

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K/A
AMENDMENT No. 1

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

For the fiscal year ended December 31, 2002

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) (zip code)

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

Securities registered pursuant to Section 12(b) of the Act: **None**

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, par value \$.01 per share

Preferred Stock Purchase Rights

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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes No

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12B-2). Yes No

The aggregate market value of the registrant's voting stock held by non-affiliates of the registrant, based upon the last reported sale price of the registrant's Common Stock on June 28, 2002 was \$67,918,991.

The number of shares outstanding of the registrant's Common Stock, par value \$.01, as of May 16, 2003 was 15,181,491.

DOCUMENTS INCORPORATED BY REFERENCE

None.

Introductory Note

Nanophase Technologies Corporation hereby amends its Annual Report of Form 10-K for the fiscal year ended December 31, 2002 (originally filed March 31, 2003) to include Items 10, 11, 12 and 13, which were not part of the original filing and to re-file an exhibit for which confidential treatment has been requested. No other changes have been made to the Annual Report. This Form 10-K/A does not reflect events occurring after the filing of the original Form 10-K and does not modify or update the disclosure therein in any way other than as required to reflect the amendments discussed above and reflected below.

PART III

Item 10. Directors and Executive Officers of the Registrant

Set forth below is certain information regarding the directors of the Company.

<u>Name</u>	<u>Age</u>	<u>Position with Company</u>	<u>Served as Director Since</u>	<u>Term Expires</u>	<u>Class</u>
James A. Henderson	68	Director	2001	2004	I
James A. McClung, Ph.D.	65	Director	2000	2004	I
Joseph E. Cross	55	Director, President and Chief Executive Officer	1998	2005	II
Richard W. Siegel, Ph.D.	65	Director	1989	2005	II
Donald S. Perkins	75	Chairman of the Board of Directors	1998	2003	III
Jerry K. Pearlman	63	Director	1999	2003	III

Mr. Henderson joined the board in July 2001. He retired as Chairman and Chief Executive Officer of Cummins Engine Company in December 1999, after joining the company in 1964. Mr. Henderson became President and Chief Operating Officer of Cummins in 1977, was promoted to President and Chief Executive Officer in 1994 and served as Chairman and Chief Executive Officer from 1995 until his retirement in 1999. Mr. Henderson attended Culver Military Academy, holds an AB in public and international affairs from Princeton University and an MBA from Harvard Business School. Mr. Henderson currently serves as Chairman of the Board of The Culver Education Foundation, member of the Board of Directors of Championship Auto Racing Teams (CART), International Paper, Landmark Communications, Inc., Rohm and Haas Company, Ryerson Tull, Inc., SBC Communications, Inc., Heritage Fund of Bartholomew County, Inc. and is a member of the Washington, D.C. Business Council.

Mr. McClung has served as a director of the Company since February 2000. He is currently Vice Chairman of Charter Consulting and former Senior Vice President and executive officer for FMC Corporation, a leading producer of a diversified portfolio of chemicals and machinery. He has over 30 years of international business development in over 75 countries, having managed and developed new technologies and production processes for diversified global businesses, including specialized chemicals and machinery, while living in the United States, Europe, and Africa. Mr. McClung currently serves as Corporate Director of Alticor (Amway), Turtle Wax and Beaulieu of America Corporation. He was a founding member of the U.S. Russia Business Council and is active in other international business organizations, such as the Japan American Society, Chicago Council of Foreign Relations and the Economic Club of Chicago. He serves as a board director at Illinois Institute of Technology, The American graduate School of International Management (Thunderbird School) and the College of Wooster (Ohio). Mr. McClung earned a Bachelor's degree from the College of Wooster, a Master's degree from the University of Kansas, and a Doctorate from Michigan State University.

Mr. Cross has served as Chief Executive Officer of the Company since December 1998 and President and a director of the Company since joining the Company in November 1998. Prior to joining the Company in November 1998, Mr. Cross served as President and Chief Executive Officer of Aptech, a manufacturer of measurement, metering and control devices for the utility industry, from August 1996 to October 1998. From December 1993 to July 1996, Mr. Cross served as President of Aegis Technologies, an interactive telecommunications company. He holds a B.S. degree from Southwest Missouri University and attended the M.B.A. program at Southwest Missouri University.

Dr. Siegel is a co-founder of the Company and has served as a director of the Company since 1989. Dr. Siegel also has served as a consultant to the Company since 1990 with regard to the application and commercialization of nanocrystalline materials. Dr. Siegel is an internationally recognized scientist in the field of nanocrystalline materials. During his tenure on the research staff at Argonne National Laboratory from July 1974 to May 1995, he was the principal scientist engaged in research with the laboratory-scale synthesis process that was the progenitor of the Company's physical-vapor-synthesis production system. Dr. Siegel has been the Robert W. Hunt Professor in Materials Science and Engineering at Rensselaer Polytechnic Institute since June 1995, and served as Department Head from 1995 to 2000. In April 2001, Dr. Siegel became the founding Director of the newly created Rensselaer Nanotechnology Center at the Institute. During 1995-1998, he was also a visiting professor at the Max Planck Institute for Microstructure Physics in Germany on an Alexander von Humboldt Research Prize received in 1994. He chaired the World Technology Evaluation Center worldwide study of nanostructure science and technology for the U.S. government, has served on the Council of the Materials Research Society and as Chairman of the International Committee on Nanostructured Materials. He also served on the Committee on Materials with Sub-Micron Sized Microstructures of the National Materials Advisory Board and was the co-chairman of the Study Panel on Clusters and Cluster-Assembled Materials for the U.S. Department of Energy. Dr. Siegel holds an A.B. degree in physics from Williams College and an M.S. degree and Ph.D. from the University of Illinois at Urbana-Champaign.

Mr. Perkins has served as a director of the Company since February 1998. Mr. Perkins retired from Jewel Companies, Inc., the retail supermarket and drug chain, in 1983. He had been

with Jewel since 1953, serving as President from 1965 to 1970, as Chairman of the Board of Directors from 1970 to 1980, and as Chairman of the Executive Committee until his retirement. He has served on a number of corporate boards and is currently a director of LaSalle Hotel Properties, three Jones Lang LaSalle REITs and several start-up companies. For more than 30 years, he has served on corporate boards including AT&T, Aon, Corning, Cummins Engine, Eastman Kodak, Firestone, Inland Steel Industries, Kmart, Lucent Technologies, The Putnam Funds, Springs Industries and Time-Warner, Inc. He is Honorary Chairman of the Illinois Coalition and Protector of the Thyssen-Bornemisza Continuity Trust. Mr. Perkins is a trustee and Vice Chairman of the Board of Trustees of Northwestern University. He is also a member of the Civic Committee of The Commercial Club of Chicago, a Director of Leadership for Quality Education and a member of Blue Ridge Partners, Potomac Ventures and RoundTable Healthcare Partners L.P. Advisory Boards. Mr. Perkins holds a B.A. degree from Yale University and an M.B.A. degree from the Harvard Graduate School of Business Administration.

Mr. Pearlman has served as a director of the Company since April 1999. Mr. Pearlman retired as Chairman of Zenith Electronics Corporation in November 1995. He joined Zenith as controller in 1971 and served as chief executive officer from 1983 through April 1995. Mr. Pearlman is a director of Smurfit Stone Container Corporation and Ryerson-Tull, Inc. He is a trustee of Northwestern University and a director and past chairman of the board of Evanston Northwestern Healthcare. Mr. Pearlman graduated from Princeton with honors from the Woodrow Wilson School and from Harvard Business School with highest honors.

Director Compensation—Upon first being elected to the Board of Directors, each director of the Company who is not an employee or consultant of the Company (an “Outside Director”) is granted stock options to purchase 10,000 shares of Common Stock at the fair market value of the Common Stock, as determined by a committee appointed by the Board of Directors, as of the date of issuance of such stock options. On or after the date of each annual meeting of the stockholders of the Company, each Outside Director who is re-elected or continues to serve as a director because his or her term has not expired is typically granted stock options to purchase 2,000 shares of Common Stock provided that such grant is typically not made to an Outside Director who was first elected to the Board of Directors within three months prior to such annual meeting. The options granted to Outside Directors typically vest in three equal annual installments beginning on the first anniversary of the date of grant. All options granted to Outside Directors expire ten years from the date of grant. Effective January 17, 2003, the Company granted 4,870 shares of Common Stock to each of Donald Perkins, Richard Siegel, Jerry Pearlman, James McClung, and James Henderson. The Company also agreed to issue a cash payment of \$10,000 to reimburse these Directors for personal income tax liabilities relating to this grant of Common Stock. In addition, the Company entered into a consulting agreement in March 2001 with Richard Siegel, Ph.D. pursuant to which the Company paid Dr. Siegel \$2,000 per month for consulting services over a twelve-month term. This agreement expired in July 2002. All Outside Directors are reimbursed for their reasonable out-of-pocket expenses incurred in attending board and committee meetings.

Meetings—During the year ended December 31, 2002, the Board of Directors held six formal meetings. Four of the Company’s current directors attended 100% of the total board and committee meetings held during 2002. Mr. Henderson missed one board meeting and one

Compensation and Governance Committee meeting (both meetings were held on the same day). Dr. Siegel missed one board meeting held during 2002.

Committees of the Board of Directors—The Board of Directors has established an Audit and Finance Committee and a Compensation and Governance Committee, each comprised entirely of directors who are not officers or employees of the Company. The members of the Audit and Finance Committee are Mr. McClung (Chairman), Mr. Henderson, Mr. Pearlman and Mr. Perkins. The members of the Compensation and Governance Committee are Mr. Pearlman (Chairman), Mr. Henderson, Mr. McClung and Mr. Perkins. The Company does not have a standing nominating committee.

The Audit and Finance Committee generally has responsibility for recommending independent public auditors to the Board of Directors for selection, reviewing the plan and scope of the accountants' annual audit, reviewing the Company's internal control functions and financial management policies, and reporting to the Board of Directors regarding all of the foregoing. The Audit and Finance Committee held five formal meetings in 2002. See "Report of the Audit and Finance Committee of the Board of Directors."

The Compensation and Governance Committee generally has responsibility for recommending to the Board of Directors guidelines and standards relating to the determination of executive and key employee compensation, reviewing the Company's executive compensation policies and reporting to the Board of Directors regarding the foregoing. The Compensation and Governance Committee also has responsibility for administering the 2001 Equity Compensation Plan, determining the number of options, if any, to be granted to the Company's employees and consultants pursuant to the 2001 Equity Compensation Plan and reporting to the Board of Directors regarding the foregoing. The Compensation and Governance Committee held four formal meetings in 2002. See "Report of the Compensation and Governance Committee of the Board of Directors."

EXECUTIVE OFFICERS

Set forth below is certain information regarding the executive officers of the Company who are not identified above as directors.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Jess Jankowski	37	Acting Chief Financial Officer, Vice President, Corporate Controller, Secretary and Treasurer
Robert Haines	52	Vice President—Operations
Daniel S. Bilicki	59	Vice President—Sales and Marketing
Richard W. Brotzman, Ph.D.	49	Vice President—Research and Development
Donald J. Freed, Ph.D.	61	Vice President—Business Development
Gina R. Kritchevsky, Ph.D.	49	Chief Technology Officer

Mr. Jankowski has served as Controller of the Company since joining in 1995. He was elected Secretary and Treasurer in November 1999, Acting Chief Financial Officer in January 2000 and Vice President in April of 2002. From 1990-1995 he served as Controller for two building contractors in the Chicago area. Mr. Jankowski holds a B.S. in accountancy from

Northern Illinois University, an M.B.A. from Loyola University, and received his certified public accountant certificate from the State of Illinois.

Mr. Haines joined Nanophase Technologies in January 2001 as Vice President of Operations. Beginning in 1996 and prior to joining Nanophase, he served as Corporate Director of Quality at Legrand North America. Previous experience includes two years as Vice President of Operations for Aegis Technologies and eight years with Digital Equipment Corporation. Mr. Haines has a BS in Chemistry/Engineering Physics from East Tennessee State University.

Mr. Bilicki has served as Vice President—Sales and Marketing of the Company since joining the Company in March 1999. From January 1996 until March 1999, Mr. Bilicki served as President/Director of PT Crosfield Indonesia in Jakarta, Indonesia, a subsidiary of Crosfield Company, which is a global chemical company. From January 1994 to December 1995, Mr. Bilicki held the position of President/Director North America of Crosfield Company. He holds a B.S. degree from Indiana Institute of Technology and an M.B.A. degree from Winthrop University.

Dr. Brotzman joined the Company in July 1994 as a senior scientist and has served as Vice President—Research and Development of the Company since July 1996. He is the inventor of much of the Company's coating technology. Dr. Brotzman has 15 years experience in research and development of advanced materials leading to new products. His technical areas of expertise include interfacial adhesion and chemistry, self-assembled polymeric coatings, nanosized inorganic powders, powder processing, reactive coupling agents, solgel derived protective coatings, non-destructive evaluation of composites, neo-debye relaxation in green inorganic gels, asymmetric membranes and plasma processing. From January 1991 to July 1994, Dr. Brotzman served as Director of Research at TPL, Inc., an advanced materials company. He holds a B.S. degree in chemical engineering from Lafayette College, an M.S. degree in engineering and applied science from the University of California, Davis and a Ph.D. in chemistry from the University of Washington.

Dr. Freed joined the Company in April 1995 as Vice President—Marketing and has served as Vice President—Business Development of the Company from June 1998 through February 2003. He has extensive experience in the commercial development of new technology products, and has been responsible for the successful startup of advanced-materials initiatives in three Fortune 50 companies. From 1985 to April 1995, Dr. Freed held senior marketing, strategic planning and product-development positions with AMP, Inc., and certain of its subsidiaries, primarily in the development and marketing of advanced materials for microelectronics and photonics. From 1980 to 1985, he held similar positions with GTE Corp. and Imperial Chemical Industries, PLC. Previously, Dr. Freed held various scientific and managerial positions at Bell Laboratories. He holds a B.A. degree in chemistry from Queens College and an A.M. degree and Ph.D. in chemistry from Harvard University. Dr. Freed has been a member of The Illinois Coalition and is past Chairman of the International Standards Council for Electronic Interconnection and Packaging Technologies. Dr. Freed retired from Nanophase on February 28, 2003 and is no longer an employee or an officer of the Company.

Dr. Kritchevsky served as Vice President—Technology and Engineering of the Company since joining the Company in February 1999 and served as Chief Technology Officer

from October 2001 until December 2002. Dr. Kritchevsky resigned from her full-time position on December 6, 2002 and is no longer an officer or an employee of the Company. The Company has retained Dr. Kritchevsky as a consultant until December 2003. From June 1998 to February 1999, Dr. Kritchevsky provided consulting services to companies in a variety of markets, including electronics packaging and liquid crystal display technology. From January 1997 to May 1998, Dr. Kritchevsky was Vice President of Strategic Initiatives for Donnelly Optics Corporation, an optics company. From 1989 to January 1997, Dr. Kritchevsky served in various positions with Donnelly Corporation, an automotive supplier, including Director of Corporate New Business Development. She holds a B.S. degree in chemistry and a Ph.D. in material sciences and engineering from MIT.

The Board of Directors elects executive officers annually and such executive officers, subject to the terms of certain employment agreements, serve at the discretion of the Board of Directors. Messrs. Cross, Jankowski, Bilicki, Haines and Dr. Brotzman each have employment agreements with the Company. See Item 11 below. There are no family relationships among any of the directors or officers of the Company.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), requires the Company's officers (as defined under Section 16), directors and persons who beneficially own greater than 10% of a registered class of the Company's equity securities to file reports of ownership and changes in ownership with the Securities and Exchange Commission. Based solely on a review of the forms it has received and on written representations from certain reporting persons that no such forms were required for them, the Company believes that during 2002 all Section 16 filing requirements applicable to its officers, directors and 10% beneficial owners were complied with by such persons.

Item 11. Executive Compensation

EXECUTIVE COMPENSATION

The following table provides information concerning the annual and long-term compensation for services in all capacities to the Company for the years ended December 31, 2002, 2001, and 2000 of those persons who were (i) during 2002, the chief executive officer of the Company and (ii) at December 31, 2002, the four other most highly compensated (based upon combined salary and bonus) executive officers of the Company whose total salary and bonus exceeded \$100,000 during 2002.

I. Summary Compensation Table

Name and Principal Position	Year	Annual Compensation			Long-Term Compensation Awards	
		Salary(\$)	Bonus(\$)	Other Annual Compensation(\$)	Securities Underlying Options	All Other Compensation(\$)
Joseph E. Cross (1) President and Chief Executive Officer	2002	\$268,234	\$ 0	\$ 0	55,000	\$ 0
	2001	261,922	74,025	17,727(2)	100,000	0
	2000	244,905	50,000	40,083(3)	100,000	84,925(4)
Daniel S. Bilicki Vice President Sales and Marketing	2002	\$195,036	\$ 0	\$ 0	30,000	\$ 0
	2001	190,812	46,620	0	60,000	0
	2000	183,288	0	0	50,000	0
Robert Haines (5) Vice President Sales and Marketing	2002	\$169,255	\$20,000	\$ 0	40,000	\$ 113,047(6)
	2001	147,692	0	55,506(7)	30,000	63,454(8)
	2000	0	0	0	0	0
Richard Brotzman, Ph.D. Vice President Research and Development	2002	\$155,914	\$10,000	\$ 0	20,000	\$ 0
	2001	145,760	16,800	0	40,000	0
	2000	139,039	0	0	22,500	0
Donald J. Freed, Ph.D. (9) Vice President Business Development	2002	\$149,714	\$ 0	\$ 0	20,000	\$ 0
	2001	146,423	22,365	0	40,000	0
	2000	139,039	0	0	16,875	0
Gina R. Kritchevsky, Ph.D. (10) Chief Technology Officer	2002	\$188,908	\$ 0	\$ 0	30,000	\$ 0
	2001	180,307	44,100	0	60,000	0
	2000	170,769	35,000	0	50,000	9,363(11)

- (1) Joseph E. Cross commenced employment as the President and Chief Operating Officer of the Company in November 1998 and became its Chief Executive Officer in December 1998.
- (2) Represents payment of personal income tax liabilities associated with relocation expenses received.
- (3) Includes \$17,605 paid for lodging in Burr Ridge, Illinois, \$12,992 paid for airfare to and from Chicago, Illinois, and \$9,486 in payments related to use of a car. These expenses were incurred through 2000. All

- amounts have been “grossed-up” to compensate Mr. Cross for personal income tax liabilities associated with the reimbursement of these expenses.
- (4) Represents relocation expenses incurred by Mr. Cross for moving to the greater Chicago metropolitan area.
 - (5) Mr. Haines’s employment commenced with the Company on January 22, 2001.
 - (6) Represents relocation expenses incurred by Mr. Haines for moving to the greater Chicago metropolitan area.
 - (7) Includes \$24,793 paid for lodging in Romeoville, Illinois, \$20,930 paid for airfare to and from Chicago, Illinois, and \$9,783 in payments related to use of a car. These expenses were incurred through 2001. All amounts have been “grossed-up” to compensate Mr. Haines for personal income tax liabilities associated with the reimbursement of these expenses.
 - (8) Represents relocation expenses incurred by Mr. Haines for moving to the greater Chicago metropolitan area.
 - (9) Dr. Freed resigned from his full-time position on February 28, 2003 and is no longer an officer or an employee of the Company.
 - (10) Dr. Kritchevsky resigned from her full-time position on December 6, 2002 and is no longer an officer or an employee of the Company. The Company has retained Dr. Kritchevsky as a consultant until December 2003.
 - (11) Represents a reimbursement for tax liabilities incurred by Dr. Kritchevsky in relation to amounts previously paid to her for relocating to the greater Chicago metropolitan area.

OPTION GRANTS IN 2002—The following table provides information on grants of stock options to the Named Officers during 2002. No stock appreciation rights were granted to the Named Officers during 2002.

Option Grants in 2002

Name	Number of Securities Underlying Options Granted (#) (1)	Individual Grants			Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation For Option Term (2)	
		Percent of Total Options Granted to Employees in Fiscal Year	Exercise or Base Price (\$/SH)	Expiration Date	5%(\$)	10%(\$)
Joseph E. Cross	55,000	18.97%	\$ 6.65	01/03/12	\$230,018	\$582,911
Robert Haines	40,000	13.80%	6.65	01/03/12	167,286	423,935
Daniel S. Bilicki	30,000	10.35%	6.65	01/03/12	125,464	317,952
Richard Brotzman, Ph.D.	20,000	6.90%	6.65	01/03/12	83,643	211,968
Donald J. Freed, Ph.D.	20,000	6.90%	6.65	01/03/12	83,643	211,968
Gina R. Kritchevsky, Ph.D.	30,000	10.35%	6.65	01/03/12	125,464	317,952

- (1) These options are all non-qualified stock options. Subject to certain restrictions, these options become exercisable in three equal annual installments, beginning on the first anniversary of the date of grant. These options were granted ten years prior to their expiration dates.
- (2) Potential realizable value is presented net of the option exercise price but before any federal or state income taxes associated with exercise. These amounts represent certain assumed rates of appreciation only. Actual gains will be dependent on the future performance of the Common Stock and the option holder's continued employment through the vesting period. The amounts reflected in the table may not necessarily be realized.

AGGREGATED OPTION EXERCISES IN 2002 AND YEAR-END 2002 OPTION VALUES—The following table provides information regarding each of the Named Officers' option exercises in 2002 and unexercised options at December 31, 2002.

Year-End 2002 Option Values

Name	Shares Acquired On Exercise (#)	Value Realized(\$)	Number of Securities Underlying Unexercised Options at Year-End 2002 (#)		Value of Unexercised In-The-Money Options at Year-End 2002 (\$) (1)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Joseph E. Cross	0	\$ 0	259,998	195,002	\$ 72,475	\$ 12,650
Robert Haines	0	0	6,000	64,000	0	0
Daniel S. Bilicki	0	0	133,332	106,668	66,850	8,900
Richard Brotzman, Ph.D.	0	0	205,462	80,283	138,975	0
Donald J. Freed, Ph.D.	0	0	77,750	72,804	20,826	0
Gina R. Kritchevsky, Ph.D.	0	0	108,000	116,667	18,119	225

- (1) The value per option is calculated by subtracting the exercise price per option from the closing price of the Common Stock on the Nasdaq National Market on December 31, 2002, which was \$2.82.

Employment and Consulting Agreements

The Company entered into an employment agreement with Joseph E. Cross dated November 9, 1999 which provides for an annual base salary of not less than \$220,000. In addition, Mr. Cross received a lump sum payment of \$50,000 on the first anniversary of the commencement of this agreement. The Company also granted to Mr. Cross options to purchase up to 100,000 shares of Common Stock at an exercise price of \$2.9375 per share and options to purchase up to 50,000 shares of Common Stock at an exercise price of \$2.1875, with options for one-fifth of such shares becoming exercisable on each of the first five anniversaries of the dates of grant. No term has been assigned to Mr. Cross' employment agreement. If Mr. Cross is terminated other than for "cause" (as such term is defined in Mr. Cross' employment agreement),

Mr. Cross will receive severance benefits in an amount equal to Mr. Cross' base salary for 52 weeks.

Effective as of November 2, 2000, the Company also entered into an employment agreement with Robert Haines providing for an annual base salary of not less than \$160,000. The Company also granted to Mr. Haines options to purchase up to 30,000 shares of Common Stock at an exercise price of \$10.1875. No term has been assigned to Mr. Haines employment agreement. If Mr. Haines is terminated other than for "cause" (as such term is defined in Mr. Haines's employment agreement), Mr. Haines will receive severance benefits in an amount equal to Mr. Haines's base salary for 52 weeks.

Effective as of February 17, 2000, the Company also entered into an employment agreement with Daniel Bilicki providing for an annual base salary of not less than \$165,000. In addition, Mr. Bilicki was granted options to purchase up to 50,000 shares of Common Stock at an exercise price of \$2.375. No term has been assigned to Mr. Bilicki's employment agreement. If Mr. Bilicki is terminated other than for "cause" (as such term is defined in Mr. Bilicki's employment agreement), Mr. Bilicki will receive severance benefits in an amount equal to Mr. Bilicki's base salary for 52 weeks.

Effective as of September 26, 2001, the Company also entered into an employment agreement with Dr. Richard Brotzman providing for an annual base salary of not less than \$146,250. No term has been assigned to Dr. Brotzman's employment agreement. If Dr. Brotzman is terminated other than for "cause" (as such term is defined in Dr. Brotzman's employment agreement), Dr. Brotzman will receive severance benefits in an amount equal to Dr. Brotzman's base salary for 26 weeks.

Effective as of June 1, 1999, the Company also entered into an employment agreement with Dr. Donald Freed providing for an annual base salary of not less than \$125,000. No term was assigned to Dr. Freed's employment agreement. If Dr. Freed had been terminated other than for "cause" (as such term is defined in Dr. Freed's employment agreement), Dr. Freed would have received severance benefits in an amount equal to Dr. Freed's base salary for 26 weeks.

Effective as of February 15, 1999, the Company also entered into an employment agreement with Dr. Gina R. Kritchevsky providing for an annual base salary of not less than \$165,000. In addition, Dr. Kritchevsky was granted a signing bonus of \$25,000 and a further bonus of \$35,000 on the first anniversary of the commencement of this agreement. The Company also granted to Dr. Kritchevsky options to purchase up to 75,000 shares of Common Stock at an exercise price of \$2.8125. No term was assigned to Dr. Kritchevsky's employment agreement. If Dr. Kritchevsky had been terminated other than for "cause" (as such term is defined in Dr. Kritchevsky's employment agreement), Dr. Kritchevsky would have received severance benefits in an amount equal to Dr. Kritchevsky's base salary for 52 weeks.

**REPORT OF THE COMPENSATION AND
GOVERNANCE COMMITTEE
OF THE BOARD OF DIRECTORS**

The current Compensation and Governance Committee members are Jerry K. Pearlman (Chairman), James A. Henderson, and Donald S. Perkins. The objectives of the Compensation and Governance Committee in determining the levels and components of executive compensation are to (1) attract, motivate and retain talented and dedicated executive officers, (2) provide executive officers with both cash and equity incentives to further the interests of the Company and its stockholders, and (3) compensate executive officers at levels comparable to those of executive officers at other comparable high technology companies. In setting compensation, the Compensation and Governance Committee reviews the achievement of corporate goals and individual contributions of particular executives. Generally, the compensation of the Company's executive officers is composed of base annual compensation, in the form of salary and other benefits, incentives in the form of fiscal year-end bonuses, and long-term compensation consisting of stock options awarded under the Company's stock option plan.

Base Salaries

In determining the base salaries of the executive officers in 2002, the Compensation and Governance Committee considered the performance of each executive, the nature of the executive's responsibilities, the salary levels of executives at comparable high technology companies, including other publicly-held advanced materials and advanced technologies companies, and the Company's general compensation practices.

Cash Bonuses

Discretionary cash bonuses for executive officers are directly tied to achievement of specified goals of the Company and are a function of the criteria which the Compensation and Governance Committee believes appropriately take into account the specific areas of responsibility of the particular officer.

Stock Options

Periodically, the Compensation and Governance Committee also grants stock options to executive officers in order to provide a long-term incentive which is directly tied to the performance of the Company's stock. These options provide an incentive to maximize stockholder value because they reward option holders only if stockholders also benefit. The exercise price of these stock options is the fair market of the Common Stock on the date of grant. In general, the options vest in equal annual installments over a three-year period beginning one year after the date of grant, in certain instances the Board of Directors (or the Compensation and Governance Committee) can adjust the vesting period for performance-based options. Vesting periods are used to retain key employees and to emphasize the long-term aspect of contribution and performance. In making stock option grants to executives, including Mr. Cross, in 2002, the Compensation and Governance Committee considered a number of factors, including the performance of such persons, the Company's performance in 2001, achievement of specific delineated goals, the responsibilities and the relative position of such persons within the

Company, the compensation of executives in comparable high technology companies and the number of stock options each such person currently possesses.

Compliance with Section 162(m)

The Compensation and Governance Committee currently intends for all compensation paid to the Named Officers to be tax deductible to the Company pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended ("Section 162(m)"). Section 162(m) provides that compensation paid to the Named Officers in excess of \$1,000,000 cannot be deducted by the Company for Federal income tax purposes unless, in general, (1) such compensation is performance-based, established by a committee of outside directors and objective, and (2) the plan or agreement providing for such performance-based compensation has been approved in advance by stockholders. The Compensation and Governance Committee believes that the requirements of Section 162(m) are uncertain at this time and may arbitrarily impact the Company. In the future, the Compensation and Governance Committee may determine to adopt a compensation program that does not satisfy the conditions of Section 162(m) if in its judgment, after considering the additional costs of not satisfying Section 162(m), such program is appropriate.

Compensation and Governance Committee Interlocks and Insider Participation

Pursuant to a consulting agreement effective as of October 29, 1998, and prior to his appointment as Chairman of the Board of Directors, Donald S. Perkins, who is Chairman of the Compensation and Governance Committee, was engaged by the Company to provide additional services in connection with the Company's organizational restructuring and refocusing. In consideration for such services, Mr. Perkins was granted options to purchase 25,000 shares of Common Stock at an exercise price of \$3.50 per share. Such options vest in five equal annual installments beginning on October 29, 1999; provided, however, that unvested options will expire upon Mr. Perkins no longer providing such services to the Company.

Item 12. Security Ownership of Certain Beneficial Owners and Management**SECURITY OWNERSHIP OF MANAGEMENT
AND PRINCIPAL STOCKHOLDERS**

The following table sets forth, as of March 31, 2003 certain information with respect to the beneficial ownership of the Common Stock by (i) each person known by the Company to own beneficially more than 5% of the outstanding shares of Common Stock, (ii) each Company director, (iii) each of the Named Officers and (iv) all Company executive officers and directors as a group.

Name and Address	Number of Shares Beneficially Owned (1)	Percent of Shares Beneficially Owned
Spurgeon Corporation	3,018,343(2)	19.9%
Bradford T. Whitmore	3,491,155(3)	23.0%
Grace Investments, Ltd.	1,069,750(4)	7.0%
Grace Brothers, Ltd.	1,948,593(5)	12.8%
Masters Capital Management, LLC	1,000,000(6)	6.6%
Joseph E. Cross	356,498(7)	2.3%
James A. Henderson	11,743(8)	*
Richard W. Siegel, Ph.D.	277,391(9)	1.8%
James McClung	41,437(10)	*
Jerry Pearlman	34,614(11)	*
Donald S. Perkins	68,478(12)	*
Gina R. Kritchevsky, Ph.D.	172,667(13)	1.1%
Daniel S. Bilicki	194,999(14)	1.3%
Donald J. Freed, Ph.D.	46,583(15)	*
Richard W. Brotzman, Ph.D.	232,963(16)	1.5%
All executive officers and directors as a group (12 persons)	1,522,152(17)	10.0%

*Denotes beneficial ownership of less than one percent.

- (1) Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission (the "Commission"). Unless otherwise indicated below, the persons in the above table have sole voting and investment power with respect to all shares of Common Stock shown as beneficially owned by them.
- (2) Includes 1,948,593 shares of Common Stock held by Grace Brothers, Ltd. and 1,069,750 shares of Common Stock held by Grace Investments, Ltd. Spurgeon Corporation is a general partner of both Grace entities and shares voting and investment power with respect to the shares of Common Stock held by such Grace entities. This information is based on information reported on Form 4 filed on March 14, 2003 with the Commission by Spurgeon Corporation. The address of the stockholder is 1560 Sherman Avenue, Suite 900, Evanston, Illinois 60201.
- (3) Includes 1,948,593 shares of Common Stock held by Grace Brothers, Ltd., 1,069,750 shares of Common Stock held by Grace Investments, Ltd. and 472,812 shares held by Bradford T. Whitmore. Mr. Whitmore is a general partner of Grace Brothers, Ltd. and is the sole owner of an entity which is a general partner of Grace Investments, Ltd. In such capacities, Mr. Whitmore shares voting and investment power with respect to the shares of Common Stock held by the Grace entities. This information is based on information reported on Form 4 filed on March 14,

- 2003 with the Commission by Mr. Whitmore. The address of the stockholder is 1560 Sherman Avenue, Suite 900, Evanston, Illinois 60201.
- (4) This information is based on information reported on Form 4's filed on March 14, 2003 with the Commission by Spurgeon Corporation and Bradford T. Whitmore. The address of the stockholder is 1560 Sherman Avenue, Suite 900, Evanston, Illinois 60201.
 - (5) This information is based on information reported on Form 4's filed on March 14, 2003 with the Commission by Spurgeon Corporation and Bradford T. Whitmore. The address of the stockholder is 1560 Sherman Avenue, Suite 900, Evanston, Illinois 60201.
 - (6) This information is based on information reported on Form SC 13G/A filed on February 11, 2003 with the Commission by Masters Capital Management, LLC. The address of the stockholder is 17 Church Street, 3rd Floor, Christiansted, VI 00820.
 - (7) Consists in part of 354,998 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (8) Consists in part of 3,333 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (9) Includes 76,864 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (10) Includes 12,666 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (11) Includes 12,666 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (12) Includes 26,334 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (13) Includes 169,667 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (14) Includes 189,999 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (15) Consists of 44,583 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (16) Consists of 232,963 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.
 - (17) Includes 1,207,552 shares of Common Stock issuable upon exercise of options exercisable currently or within 60 days of March 31, 2003.

Equity Compensation Plan Information

The following table gives information about our common stock that may be issued upon the exercise of options, warrants, and rights under all of our existing compensation plans as of December 31, 2002, including the 1992 Amended and Restated Stock Option Plan and the 2001 Equity Compensation Plan.

<u>Plan Category</u>	<u>(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</u>	<u>(b) Weighted Average Exercise Price of Outstanding Options, Warrants, and Rights</u>	<u>(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))</u>	<u>(d) Total of Securities Reflected in Columns (a) and (c)</u>
Plans Approved by Shareholders	2,089,350(1)	\$ 5.49	588,000(2)	2,677,350
Plans Not Approved by Shareholders	None	\$ —	None	—

(1) Consists of the 1992 Amended and Restated Stock Option Plan, the 2001 Equity Compensation Plan, and shares of authorized but unissued Preferred Stock.

(2) Consists of shares available for future issuance under the 2001 Equity Compensation Plan.

Item 13. Certain Relationships and Related Transactions.

See Item 11 above.

PART IV

Item 15. Exhibits, Financial Statement Schedules and Reports on Form 8-K

(a) The following exhibits are filed with this Form 10-K/A:

10.23* Cooperation Agreement dated June 23, 2002 between the Company and Rodel, Inc.

99.1 Certification of the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.

99.2 Certification of the Acting Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.

* This exhibit, previously filed as Exhibit 10.23 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2002, is being resubmitted pursuant to a request from the Commission. Confidentiality requested, confidential portions have been omitted and filed separately with the Commission as required by Rule 24b-2.

(b) Reports on Form 8-K:

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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, on the 23rd day of May, 2003.

NANOPHASE TECHNOLOGIES CORPORATION

By: /s/ Joseph Cross
Joseph Cross
President and Chief Executive Officer

CERTIFICATIONS

Certification of the Chief Executive Officer
Pursuant to Section 302
of the Sarbanes-Oxley Act of 2002

I, Joseph Cross, certify that:

1. I have reviewed this amendment no. 1 to annual report on Form 10-K/A of Nanophase Technologies Corporation;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

(a) designed such disclosure controls and procedures to ensure that material information relating to the registrant is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

(b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

(c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

(a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: May 23, 2003

/s/ JOSEPH E. CROSS

Joseph E. Cross
Chief Executive Officer

Certification of the Chief Financial Officer
Pursuant to Section 302
of the Sarbanes-Oxley Act of 2002

I, Jess Jankowski, certify that:

1. I have reviewed this amendment no. 1 to annual report on Form 10-K/A of Nanophase Technologies Corporation;

2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

(a) designed such disclosure controls and procedures to ensure that material information relating to the registrant is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

(b) evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

(c) presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):

(a) all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

(b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: May 23, 2003

/s/ JESS A. JANKOWSKI

Jess A. Jankowski
Acting Chief Financial Officer

COOPERATION AGREEMENT

THIS COOPERATION AGREEMENT is made as of the 24th day of June, 2002, by and between NANOPHASE TECHNOLOGIES CORPORATION, a Delaware corporation, with offices at 1319 Marquette Drive, Romeoville, Illinois 60446, ("Nanophase") and RODEL, INC., a Delaware corporation, with offices at 451 Bellevue Road, Newark, DE 19713 ("Rodel").

RECITALS:

WHEREAS, Nanophase manufactures and sells nanocrystalline cerium oxides particles ("Ceria") and/or dispersions of Ceria using proprietary processes (the "Particles") for potential use in products for chemical mechanical planarization ("CMP") for semiconductor wafers (such use being hereinafter referred to as the "Field"); and

WHEREAS, Rodel supplies consumable products, including slurry products to the CMP market; and

WHEREAS, Nanophase and Rodel believe that use of Nanophase's Particles for applications in the Field with Rodel's slurry products will result in superior products for sale to Rodel's CMP customers; and

WHEREAS, Rodel desires to purchase, and Nanophase desires to sell, the Particles for applications in the Field in accordance with the terms and conditions of this Agreement;

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants and promises hereinafter set forth, the parties agree as follows:

1. Cooperation

- (a) Nanophase and Rodel mutually agree to use all commercially reasonable efforts to cooperate with one another to develop one or more commercial slurry products incorporating the Particles for applications in the Field (the "Development Product").

Unless otherwise agreed, each party shall be responsible for its own expenses in connection with the development effort.

- (b) Without limiting Rodel's general obligation of cooperation under subsection (a), above, Rodel undertakes to (i) provide Nanophase with target specifications, performance data and analytical assistance as may be agreed to characterize Development Product performance, (ii) test and evaluate Development Product samples provided by Nanophase and provide feedback as to the results thereof to Nanophase in a timely manner, (iii) keep Nanophase regularly advised of the general market situation applicable to the Development Products, and (iv) include Nanophase business and technical personnel in meetings with business and technical personnel at Rodel's customers, as appropriate, to discuss and promote the Particles and the Development Products.
- (c) Without limiting Nanophase's general obligation of cooperation under subsection (a), above, Nanophase undertakes to (i) provide Rodel with reasonable research samples of the Development Product for testing and evaluation as may be agreed, together with related physical, chemical and other information, (ii) devote sufficient resources (including equipment and personnel) as may be agreed to provide for the development effort, and (iii) provide agreed technical support to Rodel and its customers as to the use of the Particles and the Development Products.
- (d) Any intellectual property created or invented after the date of this Agreement in connection with the Development Product shall be owned as follows, regardless of whether such intellectual property was created or invented by personnel of Nanophase, Rodel or both of them: (i) Nanophase shall own all such intellectual property to the extent related or applicable to the manufacture of Particles for applications in the Field, and (ii) Rodel shall own all such intellectual property to the extent related or applicable to slurry formulation and manufacture for CMP applications. Each party agrees to notify the other promptly of any inventions pertaining to applications in the Field which are created by the other or its personnel under this Section, and to cooperate with the other and its counsel to take such action and execute such documents as may be required or reasonably requested to effect the allocation of rights set forth herein, including cooperating with the

other in the filing and prosecution of all patent applications resulting from any inventions pertaining to applications in the Field in connection with the Development Product.

2. Purchase and Sale

Subject to the terms and conditions of this Agreement, Nanophase will sell, and Rodel will purchase, all of Rodel's worldwide requirements for Ceria for applications in the Field.

3. Exclusivity

Subject to Rodel's complying with the purchase minimums stated in Section 12(a), the purchase and sale obligations set forth in Section 2 shall be mutually exclusive; i.e., except as specifically otherwise provided herein, for the term of this Agreement, Nanophase will not sell or sample Ceria Particles for applications in the Field to any manufacturer, seller or end user of CMP slurries other than Rodel, and Rodel will not purchase Ceria Particles for CMP applications from any manufacturer or supplier other than Nanophase. This Section shall not apply to Rodel's purchase of evaluation samples in connection with Section 11(b), nor to Nanophase's sale of evaluation samples to customers other than Rodel who have submitted purchase orders for such samples to Nanophase before the date of this Agreement, but not to exceed 1,000 kilograms for applications in the Field.

4. Forecasts and Orders

(a) Rodel will provide Nanophase with a rolling eighteen-month forecast of the volume of its Particle requirements at the start of each calendar quarter. The first three months of this forecast shall be firm and accompanied by a purchase order for such forecast. Unless otherwise agreed, Nanophase need not manufacture more than [* * *] of the forecasted six-month volume in any single month period.

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- (b) Rodel will give Nanophase six months prior written notice before Nanophase will be obliged to either (i) have installed capacity or manufacture over [* * *] of Particles per annum, or (ii) increase production by more than [* * *] kilograms of Particles over the production for the previous six-month period. Provided that Nanophase is given such six-month notice, it will be obliged to manufacture up to [* * *] kilograms of Particles in the first year of this Agreement.
- (c) If Rodel requests that Nanophase commit to manufacture an amount of Particles in excess of [* * *] kilograms per annum, the parties will negotiate in good faith a mutually acceptable arrangement for payment of the capital expenditures required in order for Nanophase to manufacture such increased amount. Any failure of Rodel or Nanophase to agree upon such a mutually acceptable arrangement following good faith negotiations shall not constitute either (i) an unwillingness by Nanophase to supply Rodel with Particles under Section 8(a) of this Agreement, or (ii) a breach of any party's obligations under the Agreement.
- (d) Rodel will submit written purchase orders to Nanophase giving reasonable notice which may not be less than three weeks prior to the requested date of shipment and specifying the required quantities, shipment dates, destinations and other relevant information, and Nanophase will use commercially reasonable efforts to fill the orders (including using reasonable commercial efforts to fill orders for which Rodel may be unable to provide a full three weeks' notice) so that Rodel may meet its delivery commitments to its customers.
- (e) Other provisions applicable to the purchase and sale of the Particles shall be as provided in Rodel's standard terms and conditions of sale, to the extent not inconsistent with this Agreement.

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5. Price and Payment

- (a) Based on the minimum volumes required for Rodel to maintain exclusivity under Section 12(a), the sales price for the Particles shall be [* * *] If agreed indices for Ceria raw materials show that the costs of these materials has significantly changed after 2002, the parties will negotiate in good faith to determine the appropriate pricing adjustments.
- (b) Unless otherwise agreed by the parties with respect to any particular order, all shipment of Particles shall be F.O.B. Nanophase's facility, with title and risk of loss passing at the shipment point. Rodel will make payment in full of all Particles conforming to the specifications described in Exhibit A within thirty (30) days of receipt of invoice.

6. Warranties

- (a) Nanophase warrants that (i) to the best of its knowledge, the processes Nanophase applies in manufacturing and selling the Particles do not infringe upon any patent or trade secret of any third party, and (ii) all Particles shipped under this Agreement will conform to the specifications agreed upon in writing, including those set forth in Exhibit A, as the same may hereafter be amended by the parties (the "Specifications"), and (iii) the Particles and their manufacture are and shall be in compliance with all applicable laws, rules and regulations, the noncompliance with which, if Nanophase is unable to cure the noncompliance within 90 days of notification thereof, would result in Nanophase's inability to meet its supply obligations under this Agreement. If, notwithstanding Nanophase's compliance with its warranty given in clause (i) hereof, Nanophase receives notice from a third party alleging that its processes infringe a patent or trade secret of such third party, then Nanophase and Rodel will consult one another in good faith to discuss actions to resolve the claim, including possible financial support by Rodel and consideration by Nanophase in respect thereof. These warranties are in lieu of all other warranties or conditions express or implied. TO THE EXTENT ALLOWABLE BY LAW, THIS EXCLUSION OF ALL OTHER WARRANTIES OR CONDITIONS

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EXTENDS TO IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THOSE ARISING BY STATUTE OR OTHERWISE IN LAW OR FROM A COURSE OF DEALING OR USAGE OF TRADE.

- (b) If any Particles fail to comply with the Specifications, Nanophase will, at Rodel's option, promptly return or exchange the Particles with conforming Particles, or issue a refund or credit of the purchase price.

7. Indemnity

Each party (the "indemnifying party") agrees to indemnify and hold the other party, its parents, subsidiaries, affiliates and permitted assigns, and the directors, employees and agents of each of the foregoing entities (all, the "indemnified party"), harmless from and against all liabilities, claims, damages and expenses (including, without limitation, reasonable attorneys' fees) arising out of or in connection with (a) any act or omission of the indemnifying party in breach of this Agreement, (b) any injury or damage to the extent attributable to the fault or negligence of the indemnifying party or (c) violation of any law, rule, regulation or order by the indemnifying party related to this Agreement. This Section 7 shall not apply to relieve either party's liability to the other for breach of such party's obligations to the other party under this Agreement.

8. License

- (a) In the event (i) Nanophase provides written notice to Rodel that Nanophase is unwilling to supply Rodel with conforming Particles for applications in the Field conforming to the Specifications or (ii) Nanophase acknowledges in writing that it is insolvent, or the board of directors of Nanophase shall authorize any liquidation or winding up of Nanophase, or a petition seeking a receivership or involuntary bankruptcy is filed against Nanophase and such petition is not dismissed within sixty days after service upon Nanophase, or (iii) there is a change of control (as defined in Section 12(c)) of Nanophase to a direct competitor of Rodel in the Field, then, in any such case, Rodel shall have an exclusive, royalty bearing, transferable license to make, have made, use and sell Ceria particles for applications in the Field under any and all intellectual property owned or controlled by

Nanophase or its principals. Such license shall be exercisable by Rodel upon written notice and shall be self-executing. If requested by Rodel, Nanophase will sell such equipment in its possession or control as Nanophase may have available and Rodel may require for full exercise of the license rights granted hereunder. The purchase price of any such equipment shall [* * *]

- (b) In addition to the foregoing, Nanophase agrees to make available the reasonable services of personnel it deems appropriate to provide such technical assistance as Rodel may reasonably request in connection with the manufacture of the Particles for applications in the Field under the licensed intellectual property. Nanophase will provide up [* * *]
- (c) The license provided in this Section 8 shall bear a royalty payable by Rodel to Nanophase [* * *]. Aggregate royalties hereunder shall be paid on a quarterly basis and shall be accompanied by a written report of the quantity of Particles used by Rodel on a monthly basis during the period covered by the report. This Section 8 shall survive expiration or termination of this Agreement in the event it is invoked by Rodel for a reason specified in Sections 12(b)(ii) or 12(c), but not by reason of Section 12(b)(i).

9. Confidentiality

In connection with this Agreement, the parties may from time to time exchange certain information and data which the disclosing party deems to be confidential information. As used herein, "confidential information" means any information disclosed in tangible form which is labeled as "confidential", "proprietary" or the like, or, if disclosed orally or visually, is confirmed in writing as "confidential", "proprietary" or the like within thirty (30) days of original disclosure. Confidential information shall not include any information which (a) is or becomes part of the public domain by reason other than the unauthorized disclosure of a party hereto, (b) the receiving party can demonstrate was already in its possession prior to receipt, or (c) was received in good faith from a third party having the right to disclose the same, or (d) was independently developed by the receiving party as evidenced by the receiving party's written records, or (e) is required to be disclosed by law, regulation, judicial

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process or administrative order, provided that prompt notice and an opportunity to seek a protective order is given to the other party before the disclosure of confidential information. Each party agrees to keep in confidence and not disclose any confidential information received from the other, and further agrees not to use any such information for any purpose except as permitted by, or in furtherance of, this Agreement. Nothing in this Section 9 is intended to prevent or limit either party's disclosing the relationship contemplated by this Agreement in filings with the U.S. Securities and Exchange Commission, or other public disclosures, relating to publicly traded securities of either party, or the filing of this Agreement as a related exhibit, if such party's counsel reasonably determines that such disclosure is appropriate, and provided that to the extent permitted by law, (i) the party seeking to disclose provides the other party with written notice and (ii) Nanophase uses reasonable efforts to seek such redactions of confidential information contained herein as Rodel may reasonably request.

10. Force Majeure

Neither party shall be liable on account of any failure to fulfill its obligations hereunder if such fulfillment is delayed, hindered or prevented by forces or events beyond its reasonable control, including but not limited to fire, flood, labor difficulties, accident, explosion, riots, war, acts of God, terrorist acts, threats of terrorism generally affecting commerce, shortage of materials, transportation difficulties, and other unforeseen supervening events; provided, that the party claiming any such cause as an excuse for nonperformance has provided written notice thereof to the other party within two weeks of the event that is the basis of the failure to perform, together with the anticipated length of the delay or failure.

11. Product Development and Improvement

(a) Throughout the term of this Agreement, Nanophase agrees to use commercially reasonable efforts and devote reasonable resources to maintain the Particles for applications in the Field as "state of the art" or better, based on mutually agreed specifications. In addition, pursuant to a protocol to be agreed upon between the parties,

Nanophase shall provide Rodel with at least seven (7) months' prior written notice before implementing any manufacturing process change potentially affecting compliance with the Specifications.

- (b) Notwithstanding any other provision of this Agreement, if Rodel determines that Nanophase's Particles do not meet the material performance criteria of competitive Particles for a particular application in the Field, Rodel shall promptly notify Nanophase in writing and give it reasonably sufficient quantities of such competitive Particles and documentation of the material deficiency in the performance criteria of Nanophase's Particles, including all available data substantiating the performance shortfall (the "Performance Deficiency Notice"). Nanophase shall thereafter have six months to meet or exceed the material performance criteria of the competitive particles for the identified application. If Nanophase is unable to meet or exceed such criteria, then Rodel shall be free to purchase the competitive particle for the particular application. In such case, the parties will promptly meet to discuss whether and upon what terms to continue this Agreement on an exclusive basis as set forth in Sections 2 and 3, hereof. If the parties cannot agree on a course of action within 60 days of the commencement of such discussions, then this Agreement shall continue on a nonexclusive basis in accordance with its terms, and Sections 2, 3 and 12(a) shall be deemed accordingly amended, and Section 8 shall be deleted.

12. Term and Termination

- (a) This Agreement shall commence on the date first set forth above and continue for an initial period of five years; provided, that if as of December 31, 2003, [* * *], and Rodel has not purchased from Nanophase at least [* * *] kilograms of Particles, the parties shall meet in good faith to discuss the progress to date and possible adjustment of any targets, goals or prices previously established with respect to development and sale of Particles for applications in the Field (the "Adjustment Discussions"). If within thirty (30) days after either party has requested Adjustment Discussions, the parties have not agreed on an acceptable path forward on an exclusive basis, then either party may, by

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written notice delivered at the end of such thirty (30) day period, declare this Agreement to be nonexclusive, whereupon the exclusivity provisions of Sections 2 and 3 hereof shall be deemed void and this Agreement shall continue on a nonexclusive basis for the remainder of the initial term (the "Exclusivity Termination Procedure"). The parties agree to hold similar Adjustment Discussions, and adhere to the same Exclusivity Termination Procedure if (i) during 2004, Rodel has not purchased from Nanophase at least [* * *] kilograms of Particles for applications in the Field, or (ii) during 2005, Rodel has not purchased from Nanophase at least [* * *] kilograms of Particles for applications in the Field, or (iii) during subsequent years of the initial term of this Agreement, Rodel has not purchased from Nanophase agreed quantities of Particles for applications in the Field. Subject to Rodel's complying with the purchase minimums stated above (or such other quantities as the parties may agree pursuant to the Adjustment Discussions), this Agreement will renew automatically at the end of the initial term for consecutive additional periods of five years each, unless terminated by either party upon written notice delivered at least three (3) months prior to the end of any renewal period.

- (b) This Agreement may be terminated at any time prior to expiration upon written notice by either party in the event of (i) a material breach by the other which is not cured within thirty (30) days after delivery of written notice by the nonbreaching party, or (ii) the other party is placed in bankruptcy or receivership.
- (c) This Agreement may also be terminated at any time prior to expiration upon written notice by either party in the event of a change of control of the other party to an unaffiliated third party. For purposes hereof, a "change in control" means a change in the voting control of the affected party or its direct or indirect parent. Except to the extent a party's counsel reasonably determines that such disclosure is prohibited by applicable statute or regulations of the U.S. Securities and Exchange Commission, the party affected by a change of control shall give the other at least thirty (30) days' prior notice of the contemplated change. If the other party does not elect to terminate this Agreement as provided by this subsection, this Agreement shall continue in accordance with its terms as provided by Section 13, below.

* * * Confidential Portions Omitted and Filed Separately with the Commission

13. Assignment and Succession

This Agreement shall not be assigned by either party to any third party, except to an affiliate of such party (defined, for purposes of this Agreement as a company or other legal entity which controls, is controlled by, or is under common control with, Rodel or Nanophase, respectively), without the other party's prior written consent, which consent shall not be unreasonably withheld. This Agreement shall be binding upon, and inure to the benefit of, the respective successors by merger or otherwise and permitted assigns of each party.

14. Miscellaneous Provisions

- (a) This Agreement embodies all the terms and conditions of the agreement between the parties hereto with respect to the matters set forth herein and supercedes and cancels all previous agreements and understandings, whether oral or written, provided that nothing in this Agreement shall be deemed to supersede or cancel that certain Confidentiality And Non-Use Agreement between Rodel and Nanophase dated November 27, 2001 with respect to information disclosed by either party to the other prior to the date hereof.
- (b) The terms of this Agreement may not be modified, waived or discharged except by an express declaration in writing signed on behalf of the parties hereto by their duly authorized officers and referring specifically to this Agreement.
- (c) The failure of Nanophase or Rodel at any time to require performance by the other of any provision hereof shall in no way affect the full right to require such performance at any time thereafter, nor shall the waiver by Nanophase or Rodel of a breach of any provision hereof be taken or held to be a waiver of any succeeding breach of such provision or as a waiver of the provision itself.
- (d) The termination or expiration of this Agreement for any reason shall not affect any of the provisions of this Agreement which expressly continue in force after its termination or expiration, including the provisions of Sections 6, 7, 9 and 14, which the parties expressly agree shall survive any expiration or termination hereof.

- (e) Except as expressly provided herein, nothing in this Agreement shall be construed to make any party hereto the representative or agent of any other party and no party shall so hold itself out, nor shall any party be liable for or bound by any act or omission of any other party.
- (f) This Agreement in all respects shall be governed by and interpreted in accordance with the laws of the State of Delaware, U.S.A. without giving effect to principles of conflict of laws. Rodel and Nanophase hereby consent and submit to the jurisdiction of the state or federal courts in Delaware and agree that any litigation arising out of or relating to this Agreement shall be heard only in a state or federal court located in such state.
- (g) Rodel and Nanophase each agree that during the term of this Agreement, and for eighteen months after the termination of the Agreement, neither party will directly or indirectly hire or engage any current or former employee or contractor of the other party, nor solicit or try to induce any current employee or contractor of the other party, to leave that party's employ or engagement.
- (h) If any provision of this Agreement is held invalid by a court of competent jurisdiction, such invalidity shall not affect the other provisions of this Agreement.
- (i) Any notice required or permitted to be given under this Agreement shall be made by personal delivery, courier, or by telecopy or first class mail to the party to whom delivery is intended at its address set forth above, or to such other address as either party shall notify to the other from time to time.

IN WITNESS WHEREOF, the parties have executed and delivered this Agreement as of the date first set forth above.

NANOPHASE TECHNOLOGIES
CORPORATION

RODEL, INC.

By: /s/ Joe Cross

By: /s/ illegible

Joe Cross, CEO

Exhibit A

Agreed Specifications

[* * *]

* * * Confidential Portions Omitted and Filed Separately with the Commission

Certification of the Chief Executive Officer
Pursuant to Section 906
of the Sarbanes-Oxley Act of 2002

In connection with this amendment no.1 to annual report on Form 10-K/A (the "Report") of Nanophase Technologies Corporation (the "Company"), I, Joseph Cross, Chief Executive Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 23, 2003

/s/ JOSEPH E. CROSS

Joseph E. Cross
Chief Executive Officer

Certification of the Chief Financial Officer
Pursuant to Section 906
of the Sarbanes-Oxley Act of 2002

In connection with this amendment no.1 to annual report on Form 10-K/A (the "Report") of Nanophase Technologies Corporation (the "Company"), I, Jess Jankowski, Acting Chief Financial Officer of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: May 23, 2003

/s/ JESS A. JANKOWSKI

Jess A. Jankowski
Acting Chief Financial Officer