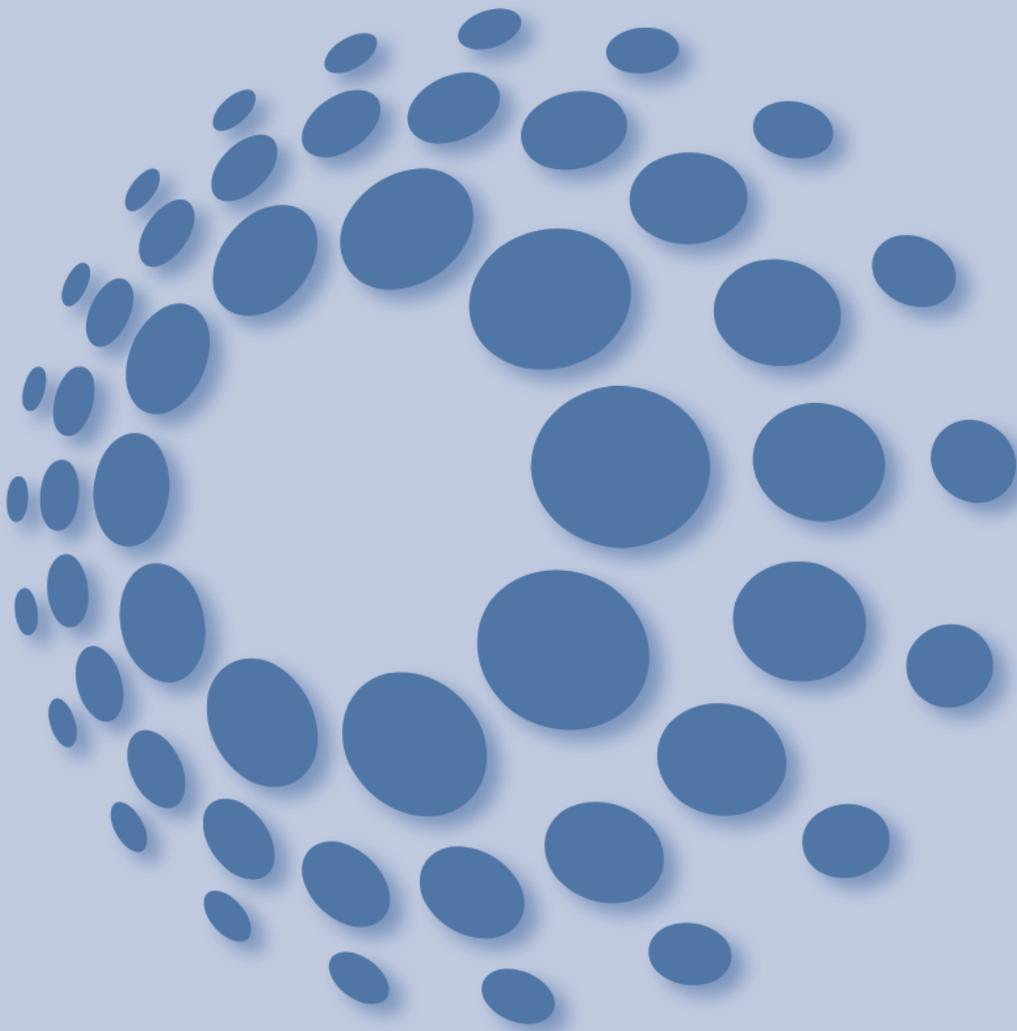


DRIVING PRODUCT INNOVATION

anti-microbial
architectural coatings
medical materials
personal care
coatings
electronics



DELIVERING MARKET ADVANTAGE



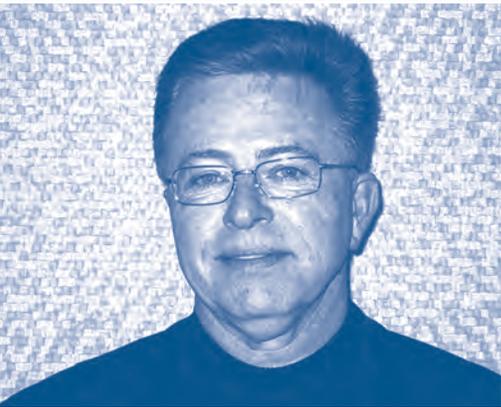
DRIVING PRODUCT **INNOVATION**

DELIVERING MARKET ADVANTAGE

**Nanophase Technologies is a nanotechnology company—
a technology that the US Government says is “likely to
change the way almost everything ... is designed and made.”**

*Founded in 1989, Nanophase has traded on the Nasdaq
Stock Exchange under the symbol NANX since 1997.*





LETTER TO **SHAREHOLDERS**
JOSEPH CROSS—President & CEO

The year 2005 was one of significant progress for Nanophase Technologies. Revenues grew substantially, new nanoproducts were launched, new market partners and customers added, the Company's technologies were increased and improved, and operational performance continued to be excellent. 2005 was a solid year that, we believe, marked the beginning of a new phase of growth for Nanophase.

Nanophase's 2005 revenues grew 31% year-over-year with product revenues increasing 52% based on growth from the Company's market partners—BASF, Altana Chemie, and Rohm & Haas Electronic Materials CMP Technologies—and new customer additions. Significantly, gross margin on revenues increased 1078% comparing 2005 to 2004. Revenue growth and increasing gross margin validate the Company's business and financial models.

Nanophase launched novel nanomaterial-based products for sunscreens, personal care, coatings, textiles, and medical diagnostics from a large slate of planned new nanomaterials that will continue into 2006. We formed an exclusive partnership with Alfa Aesar to market and distribute sample quantities of Nanophase-branded nanomaterial products into the global research and development community to accelerate new application development and contribute to the Company's future revenue growth. We were also honored by our market partners: BASF designated Nanophase as a 'strategic development partner' based on our innovation in nanomaterial products; Rohm & Haas Electronic Materials CMP Technologies granted the Company their 'Excellence in Partnership Award' for our efforts; and, in yet another demonstrable vote of confidence, Altana Chemie loaned Nanophase \$1.6M to install volume production equipment for nanoparticles and dispersions to support growth in nanoproducts for the coatings and plastics markets.



BURR RIDGE FACILITY—20,000 sq.ft.



ROMEOVILLE FACILITY—36,000 sq.ft.

Continuing to advance Nanophase's technologies and capability, we implemented the second generation of NanoArc[®] synthesis technology that increases production rates 3–5 times and allows commercial production across a broad material palette of sub-25 nanometer particles. In parallel, we continued to advance our PVS nanoparticle technology to increase reactor rates by 35% and improve output per labor hour by 43%. With aggregate improvements since 2000, Nanophase has more than quadrupled PVS capacity with existing reactors.

During 2005, Nanophase continued its industry operational leadership. Nanophase's facilities were certified to ISO 14001:2004, the international environmental management standard, and recertified to ISO 9001:2000, the internationally recognized standard of manufacturing and quality excellence. The Company also achieved 100% customer service levels with no customer complaints for the fourth consecutive year.

Market studies and our own experience lead us to believe that the global adoption rate for nanomaterial-based products is increasing at a quickening pace. Nanophase is an acknowledged leader with a novel integrated platform of nanomaterial technologies to commercially produce innovative application specific nanoproducts. We believe that Nanophase is uniquely positioned to cultivate opportunities and markets that offer significant revenue growth potential going forward.

Joseph Cross
President & CEO
April 1, 2006



- NANX is the favorite name in our Nanotechnology universe due to its growth potential, focus on expanding commercial product sales to commercial customers and not seeking government funding. The company's management team is highly professional and business (profit) oriented. Contrary to many high-tech companies of its size, NANX is run by businessmen who understand technology and not by scientists who do not understand business.

GLOBAL CROWN CAPITAL, LLC | 7/27/2005

- Nanophase Technologies, ... and Alfa Aesar, the research chemicals unit of Johnson Matthey, jointly announce the formation of a mutually exclusive partnership to supply selected Nanomaterials for a variety of research and development applications. "The Nanophase products will complement our existing high purity inorganic product line, and will give our customers a new line of Nanomaterials for their research."

NANOPHASE PRESS RELEASE | 10/28/2005

- Nanophase is a technology leader and a pure play in the burgeoning Nanomaterials market. We believe the Company is well positioned to gain from the growth in Nanomaterials by leveraging its proprietary technology, world-class manufacturing capability, established partnerships with industry leaders, and experienced management team.

ADAMS HARKNESS | 11/29/2005

- We believe Nanophase has all the ingredients of what we consider a true Advanced Enabling Materials™ company, including a defensible proprietary technology, a portfolio of unique products that are geared toward very specific end-market applications, a well-managed manufacturing infrastructure, experienced management team, and collaborations with some of the largest players in various en-markets.

CANNACORD ADAMS | 01/11/2006

- BYK-Chemie will be presenting its nanotechnology based additive range NANOBYPK for the very first time at "nano tech 2006" in Tokyo (Japan) ... "We recognized early that this technology will open up completely new horizons in the paint and plastics industry," Dr. Roland Peter, Chairman of the Management Board BYK-Chemie, states. In close collaboration with Nanophase, BYK-Chemie has been developing nanotechnology based additives for paint and plastics systems since 2004.

BYK-CHEMIE PRESS RELEASE | 01/26/2006

- We believe that Nanophase is the best play on the growth of the emerging Nanomaterials industry. ... the next five years present a considerable opportunity for the company before competition becomes a more crucial factor.

NEWBRIDGE INSTITUTIONAL RESEARCH | 02/21/2006

- Nanophase Technologies announces a new supply agreement with Roche Diagnostics to supply certain nanoparticles for a medical diagnostics application through 2014.

NANOPHASE PRESS RELEASE | 03/06/2006

BOARD OF DIRECTORS

DONALD S. PERKINS, CHAIRMAN OF THE BOARD

Donald S. Perkins is the former Chairman of Jewel Companies, Inc., a food and drug store chain. Mr. Perkins graduated from Yale University and the Harvard Business School. He served in the U.S. Merchant Marine in the mid 1940s and the Air Force in the early 1950s. Starting as a trainee with the then Jewel Tea Company in 1953, he was elected Vice President in 1960, Executive Vice President three years later, President in 1965 and Chairman and Chief Executive Officer in 1970. He retired from Jewel Companies, Inc. in 1983. Mr. Perkins currently serves as a Director of Cantilever Technologies LLC, LaSalle Hotel Properties, LaSalle U.S. Realty Income and Growth Funds I, II and III and Nanophase Technologies Corporation, where he is Chairman. 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. He is a Life Trustee and was Vice Chairman of Northwestern University. He co-chaired Campaign Northwestern, a university-wide effort which has raised more than \$1.5 billion. He is Honorary Chairman of The Illinois Coalition and Protector of the Thyssen-Bornemisza Continuity Trust. He has served as a Trustee of The Ford Foundation and The Brookings Institution and as a member of The Business Council. 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 the Advisory Boards of RoundTable Healthcare Partners L.P., Northwestern University's School of Communication and its School of Education and Social Policy.

JOSEPH E. CROSS Mr. Cross has been a director since November 1998, when he joined Nanophase as President and Chief Operating Officer. He was promoted to Chief Executive Officer in December 1998. From 1993–1998, Mr. Cross served as President and CEO of APTECH, Inc., an original equipment manufacturer of metering and control devices for the utility industry, and as President of Aegis Technologies, an interactive telecommunications company. He holds a BS in chemistry and attended the MBA program at Southwest Missouri University. He brings a background of successfully directing several high-technology start-ups, rapid growth and turnaround operations.

JAMES A. HENDERSON, DIRECTOR Mr. Henderson has served as a director of the Company since 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, Inc. 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 International Paper, Ryerson Tull, Inc., SBC Communications, Inc., and is a member of the Washington, D.C. Business Council.

BOARD OF DIRECTORS

JAMES A. MCCLUNG 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), Beaulieu of America Corporation, NCCI Holdings, Turtle Wax and Hu-Friedy. 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 Thunderbird: The Garvin School of International Management, 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.

JERRY K. PEARLMAN 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.

DR. RICHARD W. SIEGEL Dr. Siegel is a co-founder of the Company and has served as a director of the Company since 1989. Dr. Siegel also served as a consultant to the Company from 1990 to 2002 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. During 2003–2004 he was a visiting professor in Japan on a RIKEN Eminent Scientist Award. 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. He currently serves on the Nanotechnology Technical Advisory Group to the U.S. President's Council of Advisors on Science and Technology. 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.

JANET WHITMORE Ms. Whitmore joined the board in November, 2003. She is currently a director for Silverleaf Resorts, Inc., where she serves as Chairman of the Compensation Committee and as a member of the Audit and Finance Committee. Ms. Whitmore is Founder of Benton Consulting, LLC, which specializes in business development and processes. From 1976 through 1999, Ms. Whitmore held numerous engineering and finance positions at Mobil Corporation, including Mobil's Chief Financial Analyst and Controller of Mobil's Global Petrochemicals Division. Ms. Whitmore holds a Bachelor of Science degree in Chemical Engineering from Purdue University and an MBA from Lewis University.



OFFICERS

JOSEPH E. CROSS, PRESIDENT & CHIEF EXECUTIVE OFFICER (See biography under Directors)

DANIEL S. BILICKI, VICE PRESIDENT—

SALES & MARKETING Mr. Bilicki took this position in March 1999 and is responsible for the Company's global business development, sales, and marketing activities. Before joining Nanophase, from 1996–1999 he was Vice President/Director of PT Crosfield Indonesia, the Jakarta-based operation of Crosfield Company, a global chemical firm. In 1994–1995, Mr. Bilicki served as Crosfield's President/Director of North America. He holds a BS in chemical engineering from Indiana Institute of Technology and an MBA from Winthrop University.

DR. RICHARD W. BROTZMAN, VICE PRESIDENT—

RESEARCH & DEVELOPMENT Dr. Brotzman joined Nanophase in 1994 as a Senior Scientist and was promoted to his present position in 1996. He has more than 15 years of experience in the research and development of advanced materials leading to new products—and is the inventor of the Company's coating technology. From 1991–1994, Dr. Brotzman served as Director of Research at TPL, Inc., an advanced materials company. He earned his BS in chemical engineering from Lafayette College, an MS in engineering and applied science from the University of California at Davis, and a Ph.D. in chemistry from the University of Washington.

ROBERT HAINES, VICE PRESIDENT OF OPERATIONS

Mr. Haines joined Nanophase Technologies in January 2001 as Vice President—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.

JESS A. JANKOWSKI, CHIEF FINANCIAL 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, Vice President in April 2002 and Vice President of Finance and Chief Financial Officer in April 2004. From 1990–1995 he served as Controller for two building contractors in the Chicago area, also serving in the business development function. From 1986 to 1990 he worked for Kemper Financial Services in their accounting control corporate compliance unit, serving as unit supervisor during his last two years. He holds a B.S. in accountancy from Northern Illinois University, an M.B.A. from Loyola University of Chicago and received his certified public accountant certificate from the State of Illinois.

Mr. Jankowski has served on the advisory board of WESTEC, an Illinois Technology Enterprise Center focusing on the commercialization of advanced manufacturing technologies, since 2003. He was also recently elected to the Romeoville Economic Development Commission, an organization focused on fostering new business growth in Romeoville, Illinois which resides in Will County, the twelfth fastest growing county in the U.S.

INDEPENDENT AUDITORS

McGladrey & Pullen LLP

20 North Martingale Rd., Suite 500
Schaumburg, Illinois 60173

TRANSFER AGENT

LaSalle National Association

Corporate Trust Department
135 South LaSalle Street, Room 1960
Chicago, Illinois 60603
800-246-5761

STOCK LISTING

Nanophase Technologies Corporation's common stock is traded on the Nasdaq National Market under the symbol NANX.

ANNUAL MEETING

July 24, 2006

at Nanophase Technologies Corporation
1319 Marquette Drive
Romeoville, Illinois 60446

FORM 10-K

Nanophase Technologies Corporation will send a copy of its Form 10-K report for fiscal 2005 as filed with the Securities and Exchange Commission upon written request to Investor Relations at the corporate office.

BOARD OF DIRECTORS

Donald S. Perkins, Chairman of the Board

Joseph E. Cross

James A. Henderson

James A. McClung

Jerry K. Pearlman

Dr. Richard W. Siegel

Janet Whitmore

EXECUTIVE OFFICERS

Joseph E. Cross

President and Chief Executive Officer

Daniel S. Bilicki

Vice President – Sales and Marketing

Dr. Richard W. Brotzman

Vice President – Research and Development

Robert Haines

Vice President – Operations

Jess A. Jankowski

Chief Financial Officer

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

**[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D)
OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2005 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 is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

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

Large accelerated filer Accelerated filer Non-accelerated filer

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

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 30, 2005 was \$76,384,652 as of such date.

The number of shares outstanding of the registrant's common stock, par value \$.01, as of March 10, 2006 was 17,991,188.

DOCUMENTS INCORPORATED BY REFERENCE

None.

PART I

Item 1. Business

General

Nanophase Technologies (“Nanophase” or the “Company”) is a nanomaterials (also referred to as nanocrystalline materials or nanoparticles) developer and commercial manufacturer. Nanophase employs patented, patent-pending and proprietary technology to create nanomaterials, typically in the range of 5 to 100 nanometers, which may be single- or multi-element oxides, including rare earth materials. Nanophase applies its technologies to modify the nanoparticle and nanoparticle surface to manipulate electrical, mechanical, optical and other properties, while precisely controlling the particle size and other physical parameters. The Company also uses its technologies to create materials, not normally found naturally, that offer special performance attributes.

Nanophase has created an integrated platform of nanomaterial technologies that are designed to deliver, typically in the metric ton range, an engineered nanomaterial solution for a particular target market or specific customer application. Nanophase’s technologies consist of two distinct nanoparticle or nanomaterial manufacturing processes (physical vapor synthesis (“PVS”) and NanoArc™ synthesis), nanoparticle surface treatment(s) technologies and dispersion technologies. The Company delivers various nanomaterials at commercial quality and quantity. Nanophase’s products are available as nanoparticles, surface-treated nanoparticles and stable nanoparticle dispersions in aqueous or organic media, providing customers with nanomaterials in readily usable forms. The diverse markets Nanophase currently serves include personal care, sunscreens, abrasion-resistant applications, antimicrobial products and a variety of polishing applications, including semiconductors and optics. New markets and applications also are being developed. The Company’s customers include multinational corporations and Fortune 500 companies.

Nanophase reduces the cycle time for innovation by working with certain customers to jointly develop optimal nanoengineered solutions for particular market needs or specific customer applications. The Company has complete capability from application development and laboratory samples through pilot quantities and commercial production. The Company has research and development facilities and application laboratories, as well as manufacturing capacity based in two locations in the Chicago area. This capability allows Nanophase to develop and supply nanomaterials in quantities ranging from grams to metric tons. Nanophase’s business model is based on strategic partnerships, typically with companies who currently occupy a targeted market channel(s), and supplying nanomaterials to individual customer-specific needs.

Most of the raw materials used in the Company’s various processes are commercially available. In some cases, Nanophase relies on sole-source processors of materials who utilize an array of worldwide sources for the materials that they process to the Company’s specifications.

The Company was incorporated in Illinois on November 30, 1989 and merged into a Delaware corporation on November 25, 1997. The Company’s common stock trades on the Nasdaq National Market under the symbol NANX.

Nanocrystalline Materials or Nanomaterials

Nanomaterials generally are made of particles (nanoparticles) that are less than 100 nanometers in diameter. A nanometer is a billionth of a meter. To put this in perspective, a six foot tall person is approximately two billion nanometers tall. Viewing the same analogy differently, if every person in the U.S. was only one nanometer tall, and all of these people were stacked one on top of the other, they would result in a figure about 12 inches in height.

Nanomaterials are in the diverse field of nanotechnology, but are a distinct area of the field. Nanomaterial properties depend upon the composition, size, shape, structure and surface of the individual particles, as well as other possible parameters. Nanophase's methods for engineering and manufacturing nanocrystalline materials result in particles with a controlled size and shape and surface characteristics that behave differently from conventionally produced larger-sized materials. The Company's control of nanoparticles, and many of their attributes, allows it to engineer materials at a very small level to meet relatively precise application or performance requirements.

Typical uses for nanomaterials are in manufactured products (sunscreens and other personal care products) or in manufacturing processes (fine polishing, coatings and catalysts). In many applications, nanomaterials offer advantages such as improved performance, lower overall product cost, or the development of new products or processes

The Company's Technologies

Nanophase intends to maintain and grow its intellectual property position in the emerging science of nanomaterials through the development of new materials and processes, many of which management expects to result in the subsequent issuance of patents (see "Item 1. Business—Intellectual Property and Proprietary Rights"). Nanophase has created an integrated platform of nanomaterial technologies that are patented, patent-pending or proprietary and designed to deliver a nanomaterial solution for a particular market or specific customer application. Nanophase's technologies consist of two distinct nanoparticle, or nanomaterial, manufacturing processes (PVS and NanoArc™ synthesis), nanoparticle surface treatment(s) technologies and dispersion technologies. These technologies define the equipment and methods used for the commercial manufacture of nanoparticles, surface-treatment and coating of nanoparticles and dispersion of nanoparticles in a variety of media. The Company's technologies have been demonstrably scalable and robust, having produced more than a hundred metric tons of nanomaterials during each of the last five years.

The Company uses its technologies to engineer and produce nanocrystalline materials designed for specific product applications. Currently, the Company's major nanomaterials are: coated zinc oxide for sunscreens, dispersed ceria for fine polishing applications, uncoated zinc oxide for personal care applications and various nanomaterials for medical diagnostics, coatings and sealant applications. Nanophase has various other nanomaterials it is selling to existing markets at generally lower volume levels. The Company hopes to increase the revenue relating to some of these materials, over time. Nanophase also is engaged in ongoing research, technology development and where appropriate, is exploring technology-licensing activities in hopes of adding to its core technologies or providing complementary technologies. The Company's goal is to remain at the forefront of nanomaterials technologies.

Nanophase has been steadily expanding both its patented technologies and its ability to successfully practice these technologies. Through large-scale manufacturing of nanomaterials utilized in the manufacture of consumer sunscreen and personal care products, the Company has developed production expertise that has allowed it to improve processes relating to those nanomaterials, as well as processes relating to other nanomaterials. This experience has translated into additional patents and pending patents and improvement of the Company's technologies and manufacturing processes to reduce variable manufacturing cost and improve gross margins.

Newer developed technologies have opened the capability for certain new products and new markets. With the commercialization of the Company's new 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 Nanophase'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. The Company is also exploiting these capabilities in focusing on the coatings and sealants markets through its partnership with Altana Chemie AG (“Altana”). The Company received a loan in the amount of \$1.6 million from BYK Chemie, a U.S. subsidiary of Altana, in November of 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.

Essentially all of the research and development at Nanophase is directly related to product development for applications. The Company endeavors to either meet specific stated customer needs or to develop applications solutions to unmet needs in a particular market where its materials may offer a distinct performance advantage, typically resulting in a lower system cost to customers. Management believes that aggressively pursuing applications, inventions and patents will help Nanophase maintain its position as a technical and commercial innovator in the nanomaterials field.

Marketing

The Company markets and sells its products through a combination of business development and sales activities in strategic relationships with lead customers in various markets. Business development activities include evaluation and qualification of potential markets, identification of the lead customers within each market and development of a business strategy for successful market penetration.

Nanophase typically forms a technical/marketing team that offers the customer an engineered solution to meet that customer’s specific requirements. Nanophase tailors its materials to provide specific solutions required by its customers. Once a solution is established, application and customer management is moved to a sales team that is organized along market lines. The sales team is expected to increase revenue by selling product and process solutions and broadening the customer base through horizontal marketing. These collaborations often begin with sample requests from potential customers, followed by an open dialogue regarding the needs of those potential customers and the capabilities of Nanophase. The ideal outcome for this type of collaboration is the mutual development and introduction of a product that results in significant revenue to both Nanophase and the customer. The Company feels that its recently executed Distributor Agreement dated October 24, 2005 with Alfa Aesar, a recognized leader in the distribution of fine chemicals, primarily generated through catalog sales, should allow us to take advantage of their worldwide marketing and distribution channels in this broad market. Management expects that this relationship and the leverage that it provides will ultimately lead to the enhancement of Nanophase’s business development efforts.

In the case of BASF Corporation (“BASF”), much of the Company’s collaboration has involved sharing information and developing the current product and next generation products to better perform within BASF’s existing customers’ various products and systems. BASF is currently the Company’s largest customer. Nanophase and BASF have entered into a supply agreement that requires BASF to buy a minimum of 70% of its annual requirement of nanoscale zinc oxide for use in sunscreen and personal care products from Nanophase in order for BASF to retain its exclusive worldwide rights to use the Company’s zinc oxide products in the sunscreen and personal care markets. This agreement, which has no set expiration date, can be terminated by either party with two years notice under certain conditions. In November of 2000, BASF agreed to lend the Company approximately \$1.3 million to construct a nanoparticle coating facility at its Romeoville, Illinois location. See Note 7 to the Financial Statements and the “Liquidity and Capital Resources” section of “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

In the case of Rohm and Haas Electronic Materials CMP, Inc. (“RHEM”), formerly known as Rodel, the Company has collaborated in selling current generation ceria-based chemical-mechanical-

planarization (“CMP”) materials to RHEM’s customers. In June of 2002, RHEM and Nanophase entered into a supply agreement which requires RHEM to purchase 100% of its annual requirements for, and specified minimum dollar amounts of, nanocrystalline ceria for use in CMP of semiconductors in order for RHEM to retain its exclusive worldwide rights to the Company’s nanocrystalline ceria products in this field of use. In February of 2004, the Company amended its original agreement with RHEM. This amendment allowed RHEM to maintain exclusivity by purchasing lower dollar amounts of nanocrystalline materials, while extending the agreement through 2009. This amendment did not require RHEM to purchase any materials from the Company in 2004, but it did require an aggregate of \$600,000 be paid to Nanophase in four equal quarterly installments in 2004 to support ongoing efforts in joint slurry product development during 2004. This \$600,000 was fully earned in 2004. In October of 2004, the Company amended its original agreement with RHEM a second time. This amendment reduced the minimum purchase requirements necessary to maintain the Company’s exclusivity obligations to RHEM by approximately 44% during 2005. The reduction reflects the parties’ recognition of the difficulty in precisely estimating the timing of product development and sales in the semiconductor polishing market. Pursuant to the October 2004 amendment, RHEM is now obliged to purchase a guaranteed quantity of material in 2006 to maintain exclusivity; this schedule was agreed upon in accordance with the terms of the Amendment.

The Company leverages its resources through relationships with organizations focused on market-specific (e.g., BASF, RHEM) or geography-specific areas. These relationships enhance Nanophase's ability to quickly develop lead customers and applications for its products. Another of these relationships is with C. I. Kasei, a division of Itochu Corporation (“CIK”). CIK develops, engineers and manufactures products under license from the Company (specifically for the Company’s PVS technology) for use in multiple industrial markets. The Company’s agreement, originating in 1997, with CIK stipulates a minimum royalty every twelve months of the greater of \$300,000 or 4% of CIK’s sales of licensed product, payable to the Company until 2013, to guarantee CIK an exclusive license in designated parts of Asia. After that time, the agreement calls for a royalty of 2% of CIK’s sales of licensed product, at which time CIK’s license of Nanophase’s PVS technology in designated parts of Asia would become non-exclusive. CIK may terminate its agreement with the Company at any time upon 90 days prior written notice. While CIK continues to sell materials in designated parts of Asia on a regular basis, management does not believe that revenue related to the CIK agreement will contribute significantly, beyond the levels it has in the past, to the near-term growth of the Company.

On March 23, 2004, the Company received \$10,000,000 in gross proceeds in the form of an equity investment from Altana, a large German chemical company. Altana received 1,256,281 shares of Nanophase common stock. Altana and Nanophase have agreed that the shares will remain unregistered, and therefore not freely saleable, until March 23, 2006; at which point the Company will register such shares for resale as soon as practicable in accordance with the terms of the Company’s Registration Rights Agreement with Altana. Simultaneous with this transaction, the Company executed a joint development agreement with Altana in order to explore new product applications in fields that are mutually beneficial to both companies. Pursuant to the agreement, the Company and Altana have granted each other, subject to limited exceptions, exclusive rights for the development and purchase of nanomaterials for use in paints, coatings, inks, polymers and plastics, varnishes and other related applications.

Management believes that these agreements with Altana will be beneficial to the Company in several ways. Altana is a prominent ingredient supplier to many industries that the Company has had limited success in approaching in the past (including paint and industrial coatings companies). By approaching these companies at the ingredient-supplier level, with the Company’s materials already compounded into Altana’s ingredient products, the Company expects a higher likelihood of success in various applications and in these industries.

Secondly, Altana has global sales, technical support, capabilities for basic research, additional application development capability to incorporate nanomaterials, and an existing customer base and market relationships. Nanophase expects that this new partnership will help Nanophase address markets at an entry point that should allow for quicker and broader adoption of nanomaterials in composite coatings and plastics. This mutually exclusive agreement is separate and distinct from the Company's existing agreements with BASF and RHEM, as the fields of application do not intersect. Management expects Altana to continue to develop new products and market them on an ongoing basis. Altana should become a significant customer of Nanophase during 2007. The agreement with Altana has an initial term of eight years, with one-year renewal provisions.

On November 3, 2005, BYK-Chemie USA, a customer of Nanophase, lent \$1,597,420 to Nanophase pursuant to the terms of a Promissory Note received effective October 27, 2005. 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 Company, from time to time, employs marketing representatives or sales agents focused in specific application areas. Nanophase also markets itself and its capabilities by sponsoring, attending and presenting at advanced materials symposia and industry trade shows for its target markets, and by publishing articles in a variety of scientific and trade journals. The Company also markets itself and its capabilities through its Web site, by advertising in selected industry and trade journals and by providing specification sheets and other marketing materials to prospective customers. In addition, Nanophase networks with certain Fortune 500 companies to display its technology and uncover potential applications. The Company often makes technical presentations at various events where the Company's scientists and business development people meet with their counterparts at other companies and explore potential technical relationships and collaborative applications research.

Technology and Engineering

The Company's Technology and Engineering Group includes the research and development, process engineering and advanced engineering functions. Consistent with the Company's goal to remain at the forefront of nanomaterials technologies, the objective of Nanophase's research and process development activities is to gather core technologies that have the capability to serve multiple commercial markets, continue to improve and evolve the Company's manufacturing technologies and develop new nanomaterials and associated applications, usually working directly with potential and current customers.

Nanophase's total research and development expense, which includes all expenses relating to the technology and advanced engineering groups, during the years ended December 31, 2005, 2004 and 2003 was \$1,934,528, \$1,929,348 and \$1,906,791, respectively. This represents the Company's share of these expenses only and does not take into account amounts spent by our largest customers in support of our partnerships. The Company's future success will depend in large part upon its ability to keep pace with evolving advanced materials technologies and industry standards. Through the five-year period ended December 31, 2005, the Company has had cumulative research and development expenses of approximately \$8.9 million and cumulative expenditures on equipment and leasehold improvements of approximately \$9.3 million. These investments in technology and production capacity and capability have helped to take Nanophase from a development stage company to commercialization.

Manufacturing Operations

The Company's manufacturing operations include the production of nanomaterials in the form of nanoparticles, utilizing two different methods: "PVS" and NanoArc™ synthesis. The Company also has

a large quantity nanoparticle coating operation to support its sunscreen business, as well as dispersion equipment to support its CMP and polishing initiatives and other product and market areas.

The Company has manufacturing capacity based in two locations in the Chicago area. At each of these facilities, Nanophase is able to develop and supply its nanomaterials in quantities ranging from grams to metric tons. Nanophase's facilities are certified to ISO 9001:2000 international standards and are current Good Manufacturing Practices (cGMP) compliant for applicable bulk pharmaceutical manufacturing. The Company's facilities are also certified to the international standard for environmental management, ISO 14001:2004. All processes are controlled under Six-Sigma discipline with the capability to manufacture precisely to application requirements. Unlike traditional quality control, Six Sigma provides methods to reengineer processes to eliminate non-value added steps and create a system that minimizes errors and defects. Nanophase's operations employ a cellular team-based manufacturing approach, where workers operate in work "cells," under a Lean Manufacturing environment to continuously advance production capabilities.

Management is committed to a Lean Manufacturing approach where, to the extent possible given a certain measure of irregular demand, the Company is able to avoid excess labor, inventory and supply levels in order to minimize working capital demands. This approach complements two of the Company's major production goals which are to increase nanomaterials output without adding to existing equipment and to reduce production costs.

Intellectual Property and Proprietary Rights

Nanophase relies primarily on a combination of patent, trademark, copyright, trade secret and other intellectual property law, nondisclosure agreements and other protective measures to protect its intellectual property. In addition to obtaining patent and trademarks based on the Company's inventions and products, Nanophase also licenses certain third-party patents to expand its technology base. During 2005, Nanophase continued to strengthen its intellectual property portfolio by adding to its patents, pending patents, and proprietary knowledge. As of the date of this report, Nanophase owns or licenses 21 US patents and patent applications consisting of 10 owned US patents, 8 pending US patent applications, 1 license to pending US patent applications and 2 licensed US patents. The 10 owned US patents consist of 6 for its nanoparticle synthesis technologies, 2 for its surface treatment technologies and 2 for its nanoparticle applications in coatings. The Company's pending US patents and license to a pending US patent consist of 3 in nanoparticle synthesis, 3 in nanoparticle surface treatments, including dispersion of nanoparticles in various media and 4 in nanoparticle applications. Correspondingly, the Company has 51 foreign patents and pending patent applications consisting of 19 owned foreign patents and 32 pending foreign patents. All of the pending and owned foreign patents are counterparts to domestic filings covering its platform of nanotechnologies. In addition, the Company's management believes that, based on its past experience, up to 3 of its currently pending patent applications will be issued in 2006. The Company's oldest patents will begin to expire in 2009.

See "Item 1A. Risk Factors" for a discussion of risks related to our intellectual property and proprietary rights.

Competition

Within each of its targeted markets and product applications, Nanophase faces current and potential competition from many advanced materials and chemical companies, suppliers of traditional materials and the in-house capabilities of several of its current and potential customers. In many markets, the Company's competitors are larger and more diversified than the Company, although management believes its materials and related technologies are superior to those of its competitors in terms of their ability to be readily engineered to meet specific performance requirements. With respect to traditional suppliers, however, the Company competes against lower priced traditional materials where the benefits

of using nanomaterials do not always outweigh their typically higher costs. With respect to larger producers of nanomaterials, while many of these producers do not currently offer competitive products, these companies have greater financial and technical resources, larger research and development staffs and greater manufacturing and marketing capabilities and could soon begin to compete directly against Nanophase. In addition, the number of development-stage companies involved in nanocrystalline materials continues to grow on a global basis, posing significant and increasing competitive risks. Many of these companies are associated with university or national laboratories and use chemical and physical methods to produce nanocrystalline materials. Management believes that most of these companies are engaged primarily in funded research and is not aware that any of them have commercial production capabilities; however, they may represent competitive risks in the future. Some development stage companies, especially in other countries, receive significant local government assistance. Management anticipates that foreign competition may play a greater role in the nanomaterials arena in the future.

Governmental Regulations

The manufacture and use of certain of the products that contain the Company's nanocrystalline materials are subject to governmental regulations. As a result, the Company is required to adhere to the current Good Manufacturing Practices (cGMP) requirements of the U.S. Food and Drug Administration ("FDA") and similar regulations that include testing, control and documentation requirements enforced by periodic inspections.

In addition, the Company's facilities and all of its operations are subject to the plant and laboratory safety requirements of various environmental and occupational safety and health laws. To date, other than creating additional expense due to their reach and complexity, those regulations have not materially restricted or impeded operations.

Employees

On December 31, 2005, the Company had a total of 53 full-time employees, 12 of whom hold advanced degrees. Nanophase has no collective bargaining arrangements.

Backlog

Nanophase does not believe that a backlog as of any particular date is indicative of future results. The Company's sales are made primarily pursuant to purchase orders for delivery of nanomaterials. Nanophase has some agreements that give customers the right to purchase a specific quantity of nanomaterials during a specified time period. These agreements, however, often do not obligate the customers either to purchase any particular quantity of such nanomaterials at all, or in the case where an obligation exists, the risk to the customer for not purchasing nanomaterials is the loss of exclusivity. The quantity actually purchased by the customer, as well as the shipment schedules, are frequently revised during the agreement term to reflect changes in the customer's needs. The Company does not believe that such agreements are meaningful for determining backlog amounts.

Business Segment and Geographical Information

See Note 16 to the Financial Statements for additional information.

Key Customers

A limited number of key customers account for a substantial portion of the Company's commercial revenue. In particular, revenue from BASF, RHEM and CIK constituted approximately 65.8%, 12.4% and 4.5%, respectively, of the Company's 2005 total revenue. The Company's customers are significantly larger than the Company and are able to exert a high degree of influence over the

Company. While the Company's agreements with these three customers are long-term agreements, they may be terminated by the customer with reasonable notice and do not provide any guarantees that these customers will continue to buy the Company's products. The loss of one of these key customers or the failure to attract new customers could have a material adverse effect on the Company's business, results of operations and financial condition. See Item 1A. Risk factors for additional discussion.

Forward-Looking Statements

Nanophase wants to provide investors with more meaningful and useful information. As a result, this Annual Report on Form 10-K (the "Form 10-K") contains and incorporates by reference certain "forward-looking statements", as defined in Section 21E of the Securities Exchange Act of 1934, as amended. These statements reflect the Company's current expectations of the future results of its operations, performance and achievements. Forward-looking statements are covered under the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. The Company has tried, wherever possible, to identify these statements by using words such as "anticipates", "believes", "estimates", "expects", "plans", "intends" and similar expressions. These statements 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 2006 and beyond to differ materially from those expressed in, or implied by, such statements. These risks, uncertainties and factors include, without limitation: a decision by a customer to cancel a purchase order or supply agreement in light of the Company's dependence on a limited number of key customers; uncertain demand for, and acceptance of, the Company's nanocrystalline materials; the Company's 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" below. Readers of this Annual Report on Form 10-K 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.

Investor Information

The Company is subject to the informational requirements of the Securities Exchange Act of 1934 (the Exchange Act) and, accordingly, files periodic reports, proxy statements and other information with the Securities and Exchange Commission (the SEC). Such reports, proxy statements and other information may be obtained by visiting the Public Reference Room of the SEC at 450 Fifth Street, NW, Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site (<http://www.sec.gov>) that contains reports, proxy and information statements and other information regarding issuers that file electronically.

Financial and other information may also be accessed at the Company's web site. The address is www.nanophase.com. The Company makes available, free of charge, copies of its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after filing such material electronically with, or otherwise furnishing it to, the SEC, and intends to make all such reports and amendments to reports available free of charge on its web site.

Item 1A. Risk Factors

The following risks, uncertainties, and other factors could have a material adverse effect on our business, financial condition, operating results and growth prospects.

We have a limited operating history and may not be able to address difficulties encountered by early stage companies in new and rapidly evolving markets.

We have only a limited operating history. We were formed in November 1989 and began our commercial nanocrystalline materials operations in January 1997. We have not yet generated a significant amount of revenue from our nanocrystalline materials operations. Because of our limited operating history and the early stage of development of our rapidly evolving market, we have limited insight into trends that may emerge and adversely affect our business and cannot be certain that our business strategy will be successful or that it will successfully address these risks. In addition, our efforts to address any of these risks may distract personnel or divert resources from other more important initiatives, such as attracting and retaining customers and responding to competitive market conditions.

We have a history of losses that may continue in the future.

We have incurred net losses in each year since our inception with net losses of \$5.83 million in 2003, \$6.45 million in 2004 and \$5.38 million in 2005. As of December 31, 2005, we had an accumulated deficit of approximately \$57.57 million and presently expect to continue to incur losses on an annual basis through at least the end of 2006. We believe that our business depends, among other things, on our ability to significantly increase revenue. If revenue fails to grow at anticipated rates or if operating expenses increase without a commensurate increase in revenue, or if we fail to adjust operating expense levels accordingly, then the imbalance between revenue and operating expenses will negatively impact our cash balances and our ability to achieve profitability in future periods.

We depend on a small number of customers for a high percentage of our sales, and the loss of orders from a significant customer could cause a decline in revenue and/or increases in the level of losses incurred.

Sales to our customers are executed pursuant to purchase orders and annual supply contracts; however, customers can cease doing business with us at any time with limited advance notice. We expect a significant portion of our future sales to remain concentrated within a limited number of strategic customers. We may not be able to retain our strategic customers, such customers may cancel or reschedule orders, or in the event of canceled orders, such orders may not be replaced by other sales or by sales that are on as favorable terms. In addition, sales to any particular customer may fluctuate significantly from quarter to quarter, which could affect our ability to achieve anticipated revenues on a quarterly basis.

Revenue from BASF Corporation, Rohm and Haas Electronic Materials CMP Inc. (formerly known as "Rodel") and C.I. Kasei, a division of Itochu Corporation, accounted for approximately 83% of total revenue for the year ended December 31, 2005, and revenue from the same three customers accounted for approximately 89% of total revenue in 2004. For the years ended December 31, 2005 and 2004, BASF accounted for 66% and 70% of our total revenue, respectively. If we were to lose, or receive significantly decreased orders from, any of these three customers, then our results of operations would be materially harmed. While our agreements with our two largest customers are long-term agreements, they may be terminated by the customer with reasonable notice and do not provide any guarantees that these customers will continue to buy our products. In addition, while our agreements with our two largest customers contain minimum order requirements, the only repercussion under the agreements for missing the minimum order requirement is that we would be freed from the exclusivity obligations under these contracts.

We have been consistently expanding both our marketing and business development efforts and our production efficiency in order to address the issues of our dependence upon a limited amount of customers, enhancement of gross profit and operating cash flows, and the achievement of profitability. We currently have customers that may grow to the point where they generate significant revenues and

margins as relationships expand. Given the special nature of our products, and the fact that markets for them are not yet fully developed, it is difficult to accurately predict when additional large customers will materialize. Going forward, the Company's margins, as a percentage of revenue, will be dependent upon revenue mix, revenue volume and the Company's ability to continue to cut costs. The extent of the growth in revenue volume and the related gross profit that this revenue generates, will be the main drivers in generating positive operating cash flows and, ultimately, net income.

Any downturn in the markets served by us would harm our business.

A majority of our products are incorporated into products such as sunscreens, polishing slurries, personal care, and to a lesser extent, medical diagnostics, abrasion-resistant coatings for flooring, and other products. These markets have from time to time experienced cyclical, depressed business conditions, often in connection with, or in anticipation of, a decline in general economic conditions. These industry downturns have resulted in reduced product demand and declining average selling prices. Our business would be harmed by any future downturns in the markets that we serve.

Our products often have long adoption cycles, which could make it difficult to achieve market acceptance and makes it difficult to forecast revenues.

Due to their often novel characteristics and the unfamiliarity with them that exists in the marketplace, our nanocrystalline materials often require longer adoption cycles than existing materials technologies. Our nanomaterials have to receive appropriate attention within any potential customer's organization, then they must be tested to prove a performance advantage over existing materials, typically on a systems-cost basis. Once we have proven initial commercial viability, pilot scale production runs must be completed by the customer, followed by further testing. Once production-level commercial viability is established, then our nanomaterials can be introduced, often to a downstream marketplace that needs to be familiarized with them. If we are unable to convince our potential customers of the performance advantages and economic value of our nanocrystalline materials over existing and competing materials and technologies, we will be unable to generate significant sales. Our long adoption cycle makes it difficult to predict when sales will occur.

We depend on collaborative development relationships with our customers and do not have a substantial direct sales force or an established distribution network apart from the distribution networks of our strategic partners. If we are unable to initiate or sustain such collaborative relationships or if the terms of these relationships limit the distribution of our products or if our strategic partners are unable to distribute our products efficiently, then we may be unable to independently develop, manufacture or market our current and future nanocrystalline materials or applications.

We have established, and will continue to pursue, strategic relationships with many of our customers and do not have a substantial direct sales force or an established distribution network (other than distribution arrangements for research samples). Through these relationships, we seek to develop new applications for our nanocrystalline materials and share development and manufacturing resources. We also seek to coordinate the development, manufacture and marketing of our nanocrystalline products. Future success will depend, in part, on our continued relationships with these customers and our ability to enter into similar strategic relationships with other customers. Our customers may not continue in these collaborative development relationships, may not devote sufficient resources to the development or sale of our materials or may enter into strategic development relationships with our competitors. These customers may also require a share of control of these collaborative programs. Some of our agreements with these customers limit our ability to license our technology to others and/or limit our ability to engage in certain product development or marketing activities. These relationships generally can be terminated unilaterally by customers.

Additionally and except for our research quantities distribution agreement with Alfa Aesar, these

customers generally require exclusive distribution arrangements within the field of application covered by our agreement with these customers, and the very nature of these strategic relationships limits the distribution of our products to the distribution networks available to our strategic relationship partners. In addition, the development agreements with some of our larger customers contain provisions that require us to license our intellectual property to these customers on disadvantaged terms and/or transfer equipment to these customers in the event that we materially breach these agreements or fail to satisfy certain financial covenants. For example, see “Risk Factors—We may need to raise additional capital in the future.”

If we are unable to initiate or sustain such collaborative relationships or if the terms of these relationships materially limit our access to distribution channels for our products, then we may be unable to independently develop, manufacture or market our current and future nanocrystalline materials or applications.

If commodity metal prices increased at such a rate that we are unable to recover lost margins on a timely basis or that our products became uncompetitive in their current marketplaces, our financial and liquidity position and results of operations would be substantially harmed.

Many of our significant raw materials come from commodity metal markets that may be subject to rapid price increases. While we generally pass commodity price increases on to our customers, it is possible that, given our limited customer base and the limited control we have over it, commodity metal prices could increase at such a rate that could hinder our ability to recover lost margins from our customers on a timely basis. It is also possible that such drastic cost increases could render some of our materials uncompetitive in their current marketplaces when considered relative to other materials on a cost benefit basis. If either of these potential results occurred, our financial and liquidity position and results of operations would be substantially harmed.

If a catastrophe strikes either of our manufacturing facilities or if we were to lose our lease for either facility due to non-renewal or other unforeseen events, we may be unable to manufacture our materials to meet customers' demands.

Our manufacturing facilities are located in Romeoville and Burr Ridge, Illinois. These facilities and some of our manufacturing and testing equipment would be difficult to replace in a timely manner. Therefore, any material disruption at one of our facilities due to a natural or man-made disaster or a loss of lease due to non-renewal or other unforeseen events could have a material adverse effect on our ability to manufacture products to meet customers' demands. While we maintain customary property insurance, this insurance may not adequately compensate us for all losses that we may incur and would not compensate us for any interruption in our business.

If we are unable to expand our production capabilities to meet unexpected demand, we may be unable to manage our growth and our business would suffer.

Our success will depend, in part, on our ability to manufacture nanocrystalline materials in significant quantities, with consistent quality and in an efficient and timely manner. We expect to continue to expand our current facilities or obtain additional facilities in the future in order to respond to unexpected demand for existing materials or for new materials that we do not currently make in quantity. Such unplanned demand, if it resulted in rapid expansion, could create a situation where growth could become difficult to manage, which could cause us to lose potential revenue.

Protection of our intellectual property is limited and uncertain.

Our intellectual property is important to our business. We seek to protect our intellectual property through patent, trademark, trade secret protection and confidentiality or license agreements with our

employees, customers, suppliers and others. Our means of protecting our intellectual property rights in the United States or abroad may not be adequate and others, including our competitors, may use our proprietary technology without our consent. We may not receive the necessary patent protection for any applications pending with the U.S. Patent and Trademark Office (“USPTO”) and any of the patents that we currently own or license may not be sufficient to keep competitors from using our materials or processes. In addition, patents that we currently own or license may not be held valid if subsequently challenged by others and others may claim rights in the patents and other proprietary technology that we own or license. Additionally, others may have already developed or may subsequently develop similar products or technologies without violating any of our proprietary rights. If we fail to obtain patent protection or preserve our trade secrets, we may be unable to effectively compete against others offering similar products and services. In addition, if we fail to operate without infringing the proprietary rights of others or lose any license to technology that we currently have or will acquire in the future, we may be unable to continue making the products that we currently make.

Moreover, at times, attempts may be made to challenge the prior issuance of our patents. For example, the USPTO has granted a third-party request for re-examination with respect to one patent relating to one of our nanoparticle manufacturing processes. On September 7, 2005, our representatives conducted an interview with the Examiner assigned to the re-examination at the USPTO, resulting in the Examiner preparing an interview summary indicating that the Examiner agreed that all the issued claims were patentable. However, prior to the USPTO issuing a formal notice confirming patentability, the same third party filed a second request for re-examination of the patent (which second request, the USPTO has since denied). Nonetheless, a second interview was conducted, resulting in an amendment to all patent claims. While we will continue to vigorously defend our patent position, we may not be successful in maintaining the scope of the claims of this patent during re-examination. If our patent claims are narrowed substantially by the USPTO, the patent coverage afforded our nanoparticle manufacturing process could be impaired. While we would not expect such impairment to affect the value of our manufacturing trade secrets that have not been disclosed in the patent, it could impede the extent of our legal protection of the invention that is subject to this patent and potentially harm our business and operating results.

Furthermore, litigation may be necessary to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others, or to defend against claims of infringement or invalidity. Such litigation could result in substantial costs and diversion of resources and could harm our business, operating results and financial condition. In addition, if others assert that our technology infringes their intellectual property rights, resolving the dispute could divert our management team and financial resources.

In the future, we may license certain of our intellectual property, such as trademarks or copyrighted material, to third parties. While we would attempt to ensure that any licensees maintain the quality and value of our brand, these licenses might diminish this quality and value.

We may be subject to claims that one or more of the business methods used by us infringe upon patents held by others. The defense of any claims of infringement made against us by third parties could involve significant legal costs and require our management to divert time and other resources from our business operations. Either of these consequences of an infringement claim could have a material adverse effect on our operating results. If we are unsuccessful in defending any claims of infringement, we may be forced to obtain licenses or pay royalties to continue to use our technology. We may not be able to obtain any necessary licenses on commercially reasonable terms or at all. If we fail to obtain necessary licenses or other rights, or if these licenses are costly, our operating results may suffer either from reductions in revenue through our inability to serve clients or from increases in costs to license third-party technology.

Our industry is experiencing rapid changes in technology. If we are unable to keep pace with these

changes, our business will not grow.

Rapid changes have occurred, and are likely to continue to occur, in the development of advanced materials and processes. Our success will depend, in large part, upon our ability to keep pace with advanced materials technologies, industry standards and market trends and to develop and introduce new and improved products on a timely basis. We expect to commit substantial resources to develop our technologies and product applications and, in the future, to expand our commercial manufacturing capacity as volume grows. Our development efforts may be rendered obsolete by the research efforts and technological advances of others and other advanced materials may prove more advantageous than those we produce.

Our market is highly competitive, and if we are unable to compete effectively, then our business will not grow.

The advanced materials industry is new, rapidly evolving and intensely competitive, and we expect competition to intensify in the future. The market for materials having the characteristics and potential uses of our nanocrystalline materials is the subject of intensive research and development efforts by both governmental entities and private enterprises around the world. We believe that the level of competition will increase further as more product applications with significant commercial potential are developed. The nanocrystalline product applications that we are developing will compete directly with products incorporating both conventional and advanced materials and technologies. While we are not currently aware of the existence of commercially available competitive products with the same attributes as those we offer, other companies may develop and introduce new or competitive products. Our competitors may succeed in developing or marketing materials, technologies and better or less expensive products than the ones we offer. In addition, many of our potential competitors have substantially greater financial and technical resources, and greater manufacturing and marketing capabilities than we do. If we fail to improve our current and potential nanocrystalline product applications at an acceptable price, or otherwise compete with producers of conventional materials, we will lose market share and revenue to our competitors.

We may need to raise additional capital in the future. If we are unable to obtain adequate funds, we may be required to delay, scale-back or eliminate some of our manufacturing and marketing operations or we may need to obtain funds through arrangements on less favorable terms or we may be required to transfer equipment to our largest customer.

We expect to expend significant resources on research, development and product testing, and in expanding current capacity or capability for new business. In addition, we may incur significant costs in preparing, filing, prosecuting, maintaining and enforcing our patents and other proprietary rights. If necessary, we may seek funding through public or private financing and through contracts with government or other companies. Additional financing may not be available on acceptable terms or at all. If we are unable to obtain adequate funds, we may be required to delay, scale-back or eliminate some of our manufacturing and marketing operations or we may need to obtain funds through arrangements on less favorable terms. If we obtain funding on unfavorable terms, we may be required to relinquish rights to some of our intellectual property.

To raise additional funds in the future, we would likely sell our equity or debt securities or enter into loan agreements. To the extent that we issue debt securities or enter into loan agreements, we may become subject to financial, operational and other covenants that we must observe. In the event that we were to breach any of these covenants, then the amounts due under such loans or debt securities could become immediately payable by us, which could significantly harm us. To the extent that we sell additional shares of our equity securities, our stockholders may face economic dilution and dilution of their percentage of ownership.

We currently have a supply agreement with BASF that contains provisions which could potentially result in a mandatory license of technology and sale of production equipment to BASF providing capacity sufficient to meet BASF's production needs. The license and related sale would be "triggered" only in the event that we breach certain of our obligations under the supply agreement or one of the following occurs:

- our earnings for a twelve month period ending with our most recently published quarterly financial statements are less than zero and our cash, cash equivalents and investments are less than \$2,000,000, or
- the acceleration of any debt maturity having a principal amount of more than \$10,000,000, or we become insolvent as defined in the supply agreement.

In the event of a triggering event where we are required to sell to BASF production equipment providing capacity sufficient to meet BASF's production needs, the equipment would be sold at 115% of the equipment's net book value.

We believe that we have sufficient cash balances to avoid the first triggering event through 2006. If a triggering event were to occur and BASF elected to proceed with the license and related sale mentioned above, we would lose both significant revenue and the ability to generate significant revenue to replace that which was lost in the near term. Replacement of necessary equipment that would be purchased and removed by BASF pursuant to this triggering event could take six months to a year. Any additional capital outlays required to rebuild capacity would probably be greater than the proceeds from the purchase of the assets pursuant to our agreement with BASF. This shortfall might put us in a position where it would be difficult to secure additional funding given what would then be an already tenuous cash position. Such an event would also result in the loss of many of our key staff and line employees due to economic realities. We believe that our employees are a critical component of our success and would be difficult to quickly replace and train. Given the occurrence of such an event, we might not be able to hire and retrain skilled employees given the stigma relating to such an event and its impact on us. We might elect to effectively reduce our size and staffing to a point where we could remain a going concern in the near term.

We depend on key personnel, and their unplanned departure could harm our business.

Our success will depend, in large part, upon our ability to attract and retain highly qualified research and development, management, manufacturing, marketing and sales personnel on favorable terms. Due to the specialized nature of our business, we may have difficulty locating, hiring and retaining qualified personnel on favorable terms. If we were to lose the services of any of our key executive officers or other key personnel, or if we are unable to attract and retain other skilled and experienced personnel on acceptable terms in the future, or if we are unable to implement a succession plan to prepare qualified individuals to assume key roles upon any loss of our key personnel, then our business, results of operations and financial condition would be materially harmed. In addition, we do not currently have "key-man" life insurance policies covering all of our executive officers or key employees, nor do we presently have any plans to purchase such policies.

We face potential product liability risks which could result in significant costs that exceed our insurance coverage, damage our reputation and harm our business.

We may be subject to product liability claims in the event that any of our nanocrystalline product applications are alleged to be defective or cause harmful effects to humans or physical environments. Because our nanocrystalline materials are used in other companies' products, to the extent our customers become subject to suits relating to their products, such as cosmetic, skin-care and personal-care products, these claims may also be asserted against us. We may incur significant costs including payment of

significant damages, in defending or settling product liability claims. We currently maintain insurance coverage in the amount of \$10 million for product liability claims, which may prove not to be sufficient. Even if a suit is without merit and regardless of the outcome, claims can divert management time and attention, injure our reputation and adversely affect demand for our nanocrystalline materials.

We are subject to governmental regulations. The costs of compliance and liability for noncompliance with governmental regulations could have a material adverse effect on our business, results of operations and financial condition.

Current and future laws and regulations may require us to make substantial expenditures for preventive or remedial action. Our operations, business or assets may be materially and adversely affected by governmental interpretation and enforcement of current or future environmental, health and safety laws and regulations. In addition, our coating operations pose a risk of accidental contamination or injury. The damages in the event of an accident or the costs to prevent or remediate a related event could exceed both the amount of our liability insurance and our resources or otherwise have a material adverse effect on our business, results of operations and financial condition.

In addition, both of our facilities and all of our operations are subject to the plant and laboratory safety requirements of various occupational safety and health laws. We believe we have complied in all material respects with regard to governmental regulations applicable to us. However, we may have to incur significant costs in defending or settling future claims of alleged violations of governmental regulations and these regulations may materially restrict or impede our operations in the future. In addition, our efforts to comply with or contest any regulatory actions may distract personnel or divert resources from other more important initiatives.

The manufacture and use of certain products that contain our nanocrystalline materials are subject to extensive governmental regulation, including regulations promulgated by the U.S. Food and Drug Administration, the U.S. Environmental Protection Agency and the U.S. Occupational Safety and Health Administration. As a result, we are required to adhere to the requirements of the regulations of governmental authorities in the United States and other countries. These regulations could increase our cost of doing business and may render some potential markets prohibitively expensive.

We have implemented anti-takeover provisions which could discourage or prevent a takeover, even if an acquisition could be beneficial to our stockholders.

In October 1998, we entered into a Rights Agreement, commonly referred to as a “poison pill.” The provisions of this agreement and some of the provisions of our certificate of incorporation, our bylaws and Delaware law could, together or separately:

- discourage potential acquisition proposals;
- delay or prevent a change in control; and
- limit the price that investors might be willing to pay in the future for shares of our common stock.

In particular, our board of directors is authorized to issue up to 24,088 shares of preferred stock (less any outstanding shares of preferred stock) with rights and privileges that might be senior to our common stock, without the consent of the holders of the common stock, including up to 2,500 shares of Series A Junior Participating Preferred Stock issuable under the 1998 Rights Agreement.

In addition, Section 203 of the Delaware General Corporations Law relating to business combinations with related stockholders and the terms of our stock option plans relating to changes of

control may discourage, delay or prevent a change in control of our company.

Future sales of our common stock by existing stockholders could negatively affect the market price of our stock and make it more difficult for us to sell stock in the future.

Sales of our common stock in the public market, or the perception that such sales could occur, could result in a decline in the market price of our common stock and make it more difficult for us to complete future equity financings. A substantial number of shares of our common stock and shares of common stock subject to outstanding warrants and options may be resold pursuant to currently effective registration statements. As of March 1, 2006, there are:

- 15,828,905 shares of common stock that have been issued in registered offerings, upon the exercise of options under our equity incentive plan or in private placements and are freely tradable in the public markets,
- 1,476,606 shares of common stock that may be issued on the exercise of stock options outstanding and exercisable under our equity incentive plan;
- 906,002 shares of common stock that were issued pursuant to our September 8, 2003 private placement and the related warrant which was exercised on September 2, 2004. The resale of these shares has been registered pursuant to a Registration Statement on Form S-3 which was declared effective by the Securities and Exchange Commission on August 13, 2004; and
- 1,256,281 shares of common stock that were issued pursuant to our March 23, 2004 private placement and may be registered for resale after March 23, 2006 pursuant the terms of the Registration Rights Agreement executed in connection with this private placement.

We cannot estimate the number of shares of common stock that may actually be resold in the public market because this will depend on the market price for our common stock, the individual circumstances of the sellers, and other factors. If stockholders sell large portions of their holdings in a relatively short time, for liquidity or other reasons, the market price of our common stock could decline significantly.

Bradford T. Whitmore has significant influence on all matters requiring stockholder approval because he beneficially owns a large percentage of our common stock, and he may vote the common stock in ways with which our other stockholders disagree.

As of March 1, 2006, Bradford T. Whitmore, together with his affiliates, Grace Brothers, Ltd. and Grace Investments, Ltd., beneficially owned approximately 19.8% of the outstanding shares of our common stock. As a result, he has significant influence on matters submitted to our stockholders for approval, including proposals regarding:

- any merger, consolidation or sale of all or substantially all of our assets;
- the election of members of our board of directors; and
- any amendment to our certificate of incorporation.

The ownership position of Mr. Whitmore could delay, deter or prevent a change of control or adversely affect the price that investors might be willing to pay in the future for shares of our common

stock. Mr. Whitmore's interests may be significantly different from the interests of our other stockholders and he may vote the common stock he beneficially owns in ways with which our other stockholders disagree. Investors in the Company should also note that R. Janet Whitmore, one of our directors, is the sister of Mr. Whitmore.

We have been involved in litigation. If we are involved in similar litigation in the future, the expense of defending such litigation and the potential costs of judgments against us and the costs of maintaining insurance coverage could have a material adverse effect on our financial performance.

We have been involved in three securities class action lawsuits, one of which was a consolidation of several related lawsuits. While all of these lawsuits have been settled and dismissed with all settlements funded by our directors and officers liability insurance, we may be the target of additional securities lawsuits in the future. If we are involved in similar litigation in the future, the expense of defending such litigation, the potential costs of judgments against us, the costs of maintaining insurance coverage and the diversion of management's attention could have a material adverse effect on our financial performance.

Our stock price is volatile.

The stock markets in general, and the stock prices of technology-based companies in particular, have experienced extreme volatility that often has been unrelated to the operating performance of any specific public company. The market price of our common stock has fluctuated in the past and is likely to fluctuate in the future as well. Our future financial performance and stock price may be subject to significant volatility, particularly on a quarterly basis. Shortfalls in our revenues in any given period relative to the levels expected by investors could immediately, significantly and adversely affect the trading price of our common stock.

Dilutive Effect of Private Placements

On September 8, 2003 we sold 453,001 shares of our common stock to Grace Brothers, Ltd. at a purchase price of \$4.415 per share together with a warrant to purchase a like number of shares of common stock during the next twelve months also at a price of \$4.415 per share. This warrant was exercised on September 2, 2004 to acquire 453,001 newly issued shares of common stock. The share price for the common stock was determined based on the fifteen-day market closing average for our stock ending September 5, 2003. On September 8, 2003 and September 2, 2004 the closing sale price of our common stock as reported on NASDAQ, was \$5.50 and \$5.49 respectively, per share. On March 23, 2004 we sold 1,256,281 shares of our common stock to Altana at a purchase price of \$7.96 per share. On March 23, 2004 the closing sale price of our common stock, as reported on NASDAQ, was \$8.26 per share. Each of these issuances of stock at below the then-current market price had a dilutive effect on existing common stockholders.

We have never paid dividends.

We currently intend to retain earnings, if any, to support our growth strategy. We do not anticipate paying dividends on our stock in the foreseeable future.

Item 1B. Unresolved Staff Letters

None.

Item 2. Properties

Nanophase operates a 36,000 square-foot production, research and headquarters facility in Romeoville, Illinois and a 20,000 square-foot production facility in Burr Ridge, Illinois. Both locations are in Chicago suburbs. The Company also leases a 6,000 square-foot offsite warehouse in the same vicinity.

The Company's manufacturing operations in Burr Ridge are certified under ISO 9001:2000, and the Company's management believes that its manufacturing operations are within the current Good Manufacturing Practices (cGMP) requirements of the FDA for products that require such compliance. The Company's facilities are also ISO 14001:2004 certified which is the international standard for environmental management. The Burr Ridge facility has a quality control laboratory designed for the dual purposes of validating operations to cGMP and ISO standards and production process control. This laboratory is equipped to handle many routine analytical and in-process techniques the Company currently requires.

The Romeoville facility houses the Company's headquarters, advanced engineering, manufacturing (nanoparticle coating, nanoparticle dispersion, and pilot-scale manufacturing) and three research and development laboratories, and was used for additional commercial manufacturing space in 2005. All Romeoville manufacturing processes are certified to ISO 9001:2000 and ISO 14001:2004, and the Company's management believes that the nanoparticle coating used for sunscreens and personal care is in compliance with the cGMP requirements of the FDA.

Nanophase leases its Romeoville facility under an agreement. On October 18, 2005 Nanophase entered into a Lease Amendment amending its current lease for its facilities in Romeoville, Illinois, which, among other things, extended the term of such lease through December 31, 2015 (with the option to extend the term for two additional five year periods) and granted Nanophase an option to purchase such facility in certain instances. Nanophase also leases its Burr Ridge facility. The Company renewed its Burr Ridge facility lease in September 2004. The initial term of the lease expires in September 2007, but the Company has options to extend the lease for up to three additional one-year terms.

Management believes that the Company's leased facilities provide sufficient capacity to fulfill current known customer demand as well as additional space to enable expansion of key production processes. Management also believes that the Company's capital expenditures made in 2005 will support currently anticipated demand from existing customers. The Company's actual future capacity requirements will depend on many factors, including new and potential customer acceptance of the Company's current and potential nanocrystalline materials and product applications, unknown and currently unplanned growth from existing customers, continued progress in the Company's research and development activities and product testing programs and the magnitude of these activities and programs.

Item 3. Legal Proceedings

None.

Item 4. Submission of Matters to a Vote of Security Holders

No matters were submitted to a vote of the Company's security holders during the fourth quarter of 2005.

PART II

Item 5. Market for Registrant's Common Equity and Related Stockholder Matters

The Company's common stock is traded on the Nasdaq National Market under the symbol NANX. The following table sets forth, for the periods indicated, the range of high and low sale prices for the common stock on the Nasdaq National Market:

	<u>High</u>	<u>Low</u>
Fiscal year ended December 31, 2005:		
First Quarter	\$ 9.20	\$ 5.32
Second Quarter	7.07	4.75
Third Quarter	7.65	5.50
Fourth Quarter	6.96	5.05
Fiscal year ended December 31, 2004:		
First Quarter	\$ 14.95	\$ 6.86
Second Quarter	11.65	5.79
Third Quarter	7.89	4.30
Fourth Quarter	9.60	4.90

On March 1, 2006, the last reported sale price of the common stock was \$7.10 per share, and there were approximately 157 holders of record of the common stock.

The Company has never declared or paid any cash dividends on its common stock and does not currently anticipate paying any cash dividends or other distributions on its common stock in the foreseeable future. The Company intends instead to retain any future earnings for reinvestment in its business. Any future determination to pay cash dividends will be at the discretion of the Company's Board of Directors and will be dependent upon the Company's financial condition, results of operations, capital requirements and such other factors deemed relevant by the Board of Directors.

On March 23, 2004, the Company sold, in a private placement to Altana Chemie AG ("Altana"), 1,256,281 shares of common stock at \$7.96 per share and received gross proceeds of \$10.0 million. On January 22, 2004, the Company filed a universal shelf registration statement with the Securities and Exchange Commission to allow Nanophase to offer up to \$15.0 million of Nanophase securities, in the form of common stock or various types of debt securities, in the future. In August 2004, the Company withdrew its universal shelf offering due to unfavorable market conditions and the Company's adequate cash position to cover expected growth through 2006.

On September 8, 2003, the Company secured equity funding through a private placement offering with Grace Brothers, Ltd., its largest investor. The Company issued 453,001 shares of additional common stock at \$4.415 per share and received gross proceeds of \$2.0 million. Grace Brothers, Ltd. also had the right to purchase an additional 453,001 shares for an additional \$2.0 million pursuant to the terms of a warrant issued in such private placement. In accordance with the terms of such private placement, on June 7, 2004, the Company filed a registration statement for such 453,001 shares and the additional 453,001 shares issuable upon exercise of the warrant which registration statement was declared effective on August 13, 2004. On September 2, 2004, Grace Brothers, Ltd. exercised its warrant rights to acquire 453,001 newly issued shares of common stock and the Company received \$2.0 million in gross proceeds.

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 on December 31, 2005, including the 1992 Amended and Restated Stock Option Plan and the 2001 and 2004 Equity Compensation Plan and the 2005 Non-Employee Director Restricted Stock Plan.

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	(b) Weighted Average Exercise Price of Outstanding Options, Warrants, and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))	(d) Total of Securities Reflected in Columns (a) and (c)
Plans Approved by Shareholders	1,740,347(1)	\$ 5.92	709,501(2)	2,449,848
Plans Not Approved by Shareholders	None	\$ -	None	-

- (1) Consists of the 1992 Amended and Restated Stock Option Plan, the 2001 and 2004 Equity Compensation Plan, and shares of authorized but unissued Preferred Stock
- (2) Consists of shares available for future issuance under the 2004 Equity Compensation Plan and the 2005 Non-Employee Director Restricted Stock Plan.

Item 6. Selected Financial Data

The following selected financial data is qualified by reference to, and should be read in conjunction with, the financial statements and related notes thereto appearing elsewhere in this Form 10-K and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations.” The selected financial data set forth below as of, and for, each of the years in the five-year period ended December 31, 2005 have been derived from the audited financial statements of the Company.

	Years Ended December 31,				
	2005	2004	2003	2002	2001
Statement of Operations Data:					
Product revenue	\$6,444,444	\$4,253,478	\$4,880,313	\$5,002,986	\$3,650,914
Other revenue	357,463	954,456	566,348	398,229	404,574
Total revenue	<u>6,801,907</u>	<u>5,207,934</u>	<u>5,446,661</u>	<u>5,401,215</u>	<u>4,055,488</u>
Cost of revenue	5,827,719	5,125,216	5,205,065	5,095,019	4,906,716
Research and development expense	1,934,528	1,929,348	1,906,791	1,572,997	1,601,671
Selling, general and administrative expense	4,422,011	4,361,357	4,095,877	3,854,051	3,798,543
Lease accounting adjustment	279,810	-	-	-	-
Total operating expenses	<u>12,464,068</u>	<u>11,415,921</u>	<u>11,207,733</u>	<u>10,522,067</u>	<u>10,306,930</u>
Loss from operations	(5,662,161)	(6,207,987)	(5,761,072)	(5,120,852)	(6,251,442)
Interest income	295,935	171,582	67,992	152,626	585,782
Interest expense	(50,273)	(74,277)	(109,889)	(125,181)	(33,485)
Other, net	32,888	(306,273)	5,319	6,844	(11,098)
Provision for income taxes	-	(30,000)	(30,000)	(68,674)	(30,000)
Net loss	<u>\$(5,383,611)</u>	<u>\$(6,446,955)</u>	<u>\$(5,827,650)</u>	<u>\$(5,155,237)</u>	<u>\$(5,740,243)</u>
Net loss per share-basic and diluted	<u>\$ (0.30)</u>	<u>\$ (0.37)</u>	<u>\$ (0.38)</u>	<u>\$ (0.35)</u>	<u>\$ (0.42)</u>
Weighted average number of common shares outstanding	<u>17,937,932</u>	<u>17,266,228</u>	<u>15,391,537</u>	<u>14,551,479</u>	<u>13,667,062</u>

	As of December 31,				
	2005	2004	2003	2002	2001
Balance Sheet Data:					
Cash and cash equivalents	\$ 340,860	\$ 475,185	\$ 399,999	\$ 445,684	\$ 582,579
Investments.....	8,168,092	11,155,126	4,562,364	7,062,808	6,842,956
Working capital	9,210,435	11,953,699	5,313,781	7,380,051	7,215,520
Total assets	18,173,344	21,792,295	16,242,819	20,012,970	19,184,388
Long-term obligations	1,265,875	—	263,669	364,563	812,390
Total stockholders' equity	14,920,012	19,982,490	13,719,087	16,832,965	15,643,618

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion and analysis should be read in conjunction with "Item 6. Selected Financial Data," risks discussed in other filings made by the Company with the Securities and Exchange Commission, and the financial statements and related notes thereto appearing elsewhere in this Form 10-K. When used in the following discussions, the words "anticipates," "believes," "estimates," "expects," "plans," "intends" and similar expressions are intended to identify forward-looking statements. Such statements are subject to certain risks, uncertainties and contingencies that could cause actual results, performance or achievements to differ materially from those expressed in, or implied by, such statements. See the "Forward Looking Statements" section in Part I, Item 1.

Overview

Nanophase Technologies is a nanocrystalline materials developer and commercial manufacturer with an integrated family of nanomaterial technologies. Nanophase produces engineered nanomaterials for use in a variety of diverse markets: sunscreens, personal care, abrasion-resistant applications, antimicrobial products and a variety of polishing applications, including semiconductors and optics. The Company targets markets in which it feels practical solutions may be found using nanoengineered products. The Company works closely with leaders in these target markets to identify their material and performance requirements. Newer developed technologies have made certain new products possible and opened potential new markets. With the commercialization of the Company's NanoArc™ synthesis and new dispersion technologies in 2002, and the expansion of these capabilities in 2003 and 2004, Nanophase is focusing on penetrating the chemical-mechanical-planarization ("CMP") and fine polishing markets. CMP is the process of polishing various types of integrated circuits or chips to be used in various commercial electronics applications. Management believes that the Company's inroads in the CMP and fine polishing markets would have been very difficult without the Company being able to produce its materials to exacting specifications verified by in-house and customer-based testing. Management expects growth in end-user (customers of Nanophase's customers) adoption in 2006 and revenue growth to continue in 2006 in both of these areas. Additionally, the Company feels that its exclusive relationship with Altana Chemie ("Altana"), a global ingredients supplier to various coatings industries, will lead to growth in several of its abrasion-resistant applications in the marketplace. Nanophase shipped initial quantities of material to Altana in the second, third and fourth quarters of 2004, and also throughout 2005. Management expects this relationship to continue to develop in 2006. In May of 2005, BASF announced the introduction of a new coated sunscreen material. This material incorporated a new coating developed by Nanophase which, management believes, should help to expand sales in the European and Asian markets beginning in 2006.

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

From its inception in November 1989 through December 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 nanocrystalline materials for commercial sale. The Company was also engaged in the development of commercial applications and formulations and the recruiting of marketing, technical and administrative personnel. Since January 1, 1997, the Company has been engaged in commercial production and sales of its nanocrystalline materials, and the Company no longer considers itself in the development stage. From inception through December 31, 2005, the Company was primarily capitalized through the private offering of approximately \$32.0 million of equity securities prior to its initial public offering, its initial public offering of \$28.8 million of common stock in November 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 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), each net of issuance costs. The Company has incurred cumulative losses of \$57.6 million from inception through December 31, 2005.

Critical Accounting Policies

Nanophase utilizes certain accounting measurements under applicable generally accepted accounting principles that involve the exercise of management's judgment about subjective factors and estimates about the effect of matters which are inherently uncertain. Actual results may differ from these estimates. The following is a summary of those accounting measurements that involve business judgments which we believe are most critical to our reported results of operations and financial condition. Our significant accounting policies are more fully described in Note 2 to our financial statements.

Trade Accounts Receivable. Trade accounts receivable are carried at original invoice amount less an estimate made for doubtful receivables, typically based on a review of all outstanding amounts on a monthly basis. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. Trade accounts receivable are written off when deemed uncollectible. Recoveries of trade accounts receivable previously written off are recorded when received.

Inventory Valuation. Cost is determined on a first-in, first-out basis. Inventory is stated at the lower of cost, maintained on a first in, first out basis, or market. The Company has recorded allowances to reduce inventory relating to excess quantities of certain materials. Write-downs of inventories establish a new cost basis, which is not increased for future increases in market value of inventories or changes in estimated excess quantities. If expected demand were either to unexpectedly accelerate or diminish for materials currently in inventory, this could cause management's estimates to become inaccurate resulting in potential increases in inventory allowances (in the case of diminished demand), reducing gross margins or potential enhancements to gross margins caused by demand for items previously thought to have reduced near-term marketability.

Deferred Other Revenue. In connection with its promissory note to BYK Chemie (see Note 7), the Company recorded \$350,000 of deferred other revenue. The note requires that the Company give BYK Chemie first preference in use of the new equipment commissioned under this note and the Company has also agreed to provide experimental product made using this equipment. The Company's performance and delivery of its commitments under the equipment use obligations are not expected to arise until the equipment is commissioned and, accordingly the Company has not recognized any of the deferred revenue as of December 31, 2005. As a result of a lack of further specificity with regards to the equipment use obligations, the Company intends to recognize the deferred revenue ratably, on a straight-line basis over a period beginning with the expected commissioning of the equipment at some point in the

second or third quarter of the year ended December 31, 2006 and ending on July 30, 2009, the expected date of the Company's final payment under the note.

Asset Retirement Obligations. The Company records the fair value of a liability for an asset retirement obligation which was recognized in the period it was incurred. The associated retirement costs are capitalized as a component of the carrying amount of the long-lived asset and allocated to expense over the useful life of the asset.

Impairment or Disposal of Long-Lived Assets. Reviews are regularly performed to determine whether facts and circumstances exist which indicate that the carrying amount of assets may not be recoverable or that the useful life is shorter than originally estimated. The Company assesses the recoverability of its assets by comparing the projected undiscounted net cash flows associated with the related asset or group of assets over their remaining lives against their respective carrying amounts. Impairment, if any, is based on the excess of the carrying amount over the fair value of those assets. If assets are determined to be recoverable, but the useful lives are shorter than originally estimated, the net book value of the assets is depreciable over the newly determined remaining useful lives.

Revenue Recognition. Product revenue consists of sales of product that are recognized when realized and earned. This occurs when persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable and collectibility is reasonably assured. Other revenue consists of revenue from product development (see RHEM discussion in Note 1), technology license fees and the sale of production equipment that is designed and built by the Company. Such sale of equipment last occurred in the first quarter of 2003. These types of equipment sales are treated as other revenue. This transaction is discussed in further detail below. Technology license fees are recognized when earned pursuant to the contractual arrangement.

Results of Operations

Years Ended December 31, 2005 and 2004

Total revenue increased to \$6,801,907 in 2005, compared to \$5,207,934 in 2004. A substantial majority of the Company's revenue for the year ended December 31, 2005 is from the Company's three largest customers. See Note 15 to the Financial Statements for additional information regarding the revenue the Company derived from these three customers for the year ended December 31, 2005. Product revenue increased to \$6,444,444 in 2005, compared to \$4,253,478 in 2004. The increase in product revenue was primarily attributed to increased sales of sunscreen and personal care materials to BASF, the Company's largest customer, increased sales of CMP materials to Rohm and Haas Electronic Materials CMP, Inc. ("RHEM," formerly known as Rodel, Inc.) and a new customer for application in medical devices in the second quarter of 2005. 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 to begin building in 2006.

Other revenue decreased to \$357,463 in 2005, compared to \$954,456 in 2004. This decrease was primarily attributed to no technology payments being received in 2005, compared to \$600,000 in 2004 from RHEM. These payments from RHEM were part of its \$600,000 commitment in 2004 as described below which was amended for 2005.

In February of 2004, the Company amended its original agreement with RHEM. This amendment allows RHEM to maintain exclusivity based upon it purchasing lower dollar amounts of nanocrystalline materials, while extending the agreement through 2009. This amendment did not require RHEM to purchase any materials from the Company in 2004, but it did require an aggregate of \$600,000 be paid to

Nanophase in four equal quarterly installments in 2004 to support on going efforts in joint slurry product development with RHEM during 2004. This \$600,000 was fully earned in 2004. In October of 2004, the Company amended its original agreement with RHEM a second time. This amendment reduced the minimum purchase requirements necessary to maintain the Company's exclusivity obligations to RHEM by approximately 44% during 2005. The reduction reflects the parties' recognition of the difficulty in precisely estimating the timing of product development and sales in the semiconductor polishing market. Pursuant to the October 2004 amendment, RHEM is now obliged to purchase a guaranteed quantity of material in 2006 to maintain exclusivity; this schedule was agreed upon in accordance with the terms of the Amendment.

The majority of the total revenue generated during the year ended December 31, 2005 was from the Company's largest customers in the healthcare (sunscreens) and CMP markets and its new customer (second largest customer in the second quarter of 2005) for application in medical devices as described above.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue increased to \$5,827,719 in 2005, compared to \$5,125,216 in 2004. The increase in cost of revenue was generally attributed to increased revenue volume somewhat offset by decreases in depreciation and the Company's continued efficiencies in reducing its variable manufacturing costs on nanomaterials. Improvements to gross margins were primarily due to increased revenue volume, favorable product mix and the completion of a series of process improvements that increased PVS reactor output by 38% in conjunction with a re-engineering program that had reduced the expected operational labor cost by 24% on high volume PVS-produced nanomaterials. Nanophase expects to maintain an aggressive schedule for new nanomaterial development, primarily using its NanoArc™ synthesis and dispersion technologies, for targeted applications and new markets throughout 2006. At current revenue levels the Company has generated a modest positive gross margin. The Company's margins have been impeded by not having enough revenue to absorb the manufacturing overhead that is required to work with current customers and the new ones the Company expects to have. Management believes that the current fixed manufacturing cost structure is sufficient to support significantly higher levels of production and resultant product revenue. The extent to which the Company's margins remain positive, as a percentage of total revenue, will be dependent upon revenue mix, revenue volume and the Company's ability to continue to cut costs. As product revenue volume increases, this will result in more of the Company's fixed manufacturing costs being absorbed, leading to increased margins. The Company expects to continue reducing its variable product manufacturing costs in 2006 but may or may not continue to operate at a positive gross margin in 2006, dependent upon the factors discussed above.

Research and development expense, which includes all expenses relating to the technology and advanced engineering groups, primarily consists of costs associated with the Company's development or acquisition of new product applications and coating formulations and the cost of enhancing the Company's manufacturing processes. The May 2005 roll-out of BASF's new sunscreen was an example of this work. In another example, the Company has been and continues to be engaged in research to enhance its ability to disperse its material in a variety of organic and inorganic media for use as coatings and polishing materials. Much of this work has led to new potential products for use by Altana. Now that the Company has demonstrated the capability to produce pilot quantities of mixed-metal oxides in a single crystal phase, the Company does not expect development of further variations on these materials to present material technological challenges. Many of these materials exhibit performance characteristics that can enable them to serve in various catalytic applications. This development has been driven largely by customer demand. Management is now working on several related commercial applications. The Company expects that this technique should not be difficult to scale to large quantity commercial volumes once application viability and firm demand are established. The Company also has an ongoing advanced engineering effort that is primarily focused on the development of new nanomaterials as well as the refinement of existing nanomaterials. The Company is not certain when or if any significant revenue will be generated from the production of the materials described above. Research and development expense

increased to \$1,934,528 in 2005, compared to \$1,929,348 in 2004. This modest increase in research and development expense was mainly attributed to salary expenses. The Company does not expect research and development expense to increase significantly in 2006.

Selling, general and administrative expense increased to \$4,422,011 in 2005, compared to \$4,361,357 in 2004. This modest net increase was primarily attributed to increases in compensation, consulting expenses and audit fees. These increases were partially offset by decreases in directors and officers and business insurance expenses and legal fees.

A lease accounting adjustment of \$279,810 was made in the third quarter of 2005. This charge was due to the Company correcting an error in its prior accounting practices to conform the lease term used in calculating straight-line rent expense with the useful lives used to amortize improvements on leased property. See Note 19 to the Financial Statements for additional information.

Interest income increased to \$295,935 in 2005, compared to \$171,582 in 2004. These increases were primarily due to increased investment yields in 2005, along with an increase of funds available for investment, largely composed of the March 23, 2004 equity investment from Altana, which resulted in net proceeds of approximately \$9.3 million.

Other income increased to \$32,888 in 2005, compared to \$306,273 of other expenses in 2004. This net increase was primarily due to the Company taking a one-time charge in the amount of \$279,000 for accounting and legal costs associated with the withdrawal of the Company's universal shelf registration in August 2004.

Years Ended December 31, 2004 and 2003

Total revenue decreased to \$5,207,934 in 2004, compared to \$5,446,661 in 2003. A substantial majority of the Company's revenue for the year ended December 31, 2004 was from the Company's three largest customers. See Note 15 to the Financial Statements for additional information regarding the revenue the Company derived from these three customers for the year ended December 31, 2004. Product revenue decreased to \$4,253,478 in 2004, compared to \$4,880,313 in 2003. The decrease in product revenue was primarily attributed to decreased sales of CMP materials to Rohm and Haas Electronic Materials CMP, Inc. ("RHEM," formerly known as Rodel, Inc.), the Company's second largest customer in 2004. The decrease was partially offset by increased product sales to the Company's largest customer and to a lesser extent its new customer, Altana Chemie AG. The Company and its largest customer currently have a technology agreement in place to jointly develop the second generation of sunscreen nanomaterials and for other potential personal care applications.

Other revenue increased to \$954,456 in 2004, compared to \$566,348 in 2003. The increase was largely due to revenue in the amount of \$600,000 for the year ended December 31, 2004 in technology development from RHEM. This technology development from RHEM was part of its \$600,000 commitment in 2004 described below. This increase in revenue was offset in part by \$226,450 from the sale of a physical-vapor-synthesis ("PVS") reactor in March of 2003 to C.I. Kasei, the Company's Japanese licensee (and third largest customer in 2004) that was not repeated in 2004. These types of equipment sales occur on occasion (not on a regular basis) and are treated as other revenue.

In February of 2004, the Company amended its original agreement with RHEM. This amendment allowed for RHEM to maintain exclusivity based upon it purchasing lower dollar amounts of nanocrystalline materials, while extending the agreement through 2009. This amendment did not require RHEM to purchase any materials from the Company in 2004, but it did require an aggregate of \$600,000 be paid to Nanophase in four equal quarterly installments in 2004 to support ongoing efforts in joint slurry product development during 2004. This \$600,000 was fully earned in 2004.

In October of 2004, the Company amended its original agreement with RHEM a second time. This amendment reduced the minimum purchase requirements necessary to maintain the Company's exclusivity obligations to RHEM by approximately 44% during 2005. The reduction reflects the parties' recognition of the difficulty in precisely estimating the timing of product development and sales in the semiconductor polishing market.

The majority of the total revenue generated during the year ended December 31, 2004 was from customers and development partners in the healthcare (sunscreens) and CMP markets, including the technology development discussed in the preceding paragraph, and came principally from the Company's current two largest customers described above.

Cost of revenue generally includes costs associated with commercial production and customer development arrangements. Cost of revenue decreased to \$5,125,216 in 2004, compared to \$5,205,065 in 2003. The decrease in cost of revenue was generally attributed to lower product revenue volume, decreased depreciation expense and the Company's continued efficiencies in reducing its variable manufacturing costs on nanomaterials. The decreases were partially offset by increases in healthcare costs and changes in product mix. At 2004 revenue levels, with the contribution from other revenue, the Company generated a modest positive gross margin. The Company's margins were 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.

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. For example, in 2004, the Company was engaged in research to enhance its ability to disperse its material in a variety of organic and inorganic media for use as coatings and polishing materials. Much of this work has led to new potential products for use by Altana. Now that the Company has demonstrated the capability to produce pilot quantities of mixed-metal oxides in a single crystal phase, the Company does not expect development of further variations on these materials to present material technological challenges. Many of these materials exhibit performance characteristics that can enable them to serve in various catalytic applications. This development has been driven largely by customer demand. Management is now working on several related commercial applications. The Company expects that this technique should not be difficult to scale to large quantity commercial volumes once application viability and firm demand are established. The Company also has an ongoing advanced engineering effort that is primarily focused on the development of new nanomaterials as well as the refinement of existing nanomaterials. The Company is not certain when or if any significant revenue will be generated from the production of the materials described above. Research and development expense increased to \$1,929,348 in 2004, compared to \$1,906,791 in 2003. The increases in research and development expense was largely attributed to increased salaries, repairs and maintenance and health insurance expenses. These increases were partially offset by decreased spending in consulting fees relating to the ending of a one-year consulting agreement between the Company and its former Chief Technology Officer in December 2003.

Selling, general and administrative expense increased to \$4,361,357 in 2004, compared to \$4,095,877 in 2003. The net increase was primarily attributed to increases in audit fees, health insurance, investor relations, compensation and travel expenses. These increases were partially offset by decreases in director and officers insurance expense and legal fees.

Interest income increased to \$171,582 in 2004, compared to \$67,992 in 2003. These increases were primarily due to an increase of funds available for investment, largely composed of the March 23, 2004 equity investment from Altana which resulted in net proceeds of approximately \$9.3 million.

Other expenses increased to \$306,273 in 2004, compared to \$5,319 of other income in 2003. The

increases were primarily due to the Company taking a one-time charge in the amount of \$279,000 for accounting and legal costs associated with the withdrawal of the Company's universal shelf registration in August 2004.

Liquidity and Capital Resources

The Company's cash, cash equivalents and investments amounted to \$8,508,952 on December 31, 2005, compared to \$11,630,311 on December 31, 2004. The net cash used in the Company's operating activities was \$4,408,535, \$4,866,797 and \$4,446,093 for the years ended December 31, 2005, 2004 and 2003, respectively. 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 \$2,440,792 for the year ended December 31, 2005 compared to \$7,277,355 of net cash used in 2004 and \$2,001,764 of net cash provided by investing activities for the years ended December 31, 2004 and 2003, respectively. Capital expenditures amounted to \$292,692, \$529,498 and \$220,611 for the years ended December 31, 2005, 2004 and 2003, respectively. During the second quarter in 2005 the Company completed implementation of a PVS process innovation started in late 2003, within the current capital budget, that has increased PVS reactor output by approximately 38% in conjunction with a re-engineering program that had reduced the expected operational labor cost by 24% on high volume PVS-produced nanomaterials. The Company expects that this innovation should result in the need for less future capital as the Company's PVS reactor-produced business grows. Currently, all sunscreen and personal care nanomaterials are manufactured via the PVS process. Net cash provided by financing activities, is primarily due to a loan from BYK-Chemie (See discussion below), the issuance of shares of common stock pursuant to the exercise of options, partially offset by principal payments on debt and capital lease obligations, amounting, in total, to \$1,833,418 for the year ended December 31, 2005. Net cash provided by financing activities for the year ended December 31, 2004 was primarily due to the Company securing financing through an equity investment in March 2004 and, to a lesser extent, by the issuance of shares of common stock pursuant to the exercise of warrants and options, partially offset by principal payments on debt and capital lease obligations, amounting, in total, to \$12,219,318, compared to \$2,398,644 for the same period in 2003.

On November 3, 2005, BYK-Chemie USA, a customer of Nanophase, lent \$1,597,420 to Nanophase pursuant to the terms of a Promissory Note received effective October 27, 2005. The proceeds of the Promissory Note are to be used to buy, install and commission certain equipment which is then to be used for fulfillment of orders by BYK-Chemie USA and other uses. The outstanding principal balance of the Promissory Note is payable in three equal installments on January 30, 2009, April 30, 2009 and December 31, 2009. Interest accrues and is payable on a quarterly basis one year after the equipment referenced above is installed at the rate of 100 basis points over the average daily London Inter-Bank Offered Rate for the preceding quarter. See Note 7 to the Financial Statements for a discussion on the computation of interest relating to this note.

On March 23, 2004, the Company sold, in a private placement to Altana Chemie AG ("Altana"), 1,256,281 shares of common stock at \$7.96 per share and received gross proceeds of \$10.0 million. On January 22, 2004, the Company filed a universal shelf registration statement with the Securities and Exchange Commission to allow Nanophase to offer up to \$15.0 million of Nanophase securities, in the form of common stock or various types of debt securities, in the future. In August 2004, the Company withdrew its universal shelf offering due to unfavorable market conditions and the Company's adequate cash position to cover expected growth through 2006. The Company incurred expenses in 2004 relating to the filing and subsequent withdrawal of its universal shelf offering of approximately \$279,000. On September 8, 2003, the Company secured equity funding through a private placement offering with Grace Brothers, Ltd., its largest investor. The Company issued 453,001 shares of additional common stock at \$4.415 per share and received gross proceeds of \$2.0 million. Grace Brothers, Ltd. also had the right to purchase an additional 453,001 shares for an additional \$2.0 million pursuant to the terms of a warrant

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

The Company's supply agreement with 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 technology and equipment to the Company's largest customer. The Company had approximately \$8.5 million in cash, cash equivalents and investments and debt net of unamortized debt discount of less than \$1.5 million on December 31, 2005. This supply agreement and its covenants are more fully described in Note 15 to the Company's Financial Statements. See "Risk Factors—We may need to raise additional capital in the future".

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. Borrowings against this note amounted to \$200,254 on December 31, 2005. The note bears interest at 8.45% per annum and is collateralized by certain powder coating, packaging, lab and related equipment. In May 2005, an amendment to this promissory note was executed for the purpose of extending the date when any unpaid balance will be due upon demand from June 1, 2005 to June 1, 2007. Management expects this debt to be fully paid during 2006.

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

Should events arise that make it appropriate for the Company to seek additional financing, it should be noted that additional financing may not be available on acceptable terms or at all, and any such additional financing could be dilutive to the Company's stockholders. Such a financing could be necessitated by such things as the loss of existing customers; currently unknown capital requirements in light of the factors described above; new regulatory requirements that are outside the Company's control; the need to meet previously discussed cash requirements to avoid a triggering event; or various other circumstances coming to pass that are currently not anticipated by the Company.

The following table highlights the Company's contractual obligations as of December 31, 2005:

Contractual Obligations	Payments due by period				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Long-term debt obligations	\$1,797,674	\$141,356	\$ 58,898	\$1,597,420	\$ -
Operating Leases	\$7,379,243	288,536	1,033,772	656,400	5,400,535
Unfulfilled Purchase Orders	\$ 454,612	454,612	-	-	-
Totals	<u>\$9,631,529</u>	<u>\$884,504</u>	<u>\$1,092,670</u>	<u>\$2,253,820</u>	<u>\$5,400,535</u>

On December 31, 2005, the Company had a net operating loss carryforward of approximately \$65.9 million for income tax purposes. Because the Company may have experienced "ownership changes" within the meaning of the U.S. Internal Revenue Code in connection with its various prior equity offerings, future utilization of this carryforward may be subject to certain limitations as defined by the Internal Revenue Code. If not utilized, the carryforward expires at various dates between 2006 and 2025. As a result of the annual limitation and uncertainty as to the amount of future taxable income that will be earned prior to the expiration of the carryforward, the Company has concluded that it is likely that some portion of this carryforward will expire before ultimately becoming available to reduce income tax liabilities. On December 31, 2005, the Company also had a foreign tax credit carryforward of \$156,000, which could be used as an offsetting tax credit to reduce U.S. income taxes. The foreign tax credit will expire in 2014, if not utilized before that date.

Item 7A. 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 8. Financial Statements and Supplementary Data

The financial statements and financial statement schedule, with the report of independent auditors, listed in Item 15 are included in this Form 10-K.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

Not applicable.

Item 9A. 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, 2005. 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.

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 December 31, 2005 that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

Management's report

Management's report and the Report of independent registered public accounting firm on internal control over financial reporting are set forth in Part IV, Item 15 of this Form 10-K.

Item 9B. Other Information

None.

PART III

Item 10. Directors and Executive Officers of the Registrant

DIRECTORS

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>
Donald S. Perkins	78	Chairman of the Board of Directors	1998	2006	III
Jerry K. Pearlman	66	Director	1999	2006	III
James A. Henderson	71	Director	2001	2007	I
James A. McClung, Ph.D.	68	Director	2000	2007	I
R. Janet Whitmore	51	Director	2003	2007	I
Richard W. Siegel, Ph.D.	68	Director	1989	2008	II
Joseph E. Cross	58	Director, President and Chief Executive Officer	1998	2008	II

Mr. Henderson has served as a director of the Company since 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 A.B. in public and international affairs from Princeton University and an M.B.A. from Harvard Business School. Mr. Henderson currently serves as a member of the Board of Directors of ATT Inc., International Paper and Ryerson Inc. He serves as Chairman of the Board of the Culver Education Foundation and is a past Chair of the Executive Committee of the Princeton University Board of trustees.

Mr. McClung has served as a director of the Company since February 2000. He retired as 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 experience 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 Board member of Alticor (Amway), Beaulieu of America Corporation, NCCI Holdings and Hu-Friedy. 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 Thunderbird: The Garvin School of International Management 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.

Ms. Whitmore joined the board in November 2003. She is currently a director of Silverleaf Resorts, Inc., where she serves as Chairman of the Compensation Committee and as a member of the Audit Committee. She is a former director of Epoch Biosciences, a supplier of proprietary products used to accelerate genomic analysis. Ms. Whitmore is Founder of Benton Consulting, LLC, which specializes in business development and processes. From 1976 through 1999, Ms. Whitmore held numerous engineering and finance positions at Mobil Corporation, including Mobil's Chief Financial Analyst and Controller of Mobil's Global Petrochemicals Division. Ms. Whitmore holds a Bachelor of Science degree in Chemical Engineering from Purdue University and an M.B.A. from Lewis 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 served as a consultant to the Company from 1990 to 2002 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. During 2003-2004 he was a visiting professor in Japan on a RIKEN Eminent Scientist Award. 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. He currently serves on the Nanotechnology Technical Advisory Group to the U.S. President's Council of Advisors on Science and Technology. 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 and La Salle U.S. Realty Income and Growth Funds II and III. 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 Protector of the Thyssen-Bornemisza Continuity Trust. He has served as a Trustee of The Ford Foundation and The Brookings Institution and as a member of The Business Council. Mr. Perkins is a life trustee and was Vice Chairman of the Board of Trustees of Northwestern University. He co-chaired Campaign/*Northwestern*, a university-wide effort which has raised more than \$1.5 billion. He is also a member of the Civic Committee of The Commercial Club of Chicago, RoundTable Healthcare Partners L.P. Advisory Boards, Northwestern University's School of Communication and School of Education and Social Policy 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 Inc. He is a trustee of Northwestern University and a life 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. This initial option grant to Nanophase's directors vests over five years. 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 annually to Outside Directors 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. No stock options were granted to any directors during 2005 and 2004. In January 2005 and 2004, the Company paid \$6,250 as quarterly compensation, which will amount to an annual total of \$25,000 per outside director for services performed in their capacity as directors. Prior to 2004, the Company paid outside directors with a combination of common stock grants and cash as outlined below. The Company did not grant any common stock to its directors in 2005 and 2004. Under the pre-2004 compensation model, the annual compensation paid to each outside director had a value of approximately \$25,000. Beginning in 2004, Mr. McClung's cash compensation is being paid to Lismore International, Incorporated.

Effective January 17, 2003, the Company granted 4,870 restricted 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 as part of 2003 compensation to its outside directors.

All Outside Directors are reimbursed for their reasonable out-of-pocket expenses incurred in attending board and committee meetings.

Meetings of the Board and Committees -- During the year ended December 31, 2005, the Board of Directors held thirteen formal meetings. No director missed more than one board and committee meeting held during 2005 (for all committees on which a particular director served).

Committees of the Board of Directors -- The Board of Directors has established an Audit and Finance Committee, Compensation and Governance Committee and a Nominating Committee each comprised entirely of independent 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 and Mr. Perkins. The members of the Nominating Committee are Mr. Henderson (Chairman), Mr. McClung, Mr. Pearlman, Mr. Perkins and Dr. Siegel.

The Audit and Finance Committee generally has responsibility for retaining the Company's independent public auditors, 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 seven formal meetings in 2005. The Board of Directors has determined that Mr. Pearlman, Mr. Perkins and Mr. Henderson, all of whom serve on the Audit and Finance Committee, are "audit committee financial experts" as described in applicable SEC rules. Each member of the Audit and Finance Committee is independent, as defined in Rule 4200(a) (15) of the National Association of Securities Dealers' listing standards and applicable SEC rules.

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 and general corporate governance policies and reporting to the Board of Directors regarding the foregoing. The Compensation and Governance Committee also has responsibility for administering the 2004 Equity Compensation Plan, determining the number of options, if any, to be granted to the Company's employees and consultants pursuant to the 2004 Equity Compensation Plan and reporting to the Board of Directors regarding the foregoing. The Compensation and Governance Committee held five formal meetings in 2005.

The Nominating Committee generally has responsibility for nominating candidates to serve on the Board of Directors. All members of the Nominating Committee are independent. The Nominating Committee was formed in 2004 and held one formal meeting in 2005.

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	40	Chief Financial Officer, Vice President of Finance, Secretary and Treasurer
Robert Haines	55	Vice President -- Operations
Daniel S. Bilicki	62	Vice President -- Sales and Marketing
Richard W. Brotzman, Ph.D.	52	Vice President -- Research and Development

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 and Vice President of Finance and Chief Financial Officer in April of 2004. From 1990-1995 he served as Controller for two building contractors in the Chicago area. From 1986 to 1990 he worked for Kemper Financial Services in their accounting control corporate compliance unit, serving as unit supervisor during his last two years. 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. He has served on the advisory board of WESTEC, an Illinois Technology Enterprise Center focusing on the commercialization of advanced manufacturing technologies, since 2003. Mr. Jankowski was appointed to the Romeoville Economic Development Commission in 2004.

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 B.S. 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, sol-gel 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.

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 2005, all Section 16 filing requirements applicable to its officers, directors and 10% beneficial owners were complied with by such persons.

CODE OF ETHICS

The Company has adopted a Code of Business Conduct and Ethics (“Code of Ethics”) that applies to, among others, the Company’s principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. The Code of Ethics is posted on its Internet web site www.nanophase.com under the “Investor Relations” section. In the event that the Company makes any amendment to, or grants any waiver from, a provision of the Code of Ethics that requires disclosure under applicable SEC rules, the Company intends to disclose such amendment or waiver on its web site.

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, 2005, 2004 and 2003 of those persons who were (1) during 2005, the chief executive officer of the Company and (2) on December 31, 2005, 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 2005 (collectively, the “Named Officers”).

SUMMARY COMPENSATION TABLE

<u>Name and Principal Position</u>	<u>Year</u>	<u>Annual Compensation</u>			<u>Long-Term Compensation Awards</u>		<u>Payouts</u>	<u>All Other Compensation(\$)</u>
		<u>Salary(\$)</u>	<u>Bonus\$(1)</u>	<u>Other Annual Compensation(\$)</u>	<u>Restricted Stock Awards(s)(\$)</u>	<u>Securities Underlying Options</u>	<u>LTIP Payouts(\$)</u>	
Joseph E. Cross	2005	\$ 320,000	\$ 30,000	\$ 0	\$ 15,075	15,000	\$ 0	\$ 0
President and Chief Executive Officer	2004	320,000	15,000	0	13,875	20,000	0	0
	2003	305,000	0	0	0	50,000	0	0
Daniel S. Bilicki	2005	\$ 212,000	\$ 8,000	\$ 0	\$ 9,045	9,000	\$ 0	\$ 0
Vice President Sales and Marketing	2004	212,000	10,000	0	8,325	12,300	0	0
	2003	205,000	0	0	0	21,000	0	0
Robert Haines	2005	\$ 202,000	\$ 20,000	\$ 0	\$ 9,045	10,000	\$ 0	\$ 0
Vice President Operations	2004	202,000	15,000	0	8,325	14,000	0	0
	2003	192,500	20,000	0	0	30,000	0	0
Richard Brotzman, Ph.D.	2005	\$ 184,000	\$ 15,000	\$ 0	\$ 9,045	10,000	\$ 0	\$ 0
Vice President Research and Development	2004	184,000	10,000	0	8,325	14,000	0	0
	2003	175,000	0	0	0	20,000	0	0
Jess Jankowski	2005	\$ 167,500	\$ 10,000	\$ 0	\$ 9,045	10,000	\$ 0	\$ 0
Chief Financial Officer, Vice President of Finance, Secretary and Treasurer	2004	167,500	10,000	0	8,325	14,000	0	0
	2003	137,500	0	0	0	18,000	0	0

(1) See the Long-Term Incentive Awards Table below for additional performance compensation granted in 2005.

OPTION GRANTS IN 2005 -- The following table provides information on grants of stock options to the Named Officers during 2005. No stock appreciation rights were granted to the Named Officers during 2005.

<u>Name</u>	<u>Number of Securities Underlying Options Granted (#) (1)</u>	<u>Individual Grants</u>			<u>Potential Realizable Value at Assumed Annual Rates of Stock Price Appreciation For Option Term (2)</u>	
		<u>Percent of Total Options Granted to Employees in Fiscal Year</u>	<u>Exercise or Base Price (\$/SH)</u>	<u>Expiration Date</u>	<u>50%(\$)</u>	<u>10%(\$)</u>
Joseph E. Cross	15,000	15.00%	\$6.03	09/27/15	\$5,125,353	\$ 144,154
Robert Haines	10,000	10.00%	6.03	09/27/15	3,416,902	96,103
Daniel S. Bilicki	9,000	9.00%	6.03	09/27/15	3,075,212	86,492
Richard Brotzman, Ph.D.	10,000	10.00%	6.03	09/27/15	3,416,902	96,103
Jess Jankowski	10,000	10.00%	6.03	09/27/15	3,416,902	96,103

- (1) Options were granted under the 2004 Equity Compensation Plan and have a grant price that is equal to the fair market value on the date of grant. 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 on September 27, 2005.
- (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, as mandated by the SEC. 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 2005 AND YEAR-END 2005 OPTION VALUES – The following table provides information regarding each of the Named Officers' option exercises in 2005 and unexercised options on December 31, 2005.

Aggregated Option Exercises in 2005 and Year-End 2005 Option Values

<u>Name</u>	<u>Shares Acquired On Exercise (#)</u>	<u>Value Realized(\$)</u>	<u>Number of Securities Underlying Unexercised Options at Year-End 2005 (#)</u>		<u>Value of Unexercised In-The-Money Options at Year-End 2005 (\$) (1)</u>	
			<u>Exercisable</u>	<u>Unexercisable</u>	<u>Exercisable</u>	<u>Unexercisable</u>
Joseph E. Cross	0	\$ 0	443,334	41,666	\$ 511,210	\$ 34,165
Robert Haines	0	0	87,667	33,333	40,167	20,633
Daniel S. Bilicki	0	0	167,100	22,200	60,920	14,550
Richard Brotzman, Ph.D.	50,000	163,868	176,681	23,999	198,071	13,999
Jess Jankowski	0	0	100,622	23,333	66,457	12,673

- (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, 2005, which was \$5.65.

LONG-TERM INCENTIVE AWARDS IN 2005 – The following table provides information regarding each of the Named Officers’ performance share awards issued under the Company’s 2004 Equity Compensation Plan:

Long-Term Incentive Awards in 2005

Estimated future payouts under non-stock price-based plans

<u>Name</u>	<u>Number of shares, units or other rights (#)</u>	<u>Performance or other period until maturity or payout</u>	<u>Threshold (\$ or #)</u>	<u>Target (\$ or #)</u>	<u>Maximum (\$ or #)</u>
Joseph E. Cross	2,500	January 30, 2009	2,500	2,500	2,500
Robert Haines	1,500	January 30, 2009	1,500	1,500	1,500
Daniel S. Bilicki	1,500	January 30, 2009	1,500	1,500	1,500
Richard Brotzman, Ph.D.	1,500	January 30, 2009	1,500	1,500	1,500
Jess Jankowski	1,500	January 30, 2009	1,500	1,500	1,500

On September 27, 2005, the Company issued each of the Named Officers’ performance share awards under the Company’s 2004 Equity Compensation Plan. All of the performance shares vest and become nonforfeitable on January 30, 2009 only if an established performance goal is attained and the Named Officer remains employed through January 30, 2009. The performance goal requires that during any consecutive twelve month period between October 1, 2005 and January 30, 2009, the Company must achieve at least two reporting quarters of positive earnings before interest (both interest income and interest expense), taxes, depreciation and amortization. The two reporting quarters do not need to be consecutive, but must occur within a consecutive twelve month period contained within the performance period.

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. This initial option grant to an Outside Director vests over five years. Prior to 2004, on or after the date of each annual meeting of the stockholders of the Company, each Outside Director who was re-elected or continued to serve as an Outside Director because his or her term had not expired was granted stock options to purchase 2,000 shares of common stock provided that such grant was 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 annually to Outside Directors 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.

Prior to 2004, the Company also paid Outside Directors a combination of restricted common stock and cash so that the total value of the compensation equaled approximately \$25,000 per year. In 2005 and 2004, the Company paid \$6,250 quarterly, which amounted to an annual total of \$25,000 per Outside Director, in cash compensation for services performed in their capacity as directors. No stock based awards were issued to Outside Directors in 2005 and 2004. Beginning in 2004, Mr. McClung’s cash compensation is being paid to Lismore International, Incorporated.

On January 17, 2003, the Company granted 4,870 restricted 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 as part of 2003 compensation to its outside directors. All

Outside Directors are reimbursed for their reasonable out-of-pocket expenses incurred in attending board and committee meetings.

In 2005, the Company adopted, and the Shareholders' approved, the Nanophase Technologies Corporation 2005 Non-Employee Director Restricted Stock Plan (the "Director Restricted Stock Plan") which reserves 150,000 shares of the Company's common stock to be issued to Outside Directors in the form of restricted shares. In 2005, no awards were made under the Director Restricted Stock Plan. In 2005, the Company also adopted the Nanophase Technologies Corporation Non-Employee Director Deferred Compensation Plan (the "Director Deferred Compensation Plan") which permits an Outside Director to defer the receipt of director fees until separation from service or the Company undergoes a change in control. The Company amended the Director Restricted Stock Plan in 2005 to permit an Outside Director to defer receipt of restricted stock granted under it. The deferred restricted shares are accounted for under the Director Deferred Compensation Plan and issued upon separation from service or the Company's change in control. Under the Director Deferred Compensation Plan, the deferred fees that would have been paid in cash are deemed invested in 5 year U.S. Treasury Bonds during the deferral period. The accumulated hypothetical earnings are paid following the Outside Director's separation from service or the Company's change in control. The deferred fees that would have been paid as restricted shares are deemed invested in common stock of the Company during the deferral period. The Director Deferred Compensation Plan is an unfunded, nonqualified deferred compensation arrangement. In 2005, no amounts were deferred under the Director Deferred Compensation Plan.

Employment Contracts

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 February 17, 2000, the Company also entered into an employment agreement with Mr. Jess Jankowski providing for an annual base salary of not less than \$95,000. No term has been assigned to Mr. Jankowski's employment agreement. If Mr. Jankowski is terminated other than for "cause" (as such term is defined in Mr. Jankowski's employment agreement), Mr. Jankowski will receive severance benefits in an amount equal to Mr. Jankowski's base salary for 26 weeks.

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 15, 2006 certain information with respect to the beneficial ownership of the common stock by (1) each person known by the Company to own beneficially more than 5% of the outstanding shares of common stock, (2) each Company director, (3) each of the Named Officers and (4) all Company executive officers and directors as a group.

<u>Name</u>	<u>Number of Shares Beneficially Owned (1)</u>	<u>Percent of Shares Beneficially Owned</u>
Spurgeon Corporation	3,285,195 (2)	18.26%
Bradford T. Whitmore	3,558,007 (3)	19.78%
Grace Brothers, Ltd.	2,985,195 (4)	16.59%
Grace Investments, Ltd.	300,000 (5)	1.67 %
Altana Chemie, AG	1,256,281 (6)	6.98%
Joseph E. Cross	466,500 (7)	2.53%
James A. Henderson	21,743(8)	*
Richard W. Siegel, Ph.D.	274,465 (9)	1.52%
James McClung	41,104 (10)	*
Jerry Pearlman	39,281 (11)	*
Donald S. Perkins	78,145 (12)	*
R. Janet Whitmore	162,557 (13)	*
Daniel S. Bilicki	182,100 (14)	*
Jess Jankowski	110,922 (15)	*
Richard W. Brotzman, Ph.D.	186,347 (16)	1.03%
Robert Haines	106,667(17)	*
All executive officers and directors as a group (11 persons)	1,669,831 (18)	8.72%

Unless otherwise indicated below, the persons address is the same as the address for the Company.

*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 2,985,195 shares of common stock held by Grace Brothers, Ltd. and 300,000 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 Schedule 13D/A filed on September 3, 2004 with the Commission by Spurgeon Corporation. The address of the stockholder is 1560 Sherman Avenue, Suite 900, Evanston, Illinois 60201.

- (3) Includes 2,985,195 shares of common stock held by Grace Brothers, Ltd., 300,000 shares of common stock held by Grace Investments, Ltd. and 272,812 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 Schedule 13D/A filed on September 3, 2004 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 Schedule 13D/A filed on September 3, 2004 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 Schedule 13D/A filed on September 3, 2004 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) Consist of unregistered common stock, and therefore not freely saleable, until March 23, 2006.
- (7) Includes 460,000 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (8) Includes 13,333 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (9) Includes 42,093 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (10) Includes 17,333 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (11) Includes 17,333 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (12) Includes 36,001 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (13) Includes 6,666 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (14) Includes 174,100 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (15) Includes 106,622 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (16) Consists of 183,347 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (17) Consists of 103,667 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.
- (18) Includes 1,160,495 shares of common stock issuable upon exercise of options exercisable currently or within 60 days of March 15, 2006.

Item 13. Certain Relationships and Related Transactions

See Item 12 above. In addition, on September 5, 2003, in anticipation of the September 8, 2003 private placement to Grace Brothers Ltd. discussed below, the Company amended its existing Stockholder Rights Agreement to revise the beneficial ownership threshold at which a person or group of persons becomes an “acquiring person” and triggers certain provisions under the Stockholder Rights Agreement. As revised, a person or group would become an “acquiring person” if that person or group becomes the beneficial owner of 35% or more of the outstanding shares of the Company’s stock. Prior to such amendment, the beneficial ownership threshold was 25%. On September 8, 2003, the Company issued 453,001 shares of its common stock to Grace Brothers Ltd. at a purchase price of \$4.415 per share together with a warrant to purchase a like number of shares of common stock during the next twelve months also at a price of \$4.415 per share. The share price for the common stock was determined based on the fifteen-day market closing average for the Company’s stock ending September 5, 2003. On September 2, 2004 the warrants were exercised to acquire 453,001 newly issued shares of common stock. Grace Brothers, Ltd. beneficially owns approximately 19.8% of the Company’s outstanding common stock. Ms. R. Janet Whitmore is a sister of Bradford Whitmore who serves as the general partner of Grace Brothers, Ltd.

On March 23, 2004, the Company entered into a joint development agreement with Altana described in “Item 1. Business—Marketing.” In connection with this agreement the Company sold, in a private placement to Altana, 1,256,281 shares of common stock at \$7.96 per share and received gross proceeds of \$10 million. Altana beneficially owns approximately 7% of the Company’s outstanding common stock.

Item 14. Principal Accountant Fees and Services

Audit Fees. The aggregate amount billed by our principal accountant, McGladrey & Pullen, LLP, for audit services performed during the fiscal years ended December 31, 2005 and 2004 was \$238,000 and \$339,140, respectively. Audit services include the auditing of financial statements, quarterly reviews, statutory audits and the preparation of consents and review of registration statements.

Audit Related Fees. McGladrey & Pullen, LLP did not perform audit related services during the fiscal years ended December 31, 2005 and 2004. Audit related services would include employee benefit plan audits, due diligence assistance, internal control review assistance and audit or attestation services not required by statute or regulation.

Tax Fees. Total fees billed by RSM McGladrey, Inc. (an affiliate of McGladrey & Pullen, LLP) for tax related services for the fiscal years ended December 31, 2005 and 2004 were \$7,575 and \$6,500, respectively. These services include tax related research and general tax services in connection with transactions and legislation.

All Other. Other than those fees described above, during the fiscal year ended December 31, 2005 and 2004 there were no other fees billed for services performed by McGladrey & Pullen, LLP.

All of the fees described above were approved by Nanophase’s audit committee.

Audit Committee Pre-Approval Policies and Procedures. Nanophase’s audit committee pre-approves the audit and non-audit services performed by McGladrey & Pullen, LLP, our principal accountants, and RSM McGladrey, Inc. (an affiliate of McGladrey & Pullen, LLP) in order to assure that the provision of such services does not impair McGladrey & Pullen, LLP’s independence. Unless a type of service to be provided by McGladrey & Pullen, LLP and RSM McGladrey, Inc. (an affiliate of McGladrey & Pullen, LLP) has received general pre-approval, it will require specific pre-approval by the audit committee. In addition, any proposed services exceeding pre-approval cost levels will require specific pre-approval by the audit committee.

The term of any pre-approval is 12 months from the date of pre-approval, unless the audit committee specifically provides for a different period. The audit committee will periodically revise the list of pre-approved services, based on subsequent determinations, and has delegated pre-approval authority to the Chairman and Vice Chairman of the audit committee. In the event the Chairman or Vice Chairman exercise such delegated authority, they shall report such pre-approval decisions to the audit committee at its next scheduled meeting. The audit committee does not delegate its responsibilities to pre-approve services performed by the independent auditor to management.

PART IV

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

- (a) The following documents are filed as part of this Form 10-K:
1. The following financial statements of the Company, with the report of independent auditors, are filed as part of this Form 10-K:

Management's report
Report of McGladrey & Pullen, LLP, Independent Registered Public Accounting Firm
Balance Sheets as of December 31, 2005 and 2004
Statements of Operations for the Years Ended December 31, 2005, 2004 and 2003
Statements of Stockholders' Equity for the Years Ended December 31, 2005, 2004 and 2003
Statements of Cash Flows for the Years Ended December 31, 2005, 2004 and 2003
Notes to Financial Statements
 2. The following exhibits are filed with this Form 10-K or incorporated by reference as set forth below.

**Exhibit
Number**

- 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").
- 3.1 Certificate of Incorporation of the Company, incorporated by reference to Exhibit 3.1 to the 1997 10-K.
- 3.2 Bylaws of the Company, incorporated by reference to Exhibit 3.2 to the 1997 10-K.
- 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").
- 4.2 Form of Warrants, incorporated by reference to Exhibit 4.2 to the IPO S-1.
- 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.

- 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").
- 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.
- 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).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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).
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
- 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).
- 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.
- 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").
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.

- 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.
- 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
- 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.
- 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.
- 10.32 Building Lease dated September 15, 2004 between the Company and the Village of Burr Ridge, incorporated by reference to to Exhibit 10.32 to the Company's Annual Report on Form 10-K filed March 15, 2005.
- 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.
- 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.
- 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.
- 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.
- 10.37 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.
- 10.38*** 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.
- 23.1 Consent of McGladrey & Pullen, LLP.
- 31.1 Certification of the Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.
- 31.2 Certification of the Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.

* Management contract or compensatory plan or arrangement.

** Confidentiality previously granted for portions of this agreement.

*** Confidentially requested, confidential portions have been omitted and filed separately with the Commission as required by Rule 24b-2.

(b) Reports on Form 8-K:

On October 20, 2005, the Company furnished a Current Report on Form 8-K reporting under Items 1.01 and 9.01 that on October 18, 2005 the Company entered into a Lease Amendment amending its current lease for its facilities in Romeoville, Illinois, which, among other things, extended the term of such lease through December 31, 2015 (with the option to extend the term for two additional five year periods) and granted Nanophase an option to purchase such facility in certain instances.

On November 1, 2005, the Company furnished a Current Report on Form 8-K reporting under Items 1.01 and 9.01 that on October 26, 2005, the Company received a fully-executed Distribution Agreement (dated effective October 24, 2005) between Nanophase and Alfa Aesar, the research chemicals unit of Johnson Matthey Catalog Company, pursuant to which the Company will supply selected nanomaterials for a variety of research and development applications to Alfa Aesar.

On October 27, 2005, the Company furnished a Current Report on Form 8-K reporting under Items 2.02 and 9.01 that on October 27, 2005 it issued a press release announcing third quarter 2005 revenues.

On October 27, 2005, the Company furnished a Current Report on Form 8-K under Items 2.03 and 9.01 that on October 27, 2005, Nanophase received a fully-signed Promissory Note executed by BYK-Chemie USA ("Lender"), a customer of Nanophase, in favor of Nanophase in an original principle amount of \$1,597,420. The proceeds of the Promissory Note are to be used to buy, install and commission certain equipment which is then to be used for fulfillment of orders by Lender and other uses. The outstanding principle balance of the Promissory Note is payable in three equal installments on January 30, 2009, April 30, 2009 and December 31, 2009. Interest accrues and is payable on a quarterly basis one year after the equipment referenced above is installed at the rate of 100 basis points over the average daily London Inter-Bank Offered Rate for the preceding quarter.

NANOPHASE TECHNOLOGIES CORPORATION
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Management's Report

Management is responsible for the preparation, integrity and fair presentation of the financial statements and Notes to the financial statements. The financial statements were prepared in accordance with the accounting principles generally accepted in the U.S. and include certain amounts based on management's judgment and best estimates. Other financial information presented is consistent with the financial statements.

Management is also responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. The Company's internal control over financial reporting is designed under the supervision of the Company's principal executive and financial officers in order to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. The Company's internal control over financial reporting includes those policies and procedures that:

- (i) Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of assets of the Company;
- (ii) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- (iii) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2005. In making this assessment, management used the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on our assessment and those criteria, management believes that the Company maintained effective internal control over financial reporting as of December 31, 2005.

The Company's independent registered public accounting firm, McGladrey & Pullen, LLP, has issued an attestation report on management's assessment of the Company's internal control over financial reporting. That report appears on a subsequent page of this Report and expresses unqualified opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting.

NANOPHASE TECHNOLOGIES CORPORATION

March 15, 2006

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Nanophase Technologies Corporation
Romeoville, Illinois

We have audited the accompanying balance sheets of Nanophase Technologies Corporation as of December 31, 2005 and 2004, and the related statements of operations, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2005. We also have audited management's assessment, included in the accompanying Annual Report on the Form 10-K, that Nanophase Technologies Corporation maintained effective internal control over financial reporting as of December 31, 2005, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Nanophase Technologies Corporation's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on these financial statements, an opinion on management's assessment, and an opinion on the effectiveness of the company's internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audit of financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Nanophase Technologies Corporation as of December 31, 2005 and 2004, and the

results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2005 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, management's assessment that Nanophase Technologies Corporation maintained effective internal control over financial reporting as of December 31, 2005, is fairly stated, in all material respects, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Furthermore, in our opinion, Nanophase Technologies Corporation maintained, in all material respects, effective internal control over financial reporting as of December 31, 2005, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Schaumburg, Illinois
March 15, 2006

NANOPHASE TECHNOLOGIES CORPORATION

BALANCE SHEETS

	As of December 31,	
ASSETS	<u>2005</u>	<u>2004</u>
Current assets:		
Cash and cash equivalents	\$ 340,860	\$ 475,185
Investments	8,168,092	11,155,126
Trade accounts receivable, less allowance for doubtful accounts of \$23,533 and \$24,271 on December 31, 2005 and 2004, respectively	1,180,117	792,662
Other receivable, net	-	3,498
Inventories, net	801,217	837,336
Prepaid expenses and other current assets	414,363	499,697
Total current assets	10,904,649	13,763,504
Equipment and leasehold improvements, net	6,587,787	7,457,764
Other assets, net	680,908	571,027
	\$ 18,173,344	\$ 21,792,295
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	\$ 200,254	\$ 579,472
Current portion of deferred other revenue	56,757	-
Current portion of capital lease obligations	-	11,826
Accounts payable	285,076	324,485
Accrued expenses	1,152,127	894,022
Total current liabilities	1,694,214	1,809,805
Long-term debt, less current maturities and unamortized debt discount of \$331,545	1,265,875	-
Deferred other revenue, less current portion	293,243	-
	1,559,118	-
Commitments and contingencies	-	-
Stockholders' equity:		
Preferred stock, \$.01 par value; 24,088 authorized and no shares issued and outstanding	-	-
Common stock, \$.01 par value; 25,000,000 shares authorized; 17,976,592 and 17,895,482 shares issued and outstanding on December 31, 2005 and December 31, 2004, respectively	179,766	178,955
Additional paid-in capital	72,307,887	71,987,565
Accumulated deficit	(57,567,641)	(52,184,030)
Total stockholders' equity	14,920,012	19,982,490
	\$ 18,173,344	\$ 21,792,295

(See accompanying Notes to Financial Statements)

NANOPHASE TECHNOLOGIES CORPORATION

STATEMENTS OF OPERATIONS

	Years ended December 31,		
	<u>2005</u>	<u>2004</u>	<u>2003</u>
Revenue:			
Product revenue	\$ 6,444,444	\$ 4,253,478	\$ 4,880,313
Other revenue	357,463	954,456	566,348
Total revenue	6,801,907	5,207,934	5,446,661
Operating expense:			
Cost of revenue	5,827,719	5,125,216	5,205,065
Research and development expense	1,934,528	1,929,348	1,906,791
Selling, general and administrative expense	4,422,011	4,361,357	4,095,877
Lease accounting adjustment	279,810	-	-
Total operating expenses	12,464,068	11,415,921	11,207,733
Loss from operations	(5,662,161)	(6,207,987)	(5,761,072)
Interest income	295,935	171,582	67,992
Interest expense	(50,273)	(74,277)	(109,889)
Other, net	32,888	(306,273)	5,319
Loss before provision for income taxes	(5,383,611)	(6,416,955)	(5,797,650)
Provision for income taxes	-	(30,000)	(30,000)
Net loss	\$ (5,383,611)	\$ (6,446,955)	\$ (5,827,650)
Net loss net per share-basic and diluted	\$ (0.30)	\$ (0.37)	\$ (0.38)
Weighted average number of common shares outstanding	17,937,932	17,266,228	15,391,537

(See accompanying Notes to Financial Statements)

NANOPHASE TECHNOLOGIES CORPORATION

STATEMENTS OF STOCKHOLDERS' EQUITY

Description	Preferred Stock		Common Stock		Additional Paid-in Capital	Deferred Stock-based Compensation	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount				
Balance on January 1, 2003	—	\$ —	15,137,877	\$ 151,379	\$56,658,080	\$ (67,069)	\$(39,909,425)	\$16,832,965
Exercise of stock options	—	—	287,446	2,874	594,595	—	—	597,469
Stock-based compensation	—	—	24,350	244	74,024	—	—	74,268
Common stock offering	—	—	453,001	4,530	1,970,436	—	—	1,974,966
Amortization of deferred stock compensation	—	—	—	—	—	67,069	—	67,069
Net loss for the year ended December 31, 2003	—	—	—	—	—	—	(5,827,650)	(5,827,650)
Balance on December 31, 2003	—	—	<u>15,902,674</u>	<u>159,027</u>	<u>59,297,135</u>	—	<u>(45,737,075)</u>	<u>13,719,087</u>
Exercise of stock options	—	—	283,526	2,835	1,466,552	—	—	1,469,387
Exercise of warrants	—	—	453,001	4,530	1,956,634	—	—	1,961,164
Common stock offering	—	—	1,256,281	12,563	9,249,769	—	—	9,262,332
Stock-based compensation	—	—	—	—	17,475	—	—	17,475
Net loss for the year ended December 31, 2004	—	—	—	—	—	—	(6,446,955)	(6,446,955)
Balance on December 31, 2004	—	—	<u>17,895,482</u>	<u>178,955</u>	<u>71,987,565</u>	—	<u>(52,184,030)</u>	<u>19,982,490</u>
Exercise of stock options	—	—	81,110	811	247,013	—	—	247,824
Stock-based compensation	—	—	—	—	73,309	—	—	73,309
Net loss for the year ended December 31, 2005	—	—	—	—	—	—	(5,383,611)	(5,383,611)
Balance on December 31, 2005	—	<u>\$ —</u>	<u>17,976,592</u>	<u>\$ 179,766</u>	<u>\$ 72,307,887</u>	<u>\$ —</u>	<u>\$(57,567,641)</u>	<u>\$14,920,012</u>

(See accompanying Notes to Financial Statements)

NANOPHASE TECHNOLOGIES CORPORATION
STATEMENTS OF CASH FLOWS

Years ended December 31,

	<u>2005</u>	<u>2004</u>	<u>2003</u>
Operating activities:			
Net loss	\$ (5,383,611)	\$ (6,446,955)	\$ (5,827,650)
Adjustments to reconcile net loss to cash used in operating activities:			
Depreciation and amortization	1,228,515	1,392,122	1,521,353
Amortization of debt discount	18,455	—	—
Amortization of deferred stock compensation	—	—	67,069
Stock compensation expense	73,309	17,475	74,268
Allowance for excess inventory quantities	(14,205)	(5,636)	(46,084)
Equipment write-off	69,710	55,265	—
Patent write-off	—	—	19,727
Changes in assets and liabilities related to operations:			
Trade accounts receivable	(766,674)	175,034	(497,923)
Other receivable	3,498	20,716	(7,424)
Inventories	50,324	(148,701)	344,919
Prepaid expenses and other assets	85,334	160,081	87,161
Accounts payable	(25,288)	(225,189)	157,877
Accrued liabilities	252,098	138,991	(339,386)
Net cash used in operating activities	<u>(4,408,535)</u>	<u>(4,866,797)</u>	<u>(4,446,093)</u>
Investing activities:			
Acquisition of patents	(142,180)	(166,075)	(77,707)
Acquisition of equipment and leasehold improvements	(292,692)	(529,498)	(220,611)
Proceeds from disposal of equipment	-	11,000	—
Payment of accounts payable incurred for the purchase of equipment and leasehold improvements	(111,370)	—	(200,362)
Purchases of investments	(164,935,218)	(279,852,900)	(49,063,331)
Sales of investments	167,922,252	273,260,138	51,563,775
Net cash provided by (used in) investing activities	<u>2,440,792</u>	<u>(7,277,335)</u>	<u>2,001,764</u>
Financing activities:			
Principal payment on debt obligations, including capital leases	(11,826)	(473,565)	(603,746)
Proceeds from borrowings	1,597,420	—	429,955
Proceeds from sale of common stock and exercise of stock options and warrants	247,824	12,692,883	2,572,435
Net cash provided by financing activities	<u>1,833,418</u>	<u>12,219,318</u>	<u>2,398,644</u>
(Decrease) increase in cash and cash equivalents	(134,325)	75,186	(45,685)
Cash and cash equivalents at beginning of period	475,185	399,999	445,684
Cash and cash equivalents at end of period	<u>\$ 340,860</u>	<u>\$ 475,185</u>	<u>\$ 399,999</u>
Supplemental cash flow information:			
Interest paid	<u>\$ 31,818</u>	<u>\$ 74,277</u>	<u>\$ 109,889</u>
Income taxes paid	<u>\$ -</u>	<u>\$ 30,000</u>	<u>\$ 30,000</u>
Supplemental non-cash investing and financing activities:			
Accounts receivable paid through offset of long-term debt	<u>\$ 379,219</u>	<u>\$ 276,794</u>	<u>\$ 194,768</u>
Accounts payable incurred for the purchase of equipment and leasehold improvements	<u>\$ 97,249</u>	<u>\$ 111,370</u>	<u>\$ —</u>
Accrual related to asset retirement obligation	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 82,000</u>
Debt discount offset by deferred other revenue	<u>\$ 350,000</u>	<u>\$ —</u>	<u>\$ —</u>

(See accompanying Notes to Financial Statements)

NANOPHASE TECHNOLOGIES CORPORATION NOTES TO FINANCIAL STATEMENTS

(1) Description of Business

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

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

The Company also recognizes regular other revenue from a technology license and previously has recognized revenue from the occasional sale of production equipment to its technology licensee, as well as \$600,000 in revenue earned for 2004 (only) as discussed in Note 15. None of these activities are expected to drive the long-term growth of the business. All of these types of items 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.

(2) Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements requires the Company to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash and Cash Equivalents

Cash and cash equivalents primarily consist of demand deposits. The Company has employed corporate "sweep" accounts, when cost-effective in order to maximize interest income earned with its operating funds. From time to time, the Company's cash accounts may exceed federally insured limits.

Investments

Investments are classified by the Company at the time of purchase for appropriate designation and are reevaluated as of each balance sheet date. The Company's policy is to classify money market funds and certificates of deposit as investments. These investments are classified as held-to maturity when the Company has the positive intent and ability to hold the securities to maturity. Held-to maturity securities are stated at amortized cost and are adjusted to maturity for the amortization of premiums and accretion of discounts. Such adjustments for amortization and accretion are included in interest income. The Company has also made investments in variable rate demand notes. The investments have been classified as available for sale securities. Investments classified as available for sale securities are recorded at market value using the specific identification method; unrealized gains and losses (excluding other-than-temporary impairments) are reflected in other comprehensive income ("OCI"). Due to the nature of the Company's investments being short-term, the fair value of these investments approximates their cost, accordingly, no unrealized gains or losses have been reflected in OCI.

Investments are considered to be impaired when a decline in fair value is judged to be other-than-temporary. The Company employs a systematic methodology that considers available evidence in evaluating potential impairment of its investments on a quarterly basis. If the cost of an investment exceeds its fair value, the Company evaluates, among other factors, general market conditions, the duration and extent to which the fair value is less than cost, as well as the Company's intent and ability to hold the investment. The Company also considers specific adverse conditions related to the financial health of and business outlook for the investee, including industry and sector performance, changes in technology, operational and financing cash flow factors and rating agency actions. Once a decline in fair value is determined to be other-than-temporary, an impairment charge is recorded and a new cost basis in the investment is established.

The Company's investments are held by its investment bank who is a member of all major stock exchanges and the Securities Investor Protection Corporation (SIPC). Securities and cash held in custody by the Company's investment bank are afforded complete protection for the Company's investment positions through SIPC and a commercial insurer (commonly known as "Excess SIPC" coverage), however, it does not protect against losses from the rise and fall in market value of investments.

Trade Accounts Receivable

Trade accounts receivable are carried at original invoice amount less an estimate made for doubtful receivables based on a review of all outstanding amounts on a monthly basis. Management determines the allowance for doubtful accounts by identifying troubled accounts and by using historical experience applied to an aging of accounts. Trade accounts receivable are written off when deemed uncollectible. Recoveries of trade accounts receivable previously written off are recorded when received.

The Company's typical credit terms are thirty days from shipment and invoicing.

The activity in the Allowance for Doubtful Accounts is as follows:

	2005	2004
Balance, Beginning of year	\$ 24,271	\$ 25,000
Charge offs	(738)	(729)
Recoveries	-	-
Provision	-	-
	<hr/>	<hr/>
Balance, End of year	<u>\$ 23,533</u>	<u>\$ 24,271</u>

Inventories

Inventories are stated at the lower of cost, maintained on a first in, first out basis, or market. The Company has recorded allowances to reduce inventory relating to excess quantities of certain materials. Write-downs of inventories establish a new cost basis, which is not increased for future increases in market value of inventories or changes in estimated excess quantities.

Equipment and Leasehold Improvements

Equipment is stated at cost and is being depreciated over its estimated useful life (3-20 years) using the straight-line method. Leasehold improvements are stated at cost and are being amortized using the straight-line method over the shorter of the useful life of the asset or the term of the lease (3-16 years). Depreciation expense for leased assets is included with depreciation expense for owned assets. From time to time the company has self-constructed assets. These assets are stated at cost plus the capitalization of labor and have an estimated useful life (7-10 years) using the straight-line method.

Intangible Assets

Intangible assets are included in other assets and are being amortized over the estimated useful life (17 or 20 years) of the respective patents and trademarks using the straight-line method.

Fixed Assets

The Company follows the provisions of SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." Reviews are performed whenever events or changes in circumstances indicate that the carrying amount of assets may not be recoverable or that the useful life is shorter than originally estimated. The Company assesses the recoverability of its assets by comparing the projected undiscounted net cash flows associated with the related asset or group of assets over their remaining lives against their respective carrying amounts. Impairment, if any, is based on the excess of the carrying amount over the fair value of those assets. If assets are determined to be recoverable, but the useful lives are shorter than originally estimated, the net book value of the assets is depreciated over the newly determined remaining useful lives.

Deferred Other Revenue

In connection with its promissory note to BYK Chemie (see Note 7), the Company recorded \$350,000 of deferred other revenue. The note requires that the Company give BYK Chemie first preference in use of the new equipment commissioned under this note and the Company has also agreed to provide experimental product made using this equipment. The Company's performance and delivery of its commitments under the equipment use obligations are not expected to arise until the equipment is commissioned and, accordingly the Company has not recognized any of the deferred revenue as of December 31, 2005. As a result of a lack of further specificity with regards to the equipment use obligations, the Company intends to recognize the deferred revenue ratably, on a straight-line basis over a period beginning with the expected commissioning of the equipment at some point in the second or third quarter of the year ended December 31, 2006 and ending on July 30, 2009, the expected date of the Company's final payment under the note.

Asset Retirement Obligations

In connection with its leased facilities, the Company is required to remove certain leasehold improvements upon termination of its occupancy. Effective January 1, 2003, the Company follows the provisions of SFAS 143, "Accounting for Asset Retirement Obligations", under which the Company recognizes a liability for the fair value of its asset retirement obligations. The fair value of that liability is measured based on an expected cash flow approach and accretion expense is recognized each period to recognize increases to the fair value of the liability due to the passage of time. Increases to the fair value of the liability, except for accretion, are added to the carrying value of the long-lived asset. Those increases are then reported in amortization expense over the estimated useful life of the long-lived asset.

The Company adopted the provisions of SFAS 143, as of January 1, 2003. At the date of adoption the Company recorded an asset retirement obligation and related asset in the amount of \$82,000. The cumulative effect of the change on 2003 and the pro forma amounts for 2002, had the newly adopted method been applied retroactively, have not been presented because the amounts were immaterial to the financial statements.

Activity in the asset retirement obligation account for the years ended December 31, is as follows:

	<u>2005</u>	<u>2004</u>
Balance, beginning	\$ 105,417	\$ 94,157
Accretion due to passage of time	<u>3,839</u>	<u>11,260</u>
Balance, ending	<u>\$ 109,256</u>	<u>\$ 105,417</u>

The effect of the implementation of this standard resulted in an increase in net loss of \$7,114, \$40,912 and \$50,551 (no effect on per common share calculation) for 2005, 2004 and 2003, respectively. The added expenses were comprised of \$3,839, \$11,260 and \$12,157 in accretion expense and \$3,272, \$29,109 and \$38,394 in amortization expense for 2005, 2004 and 2003, respectively.

Fair Value of Financial Instruments

The Company's financial instruments include investments, accounts receivable, accounts payable, accrued liabilities and long-term debt. The fair values of all financial instruments were not materially different from their carrying values.

Product Revenue

Product revenue consists of sales of product that are recognized when realized and earned. This occurs when persuasive evidence of an arrangement exists, title transfers via shipment of products or when delivery has occurred, the price is fixed or determinable and collectibility is reasonably assured.

Other Revenue

Other revenue consists of revenue from technology development (see RHEM discussion in Note 15) and fees from a technology license and the sale of production equipment that is designed and built by the Company. Such sale of equipment last occurred in the first quarter of 2003. These types of equipment sales are treated as other revenue. Technology license fees are recognized when earned pursuant to the agreed upon contractual arrangement, when performance obligations are satisfied, the amount is fixed or determinable, and collectibility is reasonably assured. Shipping and handling costs are included in other revenue when products are shipped and invoiced to the customer. The Company includes the related cost of shipping and handling in cost of goods sold.

Advertising Expenses

The Company does not capitalize advertising expenses, they are either expensed when incurred or when related advertisements are first published. The Company recognized \$6,889, \$21,248 and \$800 in advertising expenses for the years 2005, 2004 and 2003, respectively.

Employee Stock Options

For the year ended December 31, 2005, 81,110 shares of Common Stock were issued pursuant to option exercises compared to 283,526 and 287,446 shares of Common Stock for the same period in 2004 and 2003, respectively. No shares were issued in the form of an annual restricted stock grant to the Company's outside directors in 2005 and 2004 compared to 24,350 in 2003.

As permitted by Statement of Financial Accounting Standards No. 123 "Accounting for Stock-Based Compensation" (FASB 123), the Company accounts for stock options granted to employees in accordance with APB Opinion No. 25, "Accounting for Stock Issued to Employees" (APB No. 25). As

long as the exercise price of the options granted equals the estimated fair value of the underlying stock on the measurement date, no compensation expense is recognized by the Company for these options. FASB 123, established an alternative fair value method of accounting for stock-based compensation plans. As required by FASB 123 for companies using APB No. 25 for financial reporting purposes, the Company makes pro forma disclosures regarding the impact on net loss of using the fair value method of FASB Statement No. 123.

Pro forma information regarding net income is required by FASB No. 123, which also requires that the information be determined as if the Company had accounted for the employee stock options granted subsequent to December 31, 1994 under the fair value method of that Statement. The fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following assumptions for the years ended December 31, 2005, 2004 and 2003. For the years ended December 31, 2005, 2004 and 2003, 100,000, 100,000 and 251,800 shares of stock options were granted, respectively.

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

	<u>Years Ended December 31,</u>		
	<u>2005</u>	<u>2004</u>	<u>2003</u>
Weighted-average risk-free interest rates:	4.76%	3.93%	3.79%
Dividend yield:	0.00%	0.00%	0.00%
Weighted-average expected life of the option:	7 years	7 years	7 years
Weighted-average expected stock price volatility:	60.73%	79.10%	102.49%
Weighted-average fair value of the options granted:	\$3.61	\$4.12	\$3.21

For purposes of the pro forma disclosures, the estimated fair value of the options is amortized to expense over the vesting period of the respective option. Because FASB No. 123 is applicable only to options granted subsequent to December 31, 1994, its pro forma impact was not fully reflected until 2002. The pro forma impact on the three years shown is meant to approximate the effects of the expensing of stock options.

The following table illustrates the effect on net loss and loss per share had compensation cost for all of the stock-based compensation plans been determined based on the grant date fair values of awards (the method described in FASB Statement No. 123, Accounting for Stock-Based Compensation):

	Years Ended December 31,		
	2005	2004	2003
Net Loss:			
As reported	\$ (5,383,611)	\$ (6,446,955)	\$ (5,827,650)
Deduct total stock-based employee compensation expense determined under fair value based method for all awards	(491,690)	(835,394)	(1,824,906)
Pro forma net loss	<u>\$ (5,875,301)</u>	<u>\$ (7,282,349)</u>	<u>\$ (7,652,556)</u>
Loss per share:			
Basic - As reported	(0.30)	(0.37)	(0.38)
Basic – Pro forma	(0.33)	(0.42)	(0.50)
Diluted - As reported	(0.30)	(0.37)	(0.38)
Diluted – Pro forma	(0.33)	(0.42)	(0.50)

Income Taxes

The Company accounts for income taxes using the liability method. As such, deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Deferred tax assets and liabilities are calculated using the enacted tax rates and laws that are expected to be in effect when the anticipated reversal of these differences is scheduled to occur. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion or all of the deferred tax assets will not be realized. Net Loss Per Share

Net loss per common share is computed based upon the weighted average number of common shares outstanding. Common equivalent shares of 324,400 for 2005, 497,671 for 2004 and 342,652 for 2003 are not included in the per share calculations because the effect of their inclusion would be anti-dilutive.

	Years ended December 31,		
	<u>2005</u>	<u>2004</u>	<u>2003</u>
Net loss	\$ (5,383,611)	\$ (6,446,955)	\$ (5,827,650)
Weighted average common shares outstanding	<u>17,937,932</u>	<u>17,266,228</u>	<u>15,391,537</u>
Net loss per common share-basic and diluted	<u>\$ (0.30)</u>	<u>\$ (0.37)</u>	<u>\$ (0.38)</u>

Recently Issued Accounting Standards

The Financial Accounting Standards Board has issued Statement of Financial Accounting Standards No. 123 (revised), Share-Based Payment. SFAS 123(R) is a replacement of SFAS 123, Accounting for Stock-Based Compensation, and supersedes APB Opinion No. 25, Accounting for Stock Issued to Employees, and its related interpretive guidance.

SFAS 123R will require that the compensation cost relating to share-based payment transactions be recognized in financial statements. That cost will be measured based on the fair value of the equity or liability instruments issued. The effect of the standard will be to require entities to measure the cost of

employee services received in exchange for stock options based on the grant-date fair value of the award, and to recognize the cost over the period the employee is required to provide services for the award.

The Company will be required to apply Statement 123(R) as of the beginning of its interim reporting period that begins January 1, 2006.

SFAS 123(R) allows two methods for determining the effects of the transition: the modified prospective transition method and the modified retrospective method of transition. Under the modified prospective transition method, an entity would use the fair value-based accounting method for all employee awards granted, modified, or settled after the effective date. As of the effective date, compensation cost related to the nonvested portion of awards outstanding as of that date would be based on the grant-date fair value of those awards as calculated under the original provisions of Statement No.123; that is, an entity would not remeasure the grant-date fair value estimate of the unvested portion of awards granted prior to the effective date of the final Statement. Under the modified retrospective method of transition, an entity would recognize employee compensation cost for prior periods presented in accordance with the original provisions of Statement No. 123; that is, an entity would recognize employee compensation cost in the amounts reported in the pro forma disclosures provided in accordance with Statement No. 123.

The Company will elect the modified prospective transition method. Under this method, the Company estimates that the adoption of FAS 123(R) will require the Company to record approximately \$310,000 of stock compensation expense in the year ending December 31, 2006, related to employee options issued and outstanding on December 31, 2005.

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs-an Amendment of ARB No. 43, Chapter 4* (“SFAS 151”), which is the result of the FASB’s efforts to converge U.S. accounting standards for inventory with International Accounting Standards. SFAS 151 requires that abnormal amounts of idle facility expense, freight, handling costs and wasted material be recognized as current period charges. It also requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. The adoption of SFAS 151 did not have a material impact on the Company’s results of operations.

(3) Investments

Investments at December 31, 2005 and 2004 were comprised of variable rate demand notes, certificates of deposit and a money market fund. Included in investments is \$110,090 and \$581,489 on December 31, 2005 and 2004, respectively, in the form of certificates of deposit which are pledged as collateral, primarily for the Company’s rent in 2005 and for business insurance premiums in 2004, and restricted as to withdrawal or usage. Investments held in short-term variable rate demand notes and certificates of deposit have maturity days of less than 30 days. The Company’s investments on December 31, 2005 and 2004 were as follows:

	<u>As of December 31,</u>	
	<u>2005</u>	<u>2004</u>
Variable rate demand notes	\$ 7,250,000	\$ 10,000,000
Money market fund	874,801	1,039,225
Certificates of deposit	30,000	110,090
Accrued interest	13,291	5,811
	<u>\$ 8,168,092</u>	<u>\$ 11,155,126</u>

(4) Inventories

Inventories consist of the following:

	As of December 31,	
	<u>2005</u>	<u>2004</u>
Raw materials	\$ 498,144	\$ 391,346
Finished goods	<u>894,413</u>	<u>1,051,535</u>
	1,392,557	1,442,881
Allowance for excess quantities	<u>(591,340)</u>	<u>(605,545)</u>
	<u>\$ 801,217</u>	<u>\$ 837,336</u>

The activity in the Allowance for Excess Inventory Quantities as follows:

	<u>2005</u>	<u>2004</u>
Balance, Beginning of year	\$ 605,545	\$ 611,181
Deductions(1)	(14,205)	(5,636)
Costs and Expenses	<u>-</u>	<u>-</u>
Balance, End of year	<u>\$ 591,340</u>	<u>\$ 605,545</u>

(1) Reduction in inventory allowance as a result of the disposal or sale of inventories for which an allowance had previously been provided.

(5) Equipment and Leasehold Improvements

Equipment and leasehold improvements consist of the following:

	As of December 31,	
	<u>2005</u>	<u>2004</u>
Machinery and equipment	\$ 9,345,563	\$ 9,187,960
Office equipment	405,000	390,920
Office furniture	75,871	75,871
Leasehold improvements	4,468,079	4,382,801
Construction in progress	<u>245,575</u>	<u>182,305</u>
	14,540,088	14,219,857
Less: Accumulated depreciation and amortization	<u>(7,952,301)</u>	<u>(6,762,093)</u>
	<u>\$ 6,587,787</u>	<u>\$ 7,457,764</u>

Depreciation expense was \$1,190,208, \$1,297,912 and \$1,460,853, for the years ended December 31, 2005, 2004 and 2003, respectively.

(6) Intangible Assets

The following is a summary of intangible assets on December 31, 2005 and 2004:

	<u>2005</u>		<u>2004</u>	
	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>
Subject to Amortization:				
Trademarks	\$ 44,429	\$ 7,979	\$ 14,921	\$ 6,184
Patents	370,881	126,198	343,950	96,797
	<u>\$ 415,310</u>	<u>\$ 134,177</u>	<u>\$ 358,871</u>	<u>\$ 102,981</u>

Amortization expense recognized on all amortizable intangibles totaled \$31,196, \$41,919 and \$9,949 for the years ended December 31, 2005, 2004 and 2003, respectively.

Estimated aggregate amortization expenses for each of the next five years is as follows:

Year ending December 31:

2006	\$ 32,000
2007	32,000
2008	32,000
2009	32,000
2010	31,000

(7) Pledged Assets and Long-Term Debt

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. On December 31, 2005, 2004 and 2003, borrowings against this note amounted to \$200,254, \$579,472 and \$856,267, respectively. The note bears interest at 8.45% per annum, with interest accruing beginning January 1, 2002, and the first payment commencing in February of 2002. The note is collateralized by certain powder coating, packaging, lab and related equipment. In May 2005, an amendment to this promissory note was executed for the purpose of extending the date when any unpaid balance will be due upon demand from June 1, 2005 to June 1, 2007. Management expects this debt to be fully paid during 2006.

In November 2005, the Company executed a promissory note, held by BYK Chemie (a U.S. subsidiary of Altana Chemie AG which owns approximately 7% of the Company's outstanding common stock) in the amount of \$1,597,420 for the purchase and installation of additional dispersion capacity and an additional NanoArc™ synthesis reactor at the Company's Romeoville, Illinois facility. The note requires that the Company give BYK Chemie first preference in use of the new equipment commissioned under this note, and that the Company agrees to provide experimental product made using this equipment. The rate of interest in the note will float at 1% over LIBOR, measured on a quarterly average. Interest will not begin to accrue until one year after the commissioning of the specified equipment and principal will be repaid in three equal payments during the first three quarters of 2009. Management has determined that the required interest payments, including a flexible interest free period of more than a year, are substantially lower than the Company would be required to pay in a more traditionally underwritten equipment note. As such, management's imputation of interest, in accordance with the provisions of APB No. 21, "Interest on Receivables and Payables", at 9% over the entire life of the note, its determination of a market interest rate, resulted in the Company recording a debt discount of

\$350,000, having an unamortized balance of \$331,454 on December 31, 2005. Management further determined that the debt discount of \$350,000 recorded at the inception of the loan was attributable to deferred other revenue relating to the issuance of right of first preference on the new equipment being commissioned and the Company's commitment to provide experimental product.

8) Lease Commitments

The Company leases its operating facilities under operating leases. On October 18, 2005 Nanophase entered into a Lease Amendment amending its current lease for its facilities in Romeoville, Illinois, which, among other things, extended the term of such lease through December 31, 2015 (with the option to extend the term for two additional five year periods) and granted Nanophase an option to purchase such facility in certain instances. The current monthly rent on this lease amounts to \$0 for the first five months in 2006 and \$25,000 for the remainder of the year. Nanophase leases its Burr Ridge facility under an agreement whose initial term expired in September 1999. The Company exercised its option to extend the lease for five additional one-year terms, the last of which expired in September 2004. The Company executed a new lease for its Burr Ridge facility in September 2004. The initial term of the new lease expires in September 2007, but the Company has options to extend the lease for up to three additional one-year terms. The current monthly rent on this lease amounts to \$10,000.

The following is a schedule of future minimum lease payments as required under the above operating leases:

Year ending December 31:	
2006	\$ 288,536
2007	403,772
2008	312,000
2009	318,000
2010	325,200
Thereafter	<u>5,731,735</u>
Total minimum payments required:	<u>\$ 7,379,243</u>

Rent expense, including real estate taxes, under these leases amounted to \$546,815, \$521,264 and \$511,112, for the years ended December 31, 2005, 2004 and 2003, respectively.

On December 31, 2005 and 2004, equipment under capital leases for both years had a cost of \$205,314 with accumulated depreciation of \$205,314 and \$128,413, respectively. On December 31, 2005 the Company has no capital leases.

(9) Accrued Expenses

Accrued expenses consist of the following:

	<u>As of December 31,</u>	
	<u>2005</u>	<u>2004</u>
Accrued payroll and related expenses	\$ 356,537	\$ 285,695
Accrued professional services	246,391	237,485
Accrued rent	314,265	-
Other	<u>234,934</u>	<u>370,842</u>
	<u>\$ 1,152,127</u>	<u>\$ 894,022</u>

(10) License Agreements

The Company was granted a non-exclusive license by a third party to make, use, and sell products of the type claimed in two U.S. patents. In consideration for this license, the Company agreed to pay royalties of 1% of net sales, as defined, and made an advance royalty payment of \$17,500. Royalties under this agreement amounted to approximately \$37,166, \$29,200 and \$25,600 for the years ended December 31, 2005, 2004 and 2003, respectively

In December 1997, the Company entered into a license agreement whereby the Company granted a royalty-bearing exclusive right and license, as defined, to purchase, make, use and sell nanocrystalline materials in designated parts of Asia to C. I. Kasei, a division of Itochu Corporation (“CIK”). Under this agreement, the Company also will earn royalties on net sales of manufactured products containing nanocrystalline materials. The agreement also provided for minimum sales targets and minimum royalty payments to maintain exclusivity. The agreement expires on March 31, 2013 unless earlier terminated as provided therein. The Company recorded royalty revenues, classified as “Other Revenue” on the Statements of Operations, under this agreement of \$300,000 for the years ended December 31, 2005, 2004 and 2003, respectively.

(11) Income Taxes

The Company’s provision for income taxes, as presented on its Statements of Operations for the periods presented, is attributable to foreign income taxes paid as a result of certain transactions with customers in foreign countries for the years ended December 31, 2004 and 2003. In 2005, no foreign income taxes were paid. The Company has no income tax provision, current or deferred, relating to U.S. federal, state or local income taxes.

A reconciliation of income tax expense to the amount computed by applying the Federal income tax rate to loss before provision for income taxes as of December 31, 2005, 2004 and 2003, is as follows:

	2005	2004	2003
Income tax credit at statutory rates	\$ (1,830,428)	\$ (2,181,765)	\$ (1,971,201)
Nondeductible expenses	8,094	9,084	31,348
Tax benefit of exercise of non-qualified stock options	(120,766)	(683,900)	(405,459)
State income tax, net of federal benefits	(269,180)	(320,848)	(289,883)
Foreign income taxes	-	30,000	30,000
Other	19,280	24,429	40,195
Benefit of net operating loss and foreign tax credits not recognized,			
Increase in valuation allowance	2,193,000	3,153,000	2,595,000
	<u>\$ 0</u>	<u>\$ 30,000</u>	<u>\$ 30,000</u>

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred income taxes consist of the following:

	As of December 31,	
	<u>2005</u>	<u>2004</u>
Deferred tax assets:		
Net operating loss carryforwards	\$ 25,730,000	\$ 23,568,000
Foreign tax credit carryforward.....	156,000	156,000
Inventory and other allowances.....	250,000	258,000
Excess (tax) book depreciation.....	(127,000)	(162,000)
Excess (tax) book amortization	3,000	16,000
Other accrued costs	<u>131,000</u>	<u>114,000</u>
Total deferred tax assets.....	26,143,000	23,950,000
Less: Valuation allowance	<u>(26,143,000)</u>	<u>(23,950,000)</u>
Deferred income taxes	<u>\$ —</u>	<u>\$ —</u>

The valuation allowance increased \$2,193,000 for the year ended December 31, 2005 due principally to the increase in the net operating loss carryforward and uncertainty as to whether future taxable income will be generated prior to the expiration of the carryforward period. Under the Internal Revenue Code, certain ownership changes, including the prior issuance of preferred stock and the Company's public offering of common stock, may subject the Company to annual limitations on the utilization of its net operating loss carryforward.

The Company has net operating loss carryforwards for tax purposes of approximately \$65,932,000 on December 31, 2005, which expire between 2006 and 2025.

As a result of certain transactions with third parties operating in foreign countries, the Company may be subject to the withholding and payment of foreign income taxes as transactions are completed. Under the Internal Revenue Code, foreign tax payments may be used to offset federal income tax liabilities when incurred, subject to certain limitations. On December 31, 2005, the Company has a foreign tax credit carryforward of \$156,000.

(12) Capital Stock

In October 1998, pursuant to a Stockholder Rights Agreement between Nanophase and LaSalle National Association, as Rights Agent, the Company declared a dividend of one Preferred Stock Purchase Right (a "Right") for each outstanding share of Company common stock on November 10, 1998 and each share of common stock issued by the Company after such date. The Rights are not presently exercisable. Each Right entitles the holder, upon the occurrence of certain specified events, to purchase from the Company one ten-thousandth of a share of the Company's Series A Junior Participating Preferred Stock at a purchase price of \$25 per one-ten thousandth of a share (the "Purchase Price"). The Rights further provide that each Right will entitle the holder, upon the occurrence of certain specified events, to purchase from the Company, common stock having a value of twice the Purchase Price and, upon the occurrence of certain other specified events, to purchase from another entity into which the Company is merged or which acquires 50% or more of the Company's assets or earnings power, common stock of such other entity having a value of twice the Purchase Price. In general, the Rights may be redeemed by the Company at a price of \$0.01 per Right. The Rights expire on October 28, 2008. On September 5, 2003, in anticipation of the September 8, 2003 private placement to Grace Brothers Ltd., the Company amended its existing Stockholder Rights Agreement to revise the beneficial ownership threshold at which a person or group of persons becomes an "acquiring person" and triggers certain provisions under the Stockholder Rights Agreement. As revised, a person or group would become an "acquiring person" if that

person or group becomes the beneficial owner of 35% or more of the outstanding shares of the Company's stock. Prior to this amendment, the beneficial ownership threshold was 25%.

As of December 31, 2005 and 2004, the Company has 24,088 authorized shares of preferred stock, of which 2,500 shares have been designated as Series A Junior Participating Preferred Stock and reserved for issuance in connection with the Rights described above. Shares of Series A Junior Participating Preferred Stock are nonredeemable and subordinate to any other series of the Company's preferred stock, unless otherwise provided for in the terms of the preferred stock; has a preferential dividend in an amount equal to 10,000 times any dividend declared on each share of common stock; has 10,000 votes per share, voting together with the Company's common stock; and in the event of liquidation, entitles its holder to receive a preferred liquidation payment equal to 10,000 times the payment made per share of common stock. In addition, as of December 31, 2005, 2,449,848 authorized but unissued shares of common stock have been reserved for future issuance upon exercise of stock options.

(13) Stock Options, Warrants and Stock Grants

The Company has entered into stock option agreements with certain officers, employees, directors and three members of the Company's former Advisory Board. On December 31, 2005, the Company had outstanding options to purchase 1,740,347 shares of common stock. The stock options generally expire ten years from the date of grant. Of the total number of exercisable options, 421,603 of the outstanding options vested over a five-year period, 1,047,168 vested over a three-year period from their respective grant dates and 17,011 vested on the eighth anniversary following their grant date.

Exercise prices are determined by the Compensation and Governance Committee of the Board of Directors and equal the estimated fair values of the Company's common stock at the grant date. The table below summarizes option activity through December 31, 2005:

	Number of Options	Exercise Price	Weighted Average Exercise Price
Outstanding at January 1, 2003	2,086,850	.112-11.625	5.495
Options granted during 2003	251,800	3.660-5.550	3.791
Options exercised during 2003	(287,446)	.432-3.886	2.078
Options canceled during 2003	<u>(122,585)</u>	3.660-10.875	6.689
Outstanding on December 31, 2003	1,928,619	.112-11.625	5.705
Options granted during 2004	100,000	5.550	5.550
Options exercised during 2004	(283,526)	.112-10.875	5.183
Options canceled during 2004	<u>(4,001)</u>	.112-3.660	3.659
Outstanding on December 31, 2004	1,741,092	.432-11.625	5.786
Options granted during 2005	100,000	6.030	6.030
Options exercised during 2005	(81,110)	.432-3.886	3.055
Options canceled during 2005	<u>(19,635)</u>	3.660-10.875	6.623
Outstanding on December 31, 2005	<u><u>1,740,347</u></u>	1.727-11.625	5.918

Information with respect to stock options outstanding and stock options exercisable on December 31, 2005 follows:

Options Outstanding			
	Number Outstanding on December 31, 2005	Weighted-Average Remaining Contractual Life (Years)	Weighted- Average Exercise Price
Range of Exercise Prices			
\$0.432-2.375	120,144	2.874	\$ 1.992
\$2.938-3.886	543,838	4.166	3.585
\$5.000-7.063	633,440	6.991	6.372
\$7.625-11.625	442,925	4.735	8.399
	1,740,347	5.160	5.918

Options Exercisable			
	Number Exercisable on December 31, 2005	Weighted- Average Exercise Price	
Range of Exercise Prices			
\$0.432-2.375	120,144	\$ 1.992	
\$2.938-3.886	468,606	3.585	
\$5.000-6.650	303,407	6.372	
\$7.063-11.625	593,625	8.399	
	1,485,782	6.026	

Option shares exercisable on December 31, 2004 and 2003 were 1,382,156 and 1,324,528 and had a weighted average exercise price of \$5.948 and \$5.708, respectively.

In connection with the issuance of Series C convertible preferred stock in 1993, the Company issued common stock purchase warrants for 662,287 shares at no additional cost to the Series C convertible preferred stockholders. At the Company's initial public offering on November 26, 1997, all preferred stock shares were converted to common stock shares. These warrants had an exercise price of \$1.123 per share and expired upon the tenth anniversary of issuance. For the year ended December 31, 2002, 28,950 warrants were converted into 28,950 shares of common stock and were exercised for \$32,511. On December 31, 2003 there were 453,001 warrants issued, outstanding, and exercisable. All of these outstanding warrants were issued pursuant to the Company's September 8, 2003 private equity offering at a rate of one per common share purchased. Their exercise price was \$4.415 per share and the expiration was September 8, 2004. No warrants were exercised in 2003. On September 2, 2004, 453,001 warrants were exercised relating to the Company's September 2003 private equity offering of \$4.415 per share. For the year ended December 31, 2005 there were no warrants outstanding.

For the years ended December 31, 2005, 2004 and 2003, the Company recognized \$0, \$0 and \$74,268 in stock compensation expense related to the grant of 0, 0 and 24,350 shares of stock to five directors respectively. Also, in December of 2002, an officer of the Company resigned, however, her services were retained on a consulting basis for one year. The terms of her consulting agreement allowed for all stock options previously granted to remain in effect during the term of this agreement, subject to her complying with all her obligations under the agreement. Upon the end of the term, any stock options previously granted became fully vested and exercisable in accordance with the applicable option agreement underlying each grant. Therefore, the Company is required to estimate the fair value of these options pursuant to accounting provided for under FASB No.123. The fair value of these options was

estimated on December 6, 2002, the date the consulting agreement began through December 31, 2003, the termination date of the agreement. March 30, 2004 was the last date allowable to exercise these options. Using the Black-Scholes option pricing model to calculate the appropriate expense the Company recorded \$79,750 in deferred compensation cost of which \$12,681 was recognized as compensation expense in December of 2002 with the remaining \$67,069 expensed in 2003. There is no cash impact to the Company with respect to this calculation, which is required under FAS No. 123.

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 respectively. The restricted share rights vest in lump sum or “cliff vest” on September 27, 2008, provided that the grantee has not 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. The Company as required pursuant to APB No.25 recognized \$8,719 for the restricted share rights and \$7,333 for the performance share rights totaling \$16,052 in stock-based compensation expense in 2005. Compensation expense for performance share rights is determined using variable plan accounting based upon management’s estimate of the number of share rights that will eventually vest.

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 respectively. The restricted share rights vest in lump sum or “cliff vest” on October 30, 2007, provided that the grantee has not terminated service prior to the vesting date. The performance share rights also vest in lump sum or “cliff vest” on October 30, 2007 provided a certain performance goal or milestone is achieved on or before October 30, 2007 and the grantee has not terminated service prior to October 30, 2007. The Company as required pursuant to APB No.25 recognized \$30,306 and \$6,725 for the restricted share rights and \$26,951 and \$10,750 for the performance share rights totaling \$57,257 and \$17,475 in stock-based compensation expense in 2005 and 2004, respectively. Compensation expense for performance share rights is determined using variable plan accounting based upon management’s estimate of the number of share rights that will eventually vest.

(14) 401(k) Profit-Sharing Plan

The Company has a 401(k) profit-sharing plan covering substantially all employees who meet defined service requirements. In 2004, the Company amended its 401(k) plan providing for deferred salary contributions by the plan participants and maximum contributions by the Company of 100% of the first 3% and 50% of the next 2% of the participant’s salary. The Company contributions under this plan were \$131,137, \$120,335 and \$81,875 for the years ended December 31, 2005, 2004 and 2003, respectively.

(15) Significant Customers and Contingencies

Revenue from three customers constituted approximately 65.8%, 12.4% and 5.5%, respectively, of the Company’s 2005 revenue. Amounts included in accounts receivable on December 31, 2005 relating to these three customers were approximately \$374,000, \$373,000 and \$0, respectively. Revenue from these three customers constituted approximately 69.7%, 12.9% and 1.0%, respectively, of the Company’s 2004 revenue. Amounts included in accounts receivable on December 31, 2004 relating to these three customers were approximately \$215,000, \$152,000 and \$19,000, respectively. Revenue from these three same customers constituted approximately 61.0%, 22.4% and 0%, respectively, of the Company’s 2003 revenue.

The Company currently has supply agreements with BASF Corporation (“BASF”), the Company’s largest customer, and Rohm and Haas Electronic Materials CMP, Inc. (“RHEM”), that have contingencies outlined in them which could potentially result in the license of technology and/or the sale of production equipment, providing capacity sufficient to meet the customer’s production needs, from the

Company to the customer, if triggered by the Company's failure to meet certain performance requirements and/or certain financial condition covenants. The financial condition covenants in 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.

The Company believes that it has sufficient cash and investment balances to avoid the first triggering event through 2006. 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.

In February of 2004, the Company amended its original agreement with Rohm and Haas Electronic Materials CMP, Inc. ("RHEM," formerly known as Rodel, Inc). This amendment allows for RHEM to maintain exclusivity based upon it purchasing lower dollar amounts of nanocrystalline materials, while extending the agreement through 2009. This amendment did not require RHEM to purchase any materials from the Company in 2004, but, in lieu of materials purchased it did require an aggregate of \$600,000 be paid to Nanophase in four equal quarterly installments in 2004 to support on going efforts in joint slurry product development during 2004. This \$600,000 was fully earned in 2004.

(16) Business Segmentation and Geographical Distribution

Revenue from international sources approximated \$1,094,200, \$673,900 and \$755,900 for the years ended December 31, 2005, 2004 and 2003, respectively. As part of its revenue from international sources, the Company recognized approximately \$479,400 and \$220,200 in product revenue from several German and Taiwan companies respectively, and \$306,800 in other revenue (which included \$6,800 in purchased supplies) from a technology license fee from its Japanese licensee for the year ended December 31, 2005. Revenue from these same international sources approximated \$299,200, \$1,900 and \$322,500 for the year ended December 31, 2004, compared to \$119,100, \$0 and \$366,200 for the same period in 2003, respectively. The \$300,000 technology license fee typically received every twelve months from our Japanese licensee is included in each of the three years presented.

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

(17) Quarterly Financial Data (Unaudited)

	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
2005				
Total revenue	\$1,613,382	\$2,084,725	\$1,674,614	\$1,429,186
Loss from operations	(1,468,701)	(1,179,972)	(1,602,239)	(1,411,249)
Net loss	(1,415,540)	(1,087,963)	(1,534,707)	(1,345,401)
Basic and diluted loss per share	(0.08)	(0.06)	(0.09)	(0.07)
2004				
Total revenue	\$1,293,359	\$1,542,068	\$1,377,118	\$995,389
Loss from operations	(1,453,580)	(1,467,153)	(1,397,026)	(1,890,228)
Net loss	(1,470,564)	(1,452,248)	(1,658,272)	(1,865,871)
Basic and diluted loss per share	(0.09)	(0.08)	(0.09)	(0.11)

(18) Administrative Actions

On February 23, 2004, an unidentified party filed a Petition to Request a Reexamination of US Patent No. 6,669,823 B1 in the U.S. Patent and Trademark Office, or USPTO. US Patent No. 6,669,823 B1 relates to certain parts of one of the Company's nanoparticle manufacturing processes, NanoArc Synthesis. The Company subsequently received notice that the USPTO had granted the Request for Reexamination. The reexamination process is provided for by law and requires the USPTO to consider the scope and validity of the patent based on substantial new questions of patentability raised by a third party or the USPTO. On September 7, 2005, the Company's representatives conducted an interview with the Examiner assigned to the Reexamination at the USPTO, resulting in the Examiner preparing an interview summary indicating that the Examiner agreed all the issued claims were patentable. A response, including further remarks about the interview and two new claims, was submitted shortly thereafter. However, prior to the USPTO issuing a formal notice confirming patentability, the same unidentified party referenced above filed a second Petition to Request Reexamination of the patent. A second interview was conducted, resulting in an amendment to all patent claims. It is not feasible to predict whether the Company ultimately will succeed in maintaining all the claims of this patent during reexamination. If the patent claims in this patent ultimately are narrowed substantially by the USPTO, the patent coverage afforded to certain parts of the Company's NanoArc Synthesis nanoparticle manufacturing process could be impaired, 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.

(19) Lease Accounting Adjustment

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

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 15th day of March, 2006.

NANOPHASE TECHNOLOGIES CORPORATION

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

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on the 15th day of March, 2006.

<u>Signature</u>	<u>Title</u>
<u>/s/ Joseph Cross</u> Joseph Cross	President, Chief Executive Officer (Principal Executive Officer) and a Director
<u>/s/ Jess Jankowski</u> Jess Jankowski	Chief Financial Officer, Treasurer and Secretary (Principal Financial and Accounting Officer)
<u>/s/ Donald S. Perkins</u> Donald S. Perkins	Chairman of the Board and Director
<u>/s/ James A. Henderson</u> James A. Henderson	Director
<u>/s/ James A. McClung</u> James A. McClung	Director
<u>/s/ Jerry Pearlman</u> Jerry Pearlman	Director
<u>/s/ Richard W. Siegel</u> Richard W. Siegel	Director
<u>/s/ R. Janet Whitmore</u> R. Janet Whitmore	Director

EXHIBIT INDEX

- 23.1 Consent of McGladrey & Pullen, LLP.
- 31.1 Certification of Chief Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.
- 31.2 Certification of the Chief Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Exchange Act.
- 32 Certification of the Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350.

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- Confidentially requested, confidential portions have been omitted and filed separately with the Commission as required by Rule 24b-2.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-53445 and No. 333-74170) and the Registration Statement on Form S-3 (No. 333-90326) of our report dated March 15, 2006, relating to our audits of the financial statements and internal control over financial reporting, which appear in this Annual Report on Form 10-K of Nanophase Technologies Corporation for the year ended December 31, 2005.

/s/ McGladrey & Pullen LLP
McGladrey & Pullen LLP

Schaumburg, Illinois
March 15, 2006

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

I, Joseph Cross, certify that:

1. I have reviewed this annual report on Form 10-K of Nanophase Technologies Corporation;

2. Based on my knowledge, this 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 report;

3. Based on my knowledge, the financial statements, and other financial information included in this 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 report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15(d)-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, 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 and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2006

/s/ JOSEPH E. CROSS

Joseph E. Cross
Chief Executive Officer

Certification Pursuant to 18 U.S.C. Section 1350
(as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002)

In connection with this annual report of Nanophase Technologies Corporation (the “Company”) on Form 10-K for the year ending December 31, 2005 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), we, Joseph E. Cross, Chief Executive Officer of the Company, and Jess A. Jankowski, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to our knowledge:

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: March 15, 2006

_____/s/ JOSEPH E. CROSS_____
Joseph E. Cross
Chief Executive Officer

_____/s/ JESS A. JANKOWSKI_____
Jess A. Jankowski
Chief Financial Officer

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