

NANOPHASE TECHNOLOGIES CORPORATION  
Form 10-K405  
March 29, 2002

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

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**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, 2001**

**Commission File Number 0-22333**

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**Nanophase Technologies Corporation**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

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

**1319 Marquette Drive, Romeoville, Illinois 60446**  
(Address of principal executive offices) (zip code)

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

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

Securities registered pursuant to Section 12(g) of the Act:  
**Common Stock, par value \$.01 per share**  
**Preferred Stock Purchase Rights**

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

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

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 March 25, 2002 was \$107,500,075.

The number of shares outstanding of the registrant's Common Stock, par value \$.01, as of March 25, 2002 was 13,729,256.

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**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's Definitive Proxy Statement in connection with the registrant's 2002 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report on Form 10-K.



## PART I

### Item 1. Business

#### General

Nanotechnology, as practiced by Nanophase Technologies Corporation ( Nanophase or the Company ), involves creating nanostructured materials by controlling matter at the nanometer-size scale at the level of atoms and molecules. Because these nanostructures are made with molecular building blocks, they can be designed to exhibit novel and significantly improved physical, chemical and mechanical properties.

When the structural features are sized between individual molecules and bulk materials in the range of about 10 to 100 nanometers the objects often display physical attributes substantially different from those found in bulk materials. As a result, the properties of nanocrystalline materials often cannot be predicted from those seen at larger sizes, and nanoparticles can exhibit novel properties. When it is possible to control particle size and shape, it also is possible to enhance material properties and devise functions beyond those normally found in a material.

The Company's objective is to exploit its capabilities to efficiently engineer and manufacture nanocrystalline materials. Nanophase does this by providing value-enhanced solutions for commercial applications in multiple global markets. Recognizing a need to offer enhanced performance and assist customers with their product improvements, Nanophase targets markets in which a practical solution may be found through using nanoengineered products. The Company works closely with leaders in these target markets to identify their material and performance requirements.

Raw materials used in the Company's various processes are usually readily commercially available. Nanophase currently has no significant reliance on sole-source suppliers.

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

Nanocrystalline materials generally are made of particles that are less than 100 nanometers (billionths of a meter) in diameter. They contain only 1,000s or 10,000s of atoms, rather than the millions or billions of atoms found in larger size particles. The properties of nanocrystalline materials depend upon the composition, size, shape, structure, and surface of the individual particles. 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 Technologies

Nanophase intends to maintain and grow its intellectual property position in the rapidly emerging science of nanotechnology. The Company uses its technologies to engineer and produce nanocrystalline materials designed for specific product applications. These technologies include methods for the synthesis, surface-treatment and dispersion of nanocrystals. Nanophase also is engaged in ongoing research and technology-licensing activities that add to its core technologies or provide complementary technologies. Management believes that aggressively pursuing applications, inventions and patents will help it maintain a technical and commercial leadership position.

## Marketing

The Company markets and sells its products through a combination of business development and sales activities in close collaborative relationships with one (or sometimes several) lead customer 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 then forms a technical/marketing team that offers the customer an engineered solution to meet that company's specific requirements. Nanophase tailors 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.

The Company leverages its resources through relationships with organizations and individuals focused on market-specific or geography-specific areas. These relationships enhance Nanophase's ability to quickly develop lead customers and applications for its products. For example, to promote a more rapid penetration into Japanese markets, the Company continues to maintain its relationship with C. I. Kasei, a division of Itochu Corporation (CIK). CIK develops, engineers and manufactures products under license from the Company for use in multiple industrial markets.

A limited number of key customers account for a substantial portion of the Company's commercial revenue. In particular, revenue from BASF Corporation (BASF) and CIK constituted approximately 75.5% and 9.4%, respectively, of the Company's 2001 revenue. The Company's customers are significantly larger than, and are able to exert a high degree of influence over, the Company. 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.

Nanophase has a consulting contract with Dr. Richard W. Siegel, who provides support for business development and marketing activities. Dr. Siegel is currently serving as a Director of the Company. The Company, from time to time, also employs a number of marketing representatives and third-party 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 uses its Website, advertises in selected industry and trade journals, and provides specification sheets, corporate journals, and other marketing materials. In addition, Nanophase routinely networks with Fortune 500 companies to display its technology and uncover potential applications.

## Technology and Engineering

The Company's Technology and Engineering Group includes the research and development and advanced engineering functions. The near-term objective of Nanophase's research and process-development activities is to gather core technologies that have the capability to serve multiple markets commercially and provide the technical basis for significant company growth.

Nanophase's total research and development expense, which includes all expense relating to the technology and advanced engineering group, during the years ended December 31, 2001, 2000 and 1999 were \$1,601,671, \$1,837,036, and \$1,456,126, respectively. The Company's future success will depend in large part upon its ability to keep pace with evolving advanced materials technologies and industry standards, and the Company may be unable to do so. Through the five-year period ended December 31, 2001, the Company has had cumulative research and development expenses of approximately \$7.4 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.

### **Intellectual Property and Proprietary Rights**

Nanophase relies on a combination of copyright, trademark, 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 third-party patents to expand its technology base. The Company currently owns or licenses 20 United States and 18 foreign patents and patent applications, all of which are counterparts to domestic filings. Nanophase's intellectual property rights, however, could be challenged, invalidated or circumvented. The Company does not believe that its products or processes infringe the intellectual property rights of others, but such claims, if they are established, could result in material liabilities or loss of business.

The Company requires its employees, consultants, outside scientific collaborators and other advisors to sign confidentiality and, when appropriate, non-compete agreements when their employment or consulting relationships begin. These agreements generally provide that all confidential information developed or made known to the individual during the course of that person's relationship with the Company will be kept confidential, and not be disclosed to third parties except in specific circumstances. In the case of research employees, the agreements also provide that all inventions made by the individual shall be the exclusive property of Nanophase. There can be no assurance, however, that these agreements will provide meaningful protection for the Company's trade secrets, know-how or patent rights, or will provide Nanophase with adequate remedies in the event of unauthorized use or disclosure of such information. In addition, the Company's employees who have not entered into non-compete agreements may become competitors when their employment at Nanophase ends.

### **Competition**

Within each of its targeted markets and product applications, Nanophase faces current and potential competition from many advanced materials and chemical companies, as well as the in-house capabilities of several of its current and potential customers. In many markets, the Company has major competitors, some of which are larger and more diversified than the Company. Although management believes its materials and technologies are superior to those of its competitors, competitive companies pose significant risks to Nanophase because they may have substantially greater financial and technical resources, larger research and development staffs, and greater manufacturing and marketing capabilities.

In addition, the number of development-stage companies involved in nanocrystalline materials continues to grow 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 capability; however, they may represent significant competitive risks 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 regulation. 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 in other countries 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 occupational safety and health laws. To date, those regulations have not materially restricted or impeded operations.

## Employees

On December 31, 2001, the Company had a total of 51 full-time employees, 14 of whom hold advanced degrees. In the first quarter of 2001, the Company hired Robert Haines, an experienced vice president of operations, to improve its manufacturing and related operations. Nanophase has no collective bargaining arrangements.

## Forward-Looking Statements

Nanophase Technologies Corporation 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 on 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. Nanophase 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 2002 and beyond to differ materially from those expressed in, or implied by, what appears here. These risks, uncertainties and contingencies include, without limitation, demand for and acceptance of the Company's nanocrystalline materials; the Company's dependence on a limited number of key customers; the Company's limited manufacturing capacity and experience; 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 is involved; and other risks set forth under the Company's previous filings with the Securities and Exchange Commission. In addition, the continuing impact of the September 11, 2001 terrorist attacks and subsequent related events on the global economy and international political conditions also may be an important factor or make the occurrence of one or more of the aforementioned factors more likely. 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.

## 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 are Chicago suburbs. The Company also leases offsite warehouse space from time to time. The Company's operations in Burr Ridge are registered under ISO 9001, and management believes that its manufacturing operations are in compliance with the cGMP requirements of the FDA.

The Romeoville facility houses the Company's headquarters, advanced manufacturing function (surface treatment and pilot-scale manufacturing) and research and development laboratories, and will be used for additional commercial manufacturing space in 2002. Nanophase leases its Romeoville facility under an agreement whose initial term will expire in July 2006, with an option to extend the lease for two additional periods of five years each. 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. Nanophase leases its Burr Ridge facility under an agreement whose initial term expired in September 1999. The Company has options to extend the lease for up to five additional one-year terms and is currently in the third additional one-year term, which expires in September 2002.

Management believes that the Company's leased facilities provide sufficient capacity to fulfill current known customer demand as well as providing additional space to enable expansion of key production processes. Management also believes that the Company's capital expenditures in 2001 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**

See Note 18 to the Financial Statements for additional information.

**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 2001.

## 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 ending December 31, 2001:		
First Quarter	\$ 12.69	\$ 5.25
Second Quarter	12.14	5.50
Third Quarter	10.99	3.91
Fourth Quarter	7.00	3.66
Fiscal year ending December 31, 2000:		
First Quarter	\$ 22.06	\$ 4.31
Second Quarter	16.69	5.50
Third Quarter	17.50	8.13
Fourth Quarter	15.25	8.38

On March 25, 2002, the last reported sale price of the Common Stock was \$7.83 per share, and there were approximately 133 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 August 25, 1999, the Company issued 24,500 shares of Common Stock to Joseph Cross, the Company's Chief Executive Officer, as part of an arrangement made to induce Mr. Cross to join the Company as its Chief Executive Officer. Effective January 2000, the Company granted 3,177 shares of Common Stock to each of the following directors of the Company for services performed in their capacity as directors: Donald Perkins, Edward Hagenlocker, Jerry Pearlman and Richard Siegel. Effective January 2001, the Company granted 1,361 shares of Common Stock to each of the following directors of the Company for services performed in their capacity as directors: Donald Perkins, Edward Hagenlocker, James McClung, Jerry Pearlman and Richard Siegel. Effective January 2002, the Company granted 2,540 shares of Common Stock to each of the following directors of the Company for services performed in their capacity as directors: Donald Perkins, James Henderson, James McClung, Jerry Pearlman, and Richard Siegel. Each of the preceding issuances were made in reliance on the exemption from registration found in section 4(2) of the Securities Act of 1933.

On November 26, 1997 the Company's Registration Statement on Form S-1 (File No. 333-36937) relating to the Company's initial public offering of common stock (the Offering) was declared effective by the Securities and Exchange Commission. Since the effective date, of its \$28,837,936 of net proceeds from the Offering, the Company has used approximately \$9,237,000 for capital expenditures primarily related to the further expansion of the Company's existing manufacturing facility and the purchase of operating equipment and approximately \$12,175,000 for working capital and other general corporate purposes. The remainder of the net proceeds has been invested by the Company, pending its use, in short-term, investment grade, interest-bearing obligations. At December 31, 2001, the Company had approximately \$7,426,000 in cash, cash equivalents and investments.



**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, 2001 have been derived from the audited financial statements of the Company.

	Years Ended December 31,				
	2001	2000	1999	1998	1997
<b>Statement of Operations Data:</b>					
Product revenue	\$ 3,650,914	\$ 3,824,159	\$ 1,128,861	\$ 1,140,845	\$ 924,763
Other revenue	388,555	449,194	295,986	162,944	2,798,729
<b>Total revenue</b>	<b>4,039,469</b>	<b>4,273,353</b>	<b>1,424,847</b>	<b>1,303,789</b>	<b>3,723,492</b>
Cost of revenue	4,890,697	4,754,485	2,610,667	3,221,996	3,935,766
Research and development expense	1,601,671	1,837,036	1,456,126	1,504,127	990,331
Selling, general and administrative expense	3,798,543	3,388,758	3,641,736	3,594,946	2,074,728
<b>Total operating expense</b>	<b>10,290,911</b>	<b>9,980,279</b>	<b>7,708,529</b>	<b>8,321,069</b>	<b>7,000,825</b>
Operating loss	(6,251,442)	(5,706,926)	(6,283,682)	(7,017,280)	(3,277,333)
Interest income	585,782	1,234,054	1,213,448	1,539,400	204,863
Interest expense	(33,485)	(3,455)			
Other, net	(11,098)	(42,000)	(46,833)		
Provision for income taxes	(30,000)			(156,000)	
<b>Net loss</b>	<b>\$ (5,740,243)</b>	<b>\$ (4,518,327)</b>	<b>\$ (5,117,067)</b>	<b>\$ (5,633,880)</b>	<b>\$ (3,072,470)</b>
Net loss per share-basic and diluted	\$ (0.42)	\$ (0.34)	\$ (0.40)	\$ (0.45)	
Shares used in computing the net loss per share	13,667,062	13,390,741	12,690,483	12,416,305	

	As of December 31,				
	2001	2000	1999	1998	1997
<b>Balance Sheet Data:</b>					
Cash and cash equivalents	\$ 582,579	\$ 473,036	\$ 624,509	\$ 363,394	\$ 3,988,368
Working capital	7,215,520	18,356,349	21,831,264	26,535,018	32,038,915
Total assets	19,184,388	23,830,163	25,677,539	30,453,988	36,196,569
Long-term obligations	812,390	827,984			
Total stockholders' equity	15,643,618	21,007,745	24,161,323	29,107,590	34,651,334

## **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.*

### **Overview**

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. All of the Company's revenue since January 1, 1997 has been generated through commercial sources. From inception through December 31, 2001, the Company was primarily capitalized through the private offering of approximately \$19,558,000 of equity securities and its initial public offering of \$28,838,000 of Common Stock, each net of issuance costs. The Company has incurred cumulative losses of \$34,754,188 from inception through December 31, 2001.

### **Results of Operations**

#### ***Years Ended December 31, 2001 and 2000***

Product revenue is recorded when title transfers. Other revenue is recorded when specific milestones are met regarding development arrangements or when the Company licenses its technology and transfers proprietary information. Total revenue decreased to \$4,039,469 in 2001, compared to \$4,273,353 in 2000. The decrease in total revenue between 2001 and 2000 was principally due to soft customer demand and extended times to market given the general state of the manufacturing economy, exacerbated by the terrorist attack on the United States of America on September 11, 2001. Product revenue decreased to \$3,650,914 in 2001, compared to \$3,824,159 in 2000. Other revenue decreased to \$388,555 in 2001, compared to \$449,194 in 2000. Revenue from two major customers constituted approximately 84.9% of the Company's 2001 revenue. In particular, revenue from BASF and CIK constituted approximately 75.5% and 9.4%, respectively, of the Company's 2001 revenue.

Cost of revenue generally includes costs associated with commercial production, customer development arrangements and licensing fees. Cost of revenue increased to \$4,890,697 in 2001, compared to \$4,754,485 in 2000. The increase in cost of revenue was primarily attributed to a net increase in the allowance for excess inventory quantities of \$539,415, somewhat offset by efficiencies in the manufacture of the Company's products. The majority of the increase in the allowance for excess inventory quantities related to a write-down of raw materials and finished goods relating to the Company's catalyst business. These inventories were built in support of a purchase order and in anticipation of upcoming order volumes from a customer in the United Kingdom that subsequently reneged on its legal obligations. Management felt that, although Nanophase has a current customer for this material, current volumes and limited predictability of future demand made this adjustment prudent.

Cost of revenue as a percentage of total revenue increased in 2001, compared to the same period in 2000, due primarily to the inventory adjustment 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. Research and development expense decreased to \$1,601,671 in 2001, compared to \$1,837,036 in 2000. The decrease in research and development expense was largely attributed to the capitalization of approximately \$180,000 of advanced engineering salaries attributed to the build out of the Company's new pilot manufacturing and powder coating facilities, a reduction in fees and expenses paid to outside consultants in 2001, more research personnel being hired in 2000, to whom the Company paid negotiated bonuses and recruiting and relocation costs, and fewer travel expenses being incurred in 2001.

Selling, general and administrative expense increased to \$3,798,543 in 2001, compared to \$3,388,758 in 2000. The net increase was primarily attributed to increases in salaries and costs incurred relating to the hiring of two company employees, costs of insurance, rent and associated expenses relating to the Company's new facility, and printing costs. These increases were partially offset by a reduction in bad debt expense, consulting fees, and travel expenditures.

Interest income decreased to \$585,782 in 2001, compared to \$1,234,054 in 2000. This decrease was primarily due to a reduction in funds available for investment and reduced investment yields.

The Company had \$30,000 income tax expense in 2001, compared to \$0 in 2000. The 2001 expense was due to the foreign taxes withheld from license fees received from CIK. The payment of such taxes creates a foreign tax credit which may be available to offset future federal income taxes when the Company generates taxable income.

***Years Ended December 31, 2000 and 1999***

Total revenue increased to \$4,273,353 in 2000, compared to \$1,424,847 in 1999. The increase in total revenue between 2000 and 1999 was primarily attributed to a \$2,695,298 increase in product revenue and a \$153,208 increase in other revenue. Product revenue increased to \$3,824,159 in 2000, compared to \$1,128,861 in 1999. Other revenue increased to \$449,194 in 2000, compared to \$295,986 in 1999. Revenue from two major customers constituted approximately 78.5% of the Company's 2000 revenue. In particular, revenue from BASF and CIK constituted approximately 68.5% and 10.0%, respectively, of the Company's 2000 revenue.

Cost of revenue increased to \$4,754,485 in 2000, compared to \$2,610,667 in 1999. The increase in cost of revenue was generally attributed to increased product sales, somewhat offset by efficiencies in the manufacture of the Company's products and a reduction in the allowance for excess quantities in inventory in 2000 as a result of the sale of inventories for which an allowance had previously been provided. Cost of revenue as a percentage of total revenue decreased in 2000, compared to the same period in 1999, due primarily to the increase in total revenue.

Research and development expense, which includes all expenses relating to the technology and advanced engineering groups, increased to \$1,837,036 in 2000, compared to \$1,456,126 in 1999. The increase in research and development expense was primarily attributed to additional salaries for newly hired research personnel and increases in internal costs regarding the development of new formulations and product applications. These increases were partially offset by a reduction in recruiting and relocation expenses in 2000 and non-recurring payments to a former officer relating to a restructuring in 1999.

Selling, general and administrative expense decreased to \$3,388,758 in 2000, compared to \$3,641,736 in 1999. The net decrease was primarily attributed to non-recurring restructuring costs, including payments to former officers in 1999, and decreased legal expenses in 2000. These decreases were partially offset in 2000 by additional rent expense relating to the Company's new facility, and increased investor relations and printing costs.

Interest income increased to \$1,234,054 in 2000, compared to \$1,213,448 in 1999. This increase was primarily due to an increase in investment yields which was somewhat offset by a reduction in funds available for investment.

There was no income tax expense for the years ended December 31, 2000 and 1999.

### **Liquidity and Capital Resources**

The Company's cash, cash equivalents and investments amounted to \$7,425,535 at December 31, 2001, compared to \$17,304,757 at December 31, 2000. The net cash used in the Company's operating activities was \$5,040,478, \$5,127,473 and \$4,335,648 for the years ended December 31, 2001, 2000, and 1999, respectively. Net cash provided by investing activities, which is due to maturities of securities offset somewhat by capital expenditures and purchases of securities, amounted to \$4,523,068, \$2,560,824, and \$4,550,288 for the years ended December 31, 2001, 2000, and 1999, respectively. Capital expenditures, primarily related to the build out of the Company's new pilot manufacturing and powder blending facilities within its Romeoville, Illinois facility and further expansion of the Company's existing manufacturing facility and the purchase of related operating equipment, amounted to \$5,465,697, \$1,823,623, and \$504,061 for the years ended December 31, 2001, 2000, and 1999, respectively. Net cash provided by financing activities, which related to a loan from a customer and other financing agreements, and the issuance of shares of Common Stock pursuant to the exercise of options, offset to some extent by principal payments on debt obligations amounted to \$626,953, \$2,415,176, and \$46,475 for the years ended December 31, 2001, 2000, and 1999, respectively. Net cash provided by financing activities for 1999 related only to the issuance of shares of Common Stock pursuant to the exercise of options.

The Company's actual future capital requirements will depend 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.

Additionally, the Company's capital requirements could be affected by a supply agreement with its largest customer that contains, among other things, certain financial condition covenants, that if violated could trigger this customer's ability to require the Company to license certain technology to this customer and/or sell certain equipment to this customer, as more fully described in Note 16 of the Company's financial statements. The Company believes that no triggering event has occurred. However, if a triggering event does occur, and the customer elects to force a technology license or sale of equipment, this would significantly change the financial outlook for the Company.

The Company intends to seek additional future funding through public or private financing, collaborative relationships, government contracts or additional licensing agreements. The Company intends to raise capital to fund expected growth in new markets as well as to provide for expanded working capital needs expected to arise as sales volume grows. Management expects that this capital should be sufficient to enable the Company to avoid a triggering event relating to the customer supply agreement discussed in the preceding paragraph. 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.

At December 31, 2001, the Company had a net operating loss carryforward of approximately \$39.8 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 2005 and 2021. 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. At December 31, 2001, the Company also had a foreign tax credit carryforward of \$186,000, which could be used as an offsetting tax credit to reduce U.S. income taxes. The foreign tax credit will expire at various dates between 2017 and 2021, if not utilized before that date.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

The Company does not have any material market risk sensitive instruments.

**Item 8. Financial Statements and Supplementary Data**

The financial statements and financial statement schedule, with the report of independent auditors listed in Item 14 are included in this Form 10-K.

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

At a meeting held on November 27, 2001, the Board of Directors of the Company approved the engagement of McGladrey & Pullen, LLP as its independent auditors for the fiscal year ending December 31, 2001 to replace the firm of Ernst & Young LLP, as auditors of the Company. This change was effective December 3, 2001. The audit committee of the Board of Directors approved the change in auditors.

The reports of Ernst & Young LLP on the Company's financial statements for the past two fiscal years did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope, or accounting principles.

In connection with the audits of the Company's financial statements for each of the two fiscal years ended December 31, 2000, and in the subsequent interim period, there were no disagreements with Ernst & Young LLP on any matters of accounting principles or practices, financial statement disclosure, or auditing scope and procedures which, if not resolved to the satisfaction of Ernst & Young LLP would have caused Ernst & Young LLP to make references to the matter in their report.

The Company engaged McGladrey & Pullen, LLP as its new independent accountants as of December 3, 2001. Prior to this date, the Company did not consult with McGladrey & Pullen, LLP regarding the (i) application of accounting principles to a specified transaction, either completed or proposed, (ii) the type of audit opinion that might be rendered on the Company's financial statements, or (iii) any other matter that was the subject of a disagreement between the Company and its former auditor as defined in paragraph 304(a)(1)(iv) of Regulation S-K.

**PART III**

**Item 10. Directors and Executive Officers of the Registrant**

The information in response to this item is incorporated by reference from the Proposal No. 1 Election of Directors, Executive Officers and Section 16(a) Beneficial Ownership Compliance sections of the Definitive Proxy Statement to be filed with the Commission in connection with the Company's 2002 Annual Meeting of Stockholders (the 2002 Proxy Statement).

**Item 11. Executive Compensation**

The information in response to this item is incorporated by reference from the section of the 2002 Proxy Statement captioned Executive Compensation and Certain Transactions.

**Item 12. Security Ownership of Certain Beneficial Owners and Management**

The information in response to this item is incorporated by reference from the section of the 2002 Proxy Statement captioned Security Ownership of Management and Principal Stockholders.

**Item 13. Certain Relationships and Related Transactions**

The information in response to this item is incorporated by reference from the section of the 2002 Proxy Statement captioned Executive Compensation and Certain Transactions.

**PART IV**

**Item 14. 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:

Report of McGladrey & Pullen, LLP, Independent Auditors  
Report of Ernst & Young, LLP, Independent Auditors  
Balance Sheets as of December 31, 2001 and 2000  
Statements of Operations for the Years Ended December 31, 2001, 2000 and 1999  
Statements of Stockholders' Equity for the Years Ended December 31, 2001, 2000 and 1999  
Statements of Cash Flows for the Years Ended December 31, 2001, 2000 and 1999  
Notes to Financial Statements

2. The following financial statement schedule of the Company is filed as part of this Form 10-K:

Schedule II Valuation and Qualifying Accounts

All other financial schedules are omitted because such schedules are not required or the information required has been presented in the aforementioned financial statements.

3. The following exhibits are filed with this Form 10-K or incorporated by reference as set forth below.

**Exhibit  
Number**

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- |     |  |
|-----|--|
| 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).
- 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.



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- 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 February 15, 1999 between the Company and Gina Kritchevsky, incorporated by reference to Exhibit 10.18 to the 1998 10-K.
  - 10.15\* 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.
  - 10.16\* Employment Agreement dated as of June 1, 1999 between the Company and Donald Freed incorporated by reference to Exhibit 10.19 to the 1999 10-K.
  - 10.17\* 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).
  - 10.18\*\* 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.
  - 10.19\* 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).
  - 10.20 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.
  - 10.21\*\*\* 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.
  - 10.22 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.
  - 11 Statement regarding computation of loss per share.
  - 23.1 Consent of McGladrey & Pullen, LLP.
  - 23.2 Consent of Ernst & Young, LLP.
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\* Management contract or compensatory plan or arrangement.

\*\* Confidentiality previously requested for portions of this agreement. The Company has disclosed that such agreement is with BASF Corporation, as assignee.

\*\*\* 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 December 3, 2001, the Company filed a Form 8-K disclosing a change in its certifying accountant under Item 4.

NANOPHASE TECHNOLOGIES CORPORATION

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**Report of Independent Auditors**

The Board of Directors and Stockholders  
Nanophase Technologies Corporation

We have audited the accompanying balance sheet of Nanophase Technologies Corporation as of December 31, 2001, and the related statements of operations, stockholders' equity, and cash flows for the year then ended. Our audit also included the 2001 data in the financial statement schedule, Schedule II - Valuation and Qualifying Accounts, listed in the index at Item 14(a). These financial statements and the schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the 2001 financial statements referred to above present fairly, in all material respects, the financial position of Nanophase Technologies Corporation at December 31, 2001, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the 2001 data in the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set therein.

/s/ MCGLADREY & PULLEN, LLP  
McGladrey  
&  
Pullen,  
LLP

Schaumburg, Illinois  
January 31, 2002, except for the  
last paragraph of Note 18, for  
which the date is March 8, 2001

**Report of Independent Auditors**

The Board of Directors and Stockholders  
Nanophase Technologies Corporation

We have audited the accompanying balance sheets of Nanophase Technologies Corporation as of December 31, 2000, and the related statements of operations, stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2000. Our audit also included the financial statement schedule for the two years in the period ended December 31, 2000, listed in the index at Item 14 (a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Nanophase Technologies Corporation at December 31, 2000, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2000, in conformity with accounting principles generally accepted in the United States. Also in our opinion, the related financial statement schedule for the two years in the period ended December 31, 2000, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

/s/ ERNST & YOUNG LLP  
Ernst &  
Young  
LLP

Chicago, Illinois  
February 2, 2001

## NANOPHASE TECHNOLOGIES CORPORATION

## BALANCE SHEETS

	As of December 31,	
	2001	2000
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 582,579	\$ 473,036
Investments	6,842,956	16,831,721
Trade accounts receivable, less allowance for doubtful accounts of \$25,000 in 2001 and \$81,450 in 2000	1,112,952	1,238,334
Other receivable, net	67,449	144,818
Inventories, net	956,268	892,674
Prepaid expenses and other current assets	381,696	770,200
<b>Total current assets</b>	<b>9,943,900</b>	<b>20,350,783</b>
Equipment and leasehold improvements, net	8,914,745	3,266,245
Other assets, net	325,743	213,135
	<b>\$ 19,184,388</b>	<b>\$ 23,830,163</b>
<b>LIABILITIES AND STOCKHOLDERS EQUITY</b>		
<b>Current liabilities:</b>		
Current portion of long-term debts	\$ 714,135	\$ 285,316
Current portion of capital lease obligations	48,352	
Accounts payable	1,233,466	824,338
Accrued expenses	732,427	884,780
<b>Total current liabilities</b>	<b>2,728,380</b>	<b>1,994,434</b>
Long-term debt, less current maturities	758,490	827,984
Long-term portion of capital lease obligations, less current maturities	53,900	
	<b>812,390</b>	<b>827,984</b>
<b>Contingent liabilities:</b>		
<b>Stockholders equity:</b>		
Preferred stock, \$.01 par value; 24,088 authorized and no shares issued and outstanding		
Common stock, \$.01 par value; 25,000,000 shares authorized; 13,705,931 and 13,593,914 shares issued and outstanding at December 31, 2001 and December 31, 2000, respectively	137,059	135,939
Additional paid-in capital	50,260,747	49,885,751
Accumulated deficit	(34,754,188)	(29,013,945)
<b>Total stockholders equity</b>	<b>15,643,618</b>	<b>21,007,745</b>
	<b>\$ 19,184,388</b>	<b>\$ 23,830,163</b>

(See accompanying Notes to Financial Statements)



## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF OPERATIONS

	Years ended December 31,		
	2001	2000	1999
<b>Revenue:</b>			
Product revenue	\$ 3,650,914	\$ 3,824,159	\$ 1,128,861
Other revenue	388,555	449,194	295,986
<b>Total revenue</b>	<b>4,039,469</b>	<b>4,273,353</b>	<b>1,424,847</b>
<b>Operating expense:</b>			
Cost of revenue	4,890,697	4,754,485	2,610,667
Research and development expense	1,601,671	1,837,036	1,456,126
Selling, general and administrative expense	3,798,543	3,388,758	3,641,736
<b>Total operating expenses</b>	<b>10,290,911</b>	<b>9,980,279</b>	<b>7,708,529</b>
Loss from operations	(6,251,442)	(5,706,926)	(6,283,682)
Interest income	585,782	1,234,054	1,213,448
Interest expense	(33,485)	(3,455)	
Other, net	(11,098)	(42,000)	(46,833)
Loss before provision for income taxes	(5,710,243)	(4,518,327)	(5,117,067)
Provision for income taxes	(30,000)		
<b>Net loss</b>	<b>\$ (5,740,243)</b>	<b>\$ (4,518,327)</b>	<b>\$ (5,117,067)</b>
Net loss net per share-basic and diluted	\$ (0.42)	\$ (0.34)	\$ (0.40)
Weighted average number of common shares outstanding	13,667,062	13,390,741	12,690,483

(See accompanying Notes to Financial Statements)

## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF STOCKHOLDERS EQUITY

Description	Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount			
Balance as of January 1, 1999		\$	12,568,691	\$ 125,687	\$ 48,360,454	\$ (19,378,551)	\$ 29,107,590
Exercise of stock options			170,867	1,709	44,766		46,475
Stock Compensation			24,500	245	124,080		124,325
Net loss for the year ended December 31, 1999						(5,117,067)	(5,117,067)
Balance as of December 31, 1999			12,764,058	127,641	48,529,300	(24,495,618)	24,161,323
Exercise of stock options			444,569	4,445	1,147,431		1,151,876
Exercise of warrants			372,579	3,726	146,274		150,000
Stock compensation			12,708	127	62,746		62,873
Net loss for the year ended December 31, 2000						(4,518,327)	(4,518,327)
Balance as of December 31, 2000			13,593,914	135,939	49,885,751	(29,013,945)	21,007,745
Exercise of stock options			105,212	1,052	302,761		303,813
Stock compensation			6,805	68	72,235		72,303
Net loss for the year ended December 31, 2001						(5,740,243)	(5,740,243)
Balance as of December 31, 2001		\$	13,705,931	\$ 137,059	\$ 50,260,747	\$ (34,754,188)	\$ 15,643,618

(See accompanying Notes to Financial Statements)



## NANOPHASE TECHNOLOGIES CORPORATION

## STATEMENTS OF CASH FLOWS

	Years ended December 31,		
	2001	2000	1999
<b>Operating activities:</b>			
Net loss	\$ (5,740,243)	\$ (4,518,327)	\$ (5,117,067)
Adjustments to reconcile net loss to cash used in operating activities:			
Depreciation and amortization	714,276	722,877	678,749
Stock compensation expense	72,303	62,873	124,325
Allowance for excess inventory quantities	539,415	(168,627)	69,581
Loss on disposition of equipment	84,388		61,011
Changes in assets and liabilities related to operations:			
Trade accounts receivable	125,382	(836,508)	(85,498)
Other receivable	77,369	103,023	(247,841)
Inventories	(603,009)	42,731	2,466
Prepaid expenses and other assets	266,690	(728,417)	8,807
Accounts payable	(424,696)	208,520	202,440
Accrued expenses	(152,353)	(15,618)	(32,621)
Net cash used in operating activities	(5,040,478)	(5,127,473)	(4,335,648)
<b>Investing activities:</b>			
Acquisition of equipment and leasehold improvements	(5,465,697)	(1,823,623)	(504,061)
Purchases of held-to-maturity investments	(84,880,519)	(132,457,935)	(126,819,265)
Maturities of held-to-maturity investments	94,869,284	136,842,382	131,873,614
Net cash provided by investing activities	4,523,068	2,560,824	4,550,288
<b>Financing activities:</b>			
Principal payment on debt obligations, including capital leases	(320,755)	(22,700)	
Proceeds from borrowings	643,895	1,136,000	
Proceeds from sale of common stock	303,813	1,301,876	46,475
Net cash provided by financing activities	626,953	2,415,176	46,475
Increase (decrease) in cash and cash equivalents	109,543	(151,473)	261,115
Cash and cash equivalents at beginning of period	473,036	624,509	363,394
Cash and cash equivalents at end of period	\$ 582,579	\$ 473,036	\$ 624,509
<b>Supplemental cash flow information:</b>			
Interest paid	\$ 33,485	\$ 3,455	\$
Income taxes paid	\$ 30,000	\$	\$
<b>Supplemental non-cash investing and financing activities:</b>			
Capital lease obligations incurred for use of equipment	\$ 138,437	\$	\$
Accounts payable incurred for the purchase of equipment and leasehold improvements	\$ 833,824	\$	\$



(See accompanying Notes to Financial Statements)

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**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.

In the course of its corporate development, the Company has experienced net losses and negative cash flows from operations. Historically, the Company has funded its operations primarily through the issuance of equity securities.

Revenue from international sources approximated \$530,625, \$587,500, and \$573,300, for the years ended December 31, 2001, 2000, and 1999, respectively.

**(2) Summary of Significant Accounting Policies**

***Cash and Cash Equivalents***

Cash and cash equivalents primarily consist of demand deposits.

***Investments***

Investments are classified by the Company at the time of purchase for appropriate designation and such designation is reevaluated as of each balance sheet date. The Company's policy is to classify money market funds and certificates of deposit as investments. 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.

***Accounts Receivable***

Credit evaluations of customers are ongoing and collateral or other security is generally not required on accounts receivable. An allowance for doubtful accounts is maintained at a level management believes is sufficient to cover potential credit losses.

***Inventory***

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. Although materials subject to this allowance remain in good condition, the quantities on hand exceed the Company's short-term needs.

***Equipment and Leasehold Improvements***

Equipment is stated at cost and is being depreciated over its estimated useful life (3-10 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 (1-16 years). Depreciation expense for leased assets is included with depreciation expense for owned assets.

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

***Patent Costs***

Patent costs are included in other assets and are being amortized over the life of the respective patent using the straight-line method.

***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.

***Product Revenue***

Product revenue consists of sales of product that are recognized when realized and earned. This generally occurs when persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable, and collectibility is reasonably assured. At times, the Company may recognize revenue prior to delivery, in arrangements requested by the Company's customers and meeting the requirements of Staff Accounting Bulletin No. 101, that, including other requirements, requires that the Company has fully completed the production of the product such that no specific performance obligations excluding shipment remain and that the risks of ownership have passed to the buyer.

***Other Revenue***

Other revenue consists of revenue from research and development arrangements with non-governmental entities, fees from the transfer of technology and related royalties. Research and development arrangements include both cost-plus and fixed fee agreements and such revenue is recognized when specific milestones are met under the arrangements. Fees related to the transfer of technology are recognized when the transfer of technology to the acquiring party is completed and the Company has no further significant obligation. Royalties are recognized when earned pursuant to the contractual arrangement.

***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.

***Employee Stock Options***

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

**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

Company makes pro forma disclosures regarding the impact on net loss of using the fair value method of FASB Statement No. 123.

***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.

***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 596,140 for 2001, 961,207 for 2000, and 483,927 for 1999 are not included in the per share calculations because the effect of their inclusion would be anti-dilutive.

***New Accounting Pronouncements***

In July 2001, the Financial Accounting Standards Board issued SFAS 141, Business Combinations, and SFAS 142, Goodwill and Other Intangible Assets. SFAS 141 addresses financial accounting and reporting for business combinations and is effective for all business combinations initiated after June 30, 2001. SFAS 142 addresses financial accounting and reporting for acquired goodwill and other intangible assets and is effective for fiscal years beginning after December 15, 2001. Management does not anticipate that the adoption of these Statements will have a significant effect on the Company's financial statements.

In October 2001, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards (SFAS) No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets. This Statement addresses the financial accounting and reporting for the impairment or disposal of long-lived assets and supersedes FASB Statement No. 121, Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of, and the accounting and reporting provisions of APB Opinion No. 30, Reporting the Results of Operations-Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently occurring Events and Transactions, for the disposal of a segment of a business (as previously defined in that Opinion). SFAS 144 also amends ARB No. 51, Consolidated Financial Statements, to eliminate the exception to consolidation for a subsidiary for which control is likely to be temporary. The provisions of this Statement are effective for financial statements issued for fiscal years beginning after December 15, 2001. Management does not anticipate that the adoption of this Statement will have a significant effect on the Company's financial statements.

***Reclassifications***

Certain items in the 2000 and 1999 Statements of Operations have been reclassified to conform to the 2001 presentation with no effect on net loss.

**(3) Investments**

Investments at December 31, 2001 were comprised of variable rate demand notes, certificates of deposit and a money market fund. Investments at December 31, 2000 were comprised of government bonds, commercial paper and a money market fund. These investments had an approximate fair value of \$6,800,000 and \$16,838,000 at December 31, 2001 and 2000, respectively. All investments have been classified as held-to-maturity and mature in the subsequent year. Included in investments is \$554,822 at

## NANOPHASE TECHNOLOGIES CORPORATION

## NOTES TO FINANCIAL STATEMENTS (Continued)

December 31, 2001 and 2000 in the form of certificates of deposit which are pledged as collateral and restricted as to withdrawal or usage.

**(4) Inventories**

Inventories consist of the following:

	As of December 31,	
	2001	2000
Raw materials	\$ 429,393	\$ 328,786
Finished goods	1,157,877	655,475
	<u>1,587,270</u>	<u>984,261</u>
Allowance for excess quantities	(631,002)	(91,587)
	<u>\$ 956,268</u>	<u>\$ 892,674</u>

**(5) Equipment and Leasehold Improvements**

Equipment and leasehold improvements consist of the following:

	As of December 31,	
	2001	2000
Machinery and equipment	\$ 4,239,038	\$ 3,137,182
Office equipment	306,751	292,202
Office furniture	75,871	69,230
Leasehold improvements	1,407,342	873,317
Construction in progress	5,710,743	1,524,515
	<u>11,739,745</u>	<u>5,896,446</u>
Less: Accumulated depreciation and amortization	(2,825,000)	(2,630,201)
	<u>\$ 8,914,745</u>	<u>\$ 3,266,245</u>

Depreciation expense was \$705,070, \$709,792, and \$673,728 for the years ended December 31, 2001, 2000, and 1999, respectively.

**(6) 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. At December 31, 2001 and 2000, borrowings against this note amounted to \$1,293,895 and \$650,000, 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, not yet placed in service, to be used in the manufacture of product for this customer, with a cost at December 31, 2001 approximating the outstanding balance of the note. Contractually, the Company has twenty-nine months to pay back this note, based on a rate per kilogram of product shipped, with any remaining outstanding balance at June 1, 2004 becoming payable on demand. An estimated twelve months worth of payments are included in the current portion of the Company's long-term debts.



**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

In December 2000, the Company financed \$486,000 in insurance premiums. The balance due on the note was \$463,300 at December 31, 2000. The interest on the note was accrued at 8.53% per annum through September 2001. In September 2001, the interest rate was adjusted to the 30 Day LIBOR rate plus 1.84%. At December 31, 2001, the rate of interest on this note was 5.42%. At December 31, 2001, the balance due is \$178,730 and expected monthly payments will be approximately \$26,000 through July 2002. The note is collateralized by a declining letter of credit to be reduced over the life of the loan.

**(7) Lease Commitments**

The Company leases its operating facilities under operating leases. These leases are renewable at current market rates. Future minimum rental payments required under these leases having an initial or non-cancelable term in excess of one year as of December 31, 2001 are as follows:

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

Year ending December 31:

2002	\$ 403,428
2003	305,815
2004	301,601
2005	310,651
2006	184,345
	<hr/>
Total minimum payments required:	\$ 1,505,840
	<hr/>

Rent expense, including real estate taxes, under these leases amounted to \$523,615, \$303,416, and \$190,832, for the years ended December 31, 2001, 2000, and 1999, respectively.

During the year ended December 31, 2001, the Company entered into capital leases for equipment costing \$138,437 which are included in property and equipment on the balance sheet. Depreciation expense for these assets was \$13,129 for the year ended December 31, 2001.

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

Year ending December 31:

2002	\$ 55,988
2003	46,574
2004	10,859
	<hr/>
	113,421
Less: Amount representing interest	(11,169)
	<hr/>
Present value of net future minimum lease payments	102,252
Less: Current Portion	(48,352)
	<hr/>
	\$ 53,900
	<hr/>



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

**(8) Accrued Expenses**

Accrued expenses consist of the following:

	As of December 31,	
	2001	2000
Accrued payroll and related expenses	\$ 359,708	\$ 534,994
Accrued professional services	119,245	122,768
Other	253,474	227,018
	\$ 732,427	\$ 884,780

**(9) Research and Development Arrangements**

The Company is party to a number of research and development arrangements with commercial entities. These arrangements are generally short-term in nature and provided \$47,450, \$10,500, and \$197,500 of revenues for the years ended December 31, 2001, 2000, and 1999, respectively.

**(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 \$35,200, \$24,200, and \$12,900 for the years ended December 31, 2001, 2000, and 1999, respectively.

The Company was granted a non-exclusive license by a third party to produce and sell ultrafine powders of metal and ceramics claimed in four U.S. patents. In consideration for this license, the Company agreed to pay \$14,000 as an initial payment, and pay royalties of 3% of net proceeds of sales of the product, as defined. There were no royalties under this agreement in the years ending December 31, 2001 and 2000, and \$37,900 was paid in the year ending December 31, 1999.

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 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, \$300,000, and \$4,417, for the years ended December 31, 2001, 2000, and 1999, respectively. In 1999, the Company allowed CIK to purchase additional product as a substitute for its minimum royalty requirements.

**(11) Income Taxes**

The Company has net operating loss carryforwards for tax purposes of approximately \$39,800,000 at December 31, 2001, which expire between 2005 and 2021.

## NANOPHASE TECHNOLOGIES CORPORATION

## NOTES TO FINANCIAL STATEMENTS (Continued)

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,	
	2001	2000
Deferred tax assets:		
Net operating loss carryforwards	\$ 15,501,000	\$ 12,498,000
Foreign tax credit carryforward	186,000	156,000
Inventory and other allowances	256,000	67,000
Excess book depreciation	35,000	179,000
Other accrued costs	131,000	189,000
	<u>                    </u>	<u>                    </u>
Total deferred tax assets	16,109,000	13,089,000
Less: Valuation allowance	(16,109,000)	(13,089,000)
	<u>                    </u>	<u>                    </u>
Deferred income taxes	\$	\$
	<u>                    </u>	<u>                    </u>

The valuation allowance increased \$3,020,000 for the year ended December 31, 2001 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.

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. At December 31, 2001, the Company has a foreign tax credit carryforward of \$186,000.

**(12) Capital Stock**

In October 1998, 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. 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.

## NANOPHASE TECHNOLOGIES CORPORATION

## NOTES TO FINANCIAL STATEMENTS (Continued)

At December 31, 2001, 2,500 shares of authorized but unissued Preferred Stock have been reserved for future issuance regarding the Rights. In addition, authorized but unissued shares of common stock have been reserved for future issuance as follows:

Warrants	28,949
Options	2,697,226
	<u>2,726,175</u>

**(13) Stock Options, Warrants, and Stock Grants**

The Company has entered into stock option agreements with certain officers, employees, directors and three Advisory Board members. At December 31, 2001, the Company had outstanding options to purchase 1,815,226 shares of common stock. The stock options generally expire ten years from the date of grant. Of the total number of options granted 810,891 of the outstanding options vest over a five-year period, 948,701 vest over a three-year period from their respective grant dates and 55,634 vest on the eighth anniversary following their grant date.

Exercise prices are determined by the Board of Directors and equal the estimated fair values of the Company's common stock at the grant date. The table below summarizes all option activity through December 31, 2001:

	<u>Number of Options</u>	<u>Exercise Price</u>	<u>Weighted Average Exercise Price</u>
Outstanding at January 1, 1999	1,781,385	.112-5.750	2.916
Options granted during 1999	417,000	1.750-5.000	2.115
Options exercised during 1999	(170,867)	.112-1.727	.272
Options canceled during 1999	(174,274)	.432-5.250	3.641
	<u>1,853,244</u>		
Outstanding at December 31, 1999	1,853,244	.112-5.750	2.911
Options granted during 2000	335,675	6.312-11.625	7.777
Options exercised during 2000	(444,569)	.432-5.750	2.591
Options canceled during 2000	(292,669)	1.727-7.687	3.732
	<u>1,451,681</u>		
Outstanding at December 31, 2000	1,451,681	.112-11.625	3.876
Options granted during 2001	482,200	7.062-12.250	9.075
Options exercised during 2001	(105,212)	.432-7.625	2.888
Options canceled during 2001	(13,443)	1.727-10.875	6.749
	<u>1,815,226</u>		
Outstanding at December 31, 2001	1,815,226	.112-12.250	5.293

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

Information with respect to stock options outstanding and stock options exercisable at December 31, 2001 follows:

	Options Outstanding		
	Number Outstanding at December 31, 2001	Weighted-Average Remaining Contractual Life (Years)	Weighted- Average Exercise Price
Range of Exercise Prices			
\$0.112-0.432	69,563	2.803	\$ 0.352
\$1.727-2.375	373,144	6.750	1.911
\$2.813-3.886	562,154	5.919	3.558
\$5.000-7.062	239,640	8.904	6.889
\$7.625-11.063	558,725	8.721	9.092
\$11.625-12.250	12,000	8.925	\$ 11.729
	1,815,226		

	Options Exercisable	
	Number Exercisable at December 31, 2001	Weighted- Average Exercise Price
Range of Exercise Prices		
\$0.112-0.432	69,563	\$ 0.352
\$1.727-2.375	233,477	1.845
\$2.813-3.886	364,095	3.638
\$5.000-7.063	19,073	5.469
\$7.625-11.063	99,002	7.693
\$11.625-12.250	2,000	11.625
	787,210	3.390

Option shares exercisable at December 31, 2000 and 1999, were 549,533 and 666,582 and had a weighted average exercise price of \$2.765 and \$2.907, respectively.

The Company has elected to follow APB No. 25 and related interpretations in accounting for its employee stock options because, as discussed below, the alternative fair value accounting provided for under FASB No. 123 requires use of option valuation models that were not developed for the use in valuing employee stock options. 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, 2001, 2000, and 1999: U.S. government zero coupon 7-year bond interest rates ranging from 5.11% to 5.95%, depending upon the specific grant date of the options; a dividend yield of zero percent; and a weighted-average expected life of the option of

**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

7 years. The volatility factors used range from 25.0% to 92.3%. The weighted average fair value of the options granted during 2001, 2000, and 1999 was \$7.392, \$ 3.263, and \$ 0.885 per share, respectively.

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 will not be fully reflected until 2002. The Company's pro forma net loss would be \$7,285,713, \$4,789,332, and \$5,456,516 and the pro forma net loss per share, basic and diluted, would be \$0.53, \$0.36, and \$0.43 for the years ended December 31, 2001, 2000, and 1999, 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 have an exercise price of \$1.123 per share and expire upon the tenth anniversary of issuance. No warrants were converted in 1999. For the year ended December 31, 2000, 400,847 warrants were converted to common stock, of which 267,231 warrants were converted, via a cashless exchange into 238,963 shares of common stock, and 133,616 warrants were exercised for \$150,000. No warrants were converted in 2001. At December 31, 2001, 28,949 warrants remain outstanding and exercisable.

For the year ended December 31, 2001, the Company recognized \$72,303 in stock compensation expense related to the grant of 6,805 shares of stock to five directors. For the year ended December 31, 2000, the Company recognized \$62,873 in stock compensation expense related to the grant of 12,708 shares of stock to four directors. For the year ended December 31, 1999, the Company recognized \$124,325 in stock compensation expense related to the grant of 24,500 shares of stock to an officer and to the extension of stock option vesting periods for three former officers.

**(14) 401(k) Profit-Sharing Plan**

The Company has a 401(k) profit-sharing plan covering substantially all employees who meet defined service requirements. The plan provides for deferred salary contributions by the plan participants and a maximum contribution by the Company not to exceed 3% of the participant's salary. The Company contributions under this plan were \$81,579, \$42,026, and \$0 for the years ended December 31, 2001, 2000, and 1999, respectively.

**(15) Related Party Transactions**

The Company has an ongoing consulting agreement with a director/stockholder. Payments under this agreement amount to \$2,000 per month.

**(16) Significant Customers and Contingencies**

Revenue from two customers constituted approximately 75.5% and 9.4%, respectively, of the Company's 2001 revenue. Amounts included in accounts receivable relating to these two customers were approximately \$719,000 and \$307,000, respectively. Revenue from two customers constituted approximately 68.5% and 10.0%, respectively, of the Company's 2000 revenue. Amounts included in accounts receivable relating to these two customers were approximately \$805,000 and \$309,000, respectively. Revenue from three customers constituted approximately 33.8%, 9.9%, and 9.7%, respectively, of the Company's 1999 revenue. Amounts included in accounts receivable relating to these

**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

three customers were approximately \$94,000, \$70,000, and \$80,000, respectively. The Company currently has supply agreements with the aforementioned customers that have contingencies outlined in them which could potentially result in the license of technology and/or, as provided for in the supply agreement with the Company's largest customer, 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 included in the Company's supply agreement with its largest customer 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 liquid investments are less than \$4,000,000, (b) of an acceleration of any debt maturity having a principal amount of more than \$10,000,000 or (c) 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 depreciated cost. The Company believes that it has complied with all contractual requirements and that it has not had a triggering event.

**(17) QUARTERLY FINANCIAL DATA (UNAUDITED)**

	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>
<b>2001</b>				
Total revenue	\$ 1,071,924	\$ 1,049,379	\$ 679,545	\$ 1,238,621
Loss from operations	(1,352,072)	(1,410,884)	(1,541,340)	(1,947,146)
Net loss	(1,119,283)	(1,286,720)	(1,437,712)	(1,896,528)
Basic and diluted loss per share	(0.08)	(0.09)	(0.10)	(0.14)
<b>2000</b>				
Total revenue	\$ 618,921	\$ 1,105,336	\$ 1,354,951	\$ 1,194,145
Loss from operations	(1,717,784)	(1,552,282)	(1,024,466)	(1,412,394)
Net loss	(1,434,559)	(1,252,767)	(715,241)	(1,115,760)
Basic and diluted loss per share	(0.11)	(0.09)	(0.05)	(0.08)

**(18) Contingent Liabilities**

Five separate complaints were filed in the United States District Court for the Northern District of Illinois, each alleging that the Company, certain of its officers and directors, and the underwriters of the Company's initial public offering of the Company's Common Stock (the "Offering") were liable under the federal Securities Act of 1933 for making supposedly negligent or reckless material misstatements or omissions of fact in the Registration Statement and Prospectus relating to the Offering. A consolidated complaint was filed in those cases in October 1998, alleging that the action should be maintained as (i) a plaintiff class action on behalf of certain persons who purchased the Common Stock from November 26, 1997 through January 8, 1998, and (ii) a defendant class action against the underwriters who participated in the Offering. The consolidated complaint sought relief including unquantified damages, interest, and attorneys' fees. In October 1999, the Court granted in part and denied in part defendants' motions to dismiss the consolidated complaint, finding in part that plaintiffs who did not purchase their Common

**NANOPHASE TECHNOLOGIES CORPORATION**

**NOTES TO FINANCIAL STATEMENTS (Continued)**

Stock during the Offering could not sue under Section 12(a)(2) of the Securities Act of 1933. Each defendant's respective answer to the remaining claims in the consolidated complaint was filed in November 1999. Following certain discovery, the Company agreed to settle all claims against all defendants in the consolidated complaint for \$4,025,000. The settlement did not admit liability by any party. Because the settlement was funded by the Company's directors and officers liability insurance, the settlement payment did not have a material adverse effect on the Company's financial condition or results of operations. In March 2001, the Court ordered final approval of the settlement and dismissed the consolidated complaint with prejudice.

The above-described settlement did not resolve a separate complaint filed in the Northern District of Illinois in November 1998, alleging that the Company, certain of its officers and directors, and the underwriters of the Company's Offering were liable under the federal Securities Exchange Act of 1934 for making supposedly fraudulent material misstatements and omissions of fact in connection with the solicitation of consents to proceed with the Offering from certain of the Company's preferred stockholders. The complaint alleged that the action should be maintained as a plaintiff class action on behalf of certain former preferred stockholders whose shares of preferred stock were converted into Common Stock on or about the date of the Offering. The complaint sought relief including unquantified damages, interest, and attorneys' fees. Each defendant's respective answer to the preferred stockholders' complaint was filed in September 2000. Following certain discovery, the Company agreed to settle all claims against all defendants in the preferred stockholders' complaint for \$800,000, plus up to an additional \$50,000 for the cost of settlement notices and administration. The settlement did not admit liability by any party. Because the settlement was funded by the Company's directors and officers liability insurance, the settlement payment did not have a material adverse effect on the Company's financial position or results of operations. On January 10, 2002, the Court ordered final approval of the settlement and dismissed the preferred stockholders' complaint with prejudice.

In early November 2001, a separate complaint was filed in the United States District Court for the Northern District of Illinois, alleging that the Company and one of its officers are liable under the federal Securities Exchange Act of 1934. The recent complaint asserts that defendants made supposedly fraudulent material misstatements of fact and omitted to state material facts necessary to make other statements of fact not misleading in connection with the Company's public disclosures, including certain press releases, concerning the Company's dealings with a certain British customer. The complaint alleges that the action should be maintained as a plaintiff class action on behalf of certain persons who purchased shares of the Company's Common Stock from April 5, 2001 through October 24, 2001. The complaint seeks relief including unquantified compensatory damages, and attorneys' and expert witness' fees. Defendants filed a motion to dismiss the complaint in December 2001. Rather than respond to that motion, plaintiff filed an amended complaint on March 8, 2002. The amended complaint alleges that the Company and four of its officers are liable under the federal Securities Exchange Act of 1934 for making supposedly fraudulent material misstatements and omissions of fact in connection with the Company's press releases, publicly-filed reports and other public disclosures concerning the Company's dealings with the British customer and the revenue reported under a purchase order with that customer. The amended complaint alleges the same putative class, and seeks the same relief, as in plaintiff's initial complaint. Defendants anticipate filing a motion to dismiss the amended complaint by April 12, 2002. Although the Company believes that the allegations of the amended complaint are without merit, it is not feasible for the Company to predict at this time the outcome of this litigation or whether its resolution could have a material adverse effect on the Company's results of operations or financial condition.

## Valuation and Qualifying Accounts

Description	Balance Beginning of Period	Additions		Deductions	Balance at End of Period
		Costs and Expenses	Other Accounts		
Year ended December 31, 1999:					
Allowance for doubtful accounts	\$ 85,000	\$ 54,068	\$	\$ 19,068(1)	\$ 120,000
Allowance for excess inventory quantities accounts	\$ 190,633	\$ 69,581	\$	\$	\$ 260,214
Deferred tax asset valuation account	\$ 7,663,000	\$ 1,930,000	\$	\$	\$ 9,593,000
Year ended December 31, 2000:					
Allowance for doubtful accounts	\$ 120,000	\$	\$	\$ 38,550(1)	\$ 81,450
Allowance for excess inventory quantities accounts	\$ 260,214	\$	\$	\$ 168,627(2)	\$ 91,587
Deferred tax asset valuation account	\$ 9,593,000	\$ 3,496,000	\$	\$	\$ 13,089,000
Year ended December 31, 2001:					
Allowance for doubtful accounts	\$ 81,450	\$	\$	\$ 56,450	\$ 25,000
Allowance for excess inventory quantities accounts	\$ 91,587	\$ 631,002	\$	\$ 91,587(2)	\$ 631,002
Deferred tax asset valuation account	\$ 13,089,000	\$ 3,020,000	\$	\$	\$ 16,109,000

(1) Uncollectible accounts written off.

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



**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 28th day of March, 2002.

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 28th day of March, 2002.

<u>Signature</u>	<u>Title</u>
<u>          /s/ JOSEPH CROSS          </u> <b>Joseph Cross</b>	President, Chief Executive Officer (Principal Executive Officer) and a Director
<u>          /s/ JESS JANKOWSKI          </u> <b>Jess Jankowski</b>	Acting Chief Financial Officer, Corporate Controller, Treasurer and Secretary (Principal Financial and Accounting Officer)
<u>          /s/ DONALD S. PERKINS          </u> <b>Donald S. Perkins</b>	Chairman of the Board and Director
<u>          /s/ JAMES A. HENDERSON          </u> <b>James A. Henderson</b>	Director
<u>          /s/ JAMES A. McCLUNG          </u> <b>James A. McClung</b>	Director
<u>          /s/ JERRY PEARLMAN          </u> <b>Jerry Pearlman</b>	Director
<u>          /s/ RICHARD W. SIEGEL          </u> <b>Richard W. Siegel</b>	Director

**EXHIBIT INDEX**

**Exhibit  
Number**

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- 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.
- 4.7 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).
- 4.8 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.
- 4.9 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).
- 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.

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- 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 February 15, 1999 between the Company and Gina Kritchevsky, incorporated by reference to Exhibit 10.18 to the 1998 10-K.
- 10.15\* 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.
- 10.16\* Employment Agreement dated as of June 1, 1999 between the Company and Donald Freed incorporated by reference to Exhibit 10.19 to the 1999 10-K.
- 10.17\* 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).
- 10.18\*\* 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.
- 10.19\* 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).
- 10.20 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.

- 10.21\*\*\* 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.
- 10.22 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.
- 11 Statement regarding computation of loss per share.
- 23.1 Consent of McGladrey & Pullen, LLP.
- 23.2 Consent of Ernst & Young, LLP.
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\* Management contract or compensatory plan or arrangement.

\*\* Confidentiality previously requested for portions of this agreement. The Company has disclosed that such agreement is with BASF Corporation, as assignee.

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