of Contents**

Exhibit 10.16**	Zinc Oxide Supply Agreement dated as of September 16, 1999 between the Company and BASF Corporation, as assignee, incorporated by reference to Exhibit 10.22 to the 1999 10-K.
Exhibit 10.17*	Employment Agreement dated as of November 2, 2000 between the Company and Robert Haines, incorporated by reference to Exhibit 10.22 to the Company's Annual Report on Form 10-K for the year ended December 31, 2000 (the "2000 10-K").
Exhibit 10.18	Lease Agreement between Centerpointe Properties Trust and the Company, dated June 15, 2000, incorporated by reference to Exhibit 10.23 to the 2000 10-K.
Exhibit 10.19**	Amendment No. 1 to Zinc Oxide Supply Agreement dated as of January, 2001 between the Company and BASF Corporation, incorporated by reference to Exhibit 10.24 to the 2000 10-K.
Exhibit 10.20	Promissory Note dated as of September 14, 2000 between the Company and BASF Corporation, incorporated by reference to Exhibit 10.25 to the 2000 10-K.
Exhibit 10.21**	Cooperation Agreement dated June 24, 2002 between the Company and Rodel, Inc., incorporated by reference to Exhibit 10.23 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002.
Exhibit 10.22*	Consulting Agreement dated December 12, 2002 between the Company and Dr. Gina Kritchevsky, incorporated by reference to Exhibit 10.24 to the Company's Annual Report on Form 10-K for the year ended December 31, 2002.
Exhibit 10.23	First Amendment to Promissory Note dated as of March 11, 2003 between the Company and BASF Corporation, incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K for the year ended December 31, 2002.
Exhibit 10.24	Amendment No. 2 to Zinc Oxide Supply Agreement dated as of March 17, 2003 between the Company and BASF Corporation, incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K for the year ended December 31, 2002.
Exhibit 10.25*	Employment Agreement dated March 24, 2003 between the Company and Mr. Edward G. Ludwig, Jr., incorporated by reference to Exhibit 10.25 to the Company's Annual Report on Form 10-K for the year ended December 31, 2002.
Exhibit 10.26*	Employment Agreement dated February 17, 2000 between the Company and Mr. Jess Jankowski, incorporated by reference to Exhibit 10.26 to the Company's Annual Report on Form 10-K filed March 30, 2004.
Exhibit 10.27*	Employment Agreement dated September 26, 2001 between the Company and Dr. Richard W. Brotzman, incorporated by reference to Exhibit 10.27 to the Company's Annual Report on Form 10-K filed March 30, 2004.

**Table of Contents**

Exhibit 10.28**	Amendment No. 1 to Cooperation Agreement dated February 25, 2004 between the Company and Rohm and Haas Electronic Materials CMP Inc. (formerly known as Rodel, Inc.), incorporated by reference to Exhibit 10.28 to the Company's Annual Report on Form 10-K filed March 30, 2004.
Exhibit 10.29	Joint Development Agreement dated March 23, 2004 between the Company and Altana Chemie AG., incorporated by reference to Exhibit 10.29 to the Company's Quarterly Report on Form 10-Q filed August 13, 2004.
Exhibit 10.30	Amendment No. 1 to License Agreement dated July 16, 2004 between the Company and C.I. Kasei Co., Ltd., incorporated by reference to Exhibit 10.30 to the Company's Quarterly Report on Form 10-Q filed August 13, 2004.
Exhibit 10.31**	Letter Agreement Amending Cooperation Agreement dated October 15, 2004 between the Company and Rohm and Haas Electronic Materials CMP Inc., incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed October 22, 2004.
Exhibit 10.32	Building Lease dated September 15, 2004 between the Company and the Village of Burr Ridge, incorporated by reference to Exhibit 10.32 to the Company's Annual Report on Form 10-K filed March 15, 2005.
Exhibit 10.33**	Second Amendment to Promissory Note dated as of May 1, 2005 between the Company and BASF Corporation, incorporated by reference to Exhibit 10.33 to the Company's Quarterly Report on Form 10-Q filed May 9, 2005.
Exhibit 10.34	Lease Amendment effective October 1, 2005 between Nanophase Technologies Corporation and Centerpoint Properties Trust, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed October 20, 2005.
Exhibit 10.35	Promissory Note effective October 27, 2005 executed by BYK-Chemie USA in favor of Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed October 27, 2005.
Exhibit 10.36**	Distributor Agreement dated October 24, 2005 between Johnson Matthey Catalog Company, Inc., d/b/a ALFA AESAR, and Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed November 1, 2005.
Exhibit 10.37	First Amendment to 2005 Non-Employee Director Restricted Stock Plan, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed January 9, 2006.
Exhibit 10.38	Nanophase Technologies Corporation Non-Employee Director Deferred Compensation Plan, incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed January 9, 2006.

**Table of Contents**

Exhibit 10.39**	Supply Agreement dated March 3, 2006 between Roche Diagnostics GmbH and Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed March 9, 2006.
Exhibit 10.40	Z-COTE HP-2 Brand Supply Agreement dated May 15, 2006 between BASF Corporation and Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed June 20, 2006.
Exhibit 10.41	Amendment to 2004 Equity Compensation Plan, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed July 27, 2006.
Exhibit 10.42	Stock Purchase Agreement dated August 25, 2006 between Rohm and Haas Electronic Materials CMP Holdings, Inc. and Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed August 28, 2006.
Exhibit 10.43	Registration Rights Agreement dated August 25, 2006 between Rohm and Haas Electronic Materials CMP Holdings, Inc. and Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed August 28, 2006.
Exhibit 10.44**	Amended and Restated Cooperation Agreement dated August 25, 2006 between Rohm and Haas Electronic Materials CMP Inc. and Nanophase Technologies Corporation, incorporated by reference to Exhibit 99.3 to the Company's Current Report on Form 8-K filed August 28, 2006.
Exhibit 10.45	2006 Stock Appreciation Rights Plan, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed October 3, 2006.
Exhibit 10.46	Form of Grant Agreement, incorporated by reference to Exhibit 99.2 to the Company's Current Report on Form 8-K filed October 3, 2006.
Exhibit 10.47*	Employment Agreement dated as of January 8, 2007 between the Company and Kevin J. Wenta, incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed January 12, 2007.
Exhibit 10.48	Placement Agency Agreement dated as of June 29, 2007 between the Company and Global Crown Capital, L.L.C., incorporated by reference to Exhibit 99.1 to the Company's Current Report on Form 8-K filed June 2, 2007.
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.

\* Management contract or compensatory plan or arrangement.

\*\* Confidentiality previously granted for portions of this agreement.

**Table of Contents**

**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 8, 2007

By: /s/ JOSEPH E. CROSS  
Joseph E. Cross  
President, Chief Executive Officer

(principal executive officer) and a Director

Date: August 8, 2007

By: /s/ JESS A. JANKOWSKI  
Jess A. Jankowski  
Chief Financial Officer

(principal financial and chief accounting officer)