

WHITMORE BRADFORD T  
Form SC 13D/A  
December 22, 2010

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13D/A

UNDER THE SECURITIES EXCHANGE ACT OF 1934  
(Amendment No. 5)

Nanophase Technologies Corporation  
(Name of Issuer)

COMMON STOCK, par value \$.01  
(Title of Class of Securities)

630079101  
(CUSIP Number)

Jerald A. Trannel  
290 South County Farm Road, Third Floor  
Wheaton, Illinois 60187-4526  
Telephone: (630) 588-7200  
(Name, Address and Telephone Number of Person Authorized to  
Receive Notices and Communications)

December 20, 2010  
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on  
Schedule 13G to report the acquisition which is the subject  
of this Schedule 13D, and is filing this schedule because  
of Section 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g),  
check the following box. [ ]

NOTE: Schedules filed in paper format shall include a  
signed original and five copies of the schedule, including  
all exhibits. See Section 240.13d-7(b) for other parties  
to whom copies are to be sent.

The remainder of this cover page shall be filled out for a  
reporting person's initial filing on this form with respect  
to the subject class of securities, and for any subsequent  
amendment containing information which would alter  
disclosures provided in a prior cover page.

The information required on the remainder of this cover  
page shall not be deemed to be "filed" for the purpose of  
Section 18 of the Securities Exchange Act of 1934 ("Act")  
or otherwise subject to the liabilities of that section of  
the Act but shall be subject to all other provisions of the  
Act (however, see the Notes).

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Schedule 13D/A

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1. Names of Reporting Person  
S.S. OR I.R.S. Identification No. of Above Persons

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Bradford T. Whitmore

2. Check the Appropriate Box if a Member of a Group (See instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See instructions)

00

5. Check if Disclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

United States

|   |                             |
|---|-----------------------------|
|   | 7 Sole Voting Power         |
| Number of Shares                            | 1,014,387 shares            |
| Beneficially Owned by Each Reporting Person | 8 Shared Voting Power       |
| With  | 3,873,920 shares            |
|   | 9 Sole Dispositive Power    |
|   | 1,014,387 shares            |
|   | 10 Shared Dispositive Power |
|   | 3,873,920 shares            |

11. Aggregate Amount Beneficially Owned by Each Reporting Person

4,888,307 shares

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See instructions)

13. Percent of Class Represented by Amount in Row (11)

23.1%

14. Type of Reporting Person (See instructions)

IN

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Schedule 13D/A

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1. Names of Reporting Person

S.S. OR I.R.S. Identification No. of Above Persons

Grace Investments, Ltd.

2. Check the Appropriate Box if a Member of a Group (See instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See instructions)

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5. Check if Disclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Illinois Limited Partnership

|              |                             |
|--------------|-----------------------------|
|              | 7 Sole Voting Power         |
| Number of    | 0                           |
| Shares       | 8 Shared Voting Power       |
| Beneficially | 300,000 shares              |
| Owned by     |                             |
| Each         |                             |
| Reporting    | 9 Sole Dispositive Power    |
| Person       | 0                           |
| With         | 10 Shared Dispositive Power |
|              | 300,000 shares              |

11. Aggregate Amount Beneficially Owned by Each Reporting Person  
300,000 shares

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See instructions)

13. Percent of Class Represented by Amount in Row (11)

1.4%

14. Type of Reporting Person (See instructions)

PN,

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Schedule 13D/A

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1. Names of Reporting Person  
S.S. OR I.R.S. Identification No. of Above Persons  
Grace Brothers, Ltd.

2. Check the Appropriate Box if a Member of a Group (See instructions)

(a)

(b)

3. SEC Use Only

4. Source of Funds (See instructions)

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5. Check if Disclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e)

6. Citizenship or Place of Organization

Illinois Limited Partnership

7 Sole Voting Power

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Number of Shares Beneficially Owned by Each Reporting Person 0  
8 Shared Voting Power  
3,573,920 shares  
9 Sole Dispositive Power  
0  
10 Shared Dispositive Power  
3,573,920 shares

11. Aggregate Amount Beneficially Owned by Each Reporting Person

3,573,920 shares

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See instructions) [ ]

13. Percent of Class Represented by Amount in Row (11)

16.9%

14. Type of Reporting Person (See instructions)

PN, BD

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1. Names of Reporting Person  
S.S. OR I.R.S. Identification No. of Above Persons

Spurgeon Corporation

2. Check the Appropriate Box if a Member of a Group (See instructions)

(a) [ ]  
(b) [ ]

3. SEC Use Only

4. Source of Funds (See instructions)  
00

5. Check if Disclosure of Legal Proceedings is Required Pursuant to Items 2(d) or 2(e) [ ]

6. Citizenship or Place of Organization  
Illinois Corporation

Number of Shares Beneficially Owned by Each Reporting Person 0  
7 Sole Voting Power  
8 Shared Voting Power  
3,873,920 shares  
9 Sole Dispositive Power  
0  
10 Shared Dispositive Power

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3,873,920 shares

11. Aggregate Amount Beneficially Owned by Each Reporting Person  
3,873,920 shares

12. Check if the Aggregate Amount in Row (11) Excludes Certain Shares (See instructions) [ ]

13. Percent of Class Represented by Amount in Row (11)  
18.3%

14. Type of Reporting Person (See instructions)  
CO

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The undersigned hereby amends its Schedule 13D as filed on September 19, 2003 and as previously amended relating to the Common Stock of Nanophase Technologies Corporation. Unless otherwise indicated, all capitalized terms used herein but not defined herein shall have the same meaning as set forth in the Schedule 13D. Except as set forth herein, the Schedule 13D remains unchanged.

Item 4. Purpose of Transaction

On December 20, 2010, Whitmore purchased 590,000 shares of Common Stock held by Grace in a private transaction at a market price of \$1.07 per share. The transaction was effected to reduce the investment exposure held by Grace, while at the same time increasing Whitmore's investment position.

The Filers have no plans or proposals which relate to, or would result in, any of the matters referred to in Paragraphs (a) through (j), inclusive, of Item 4 of the Schedule 13D. The Filers may, at any time and from time to time, review or reconsider their investment in the Company and formulate plans or proposals with respect thereto, but have no present intention of doing so.

Item 5. Interest in Securities of the Issuer

(a) As of the date of this filing, Grace beneficially owns 3,573,920 shares of Common Stock, representing approximately 16.5% of the outstanding shares of Common Stock. Grace Investments beneficially owns 300,000 shares of Common Stock, representing approximately 1.4% of the outstanding shares of Common Stock. As general partner of Grace and Grace Investments, Spurgeon may be deemed the beneficial owner of 3,873,920 shares of Common Stock, or 18.3% of the outstanding shares of Common Stock, although Spurgeon otherwise disclaims beneficial ownership. As General partner of Grace and Grace Investments, Whitmore may be deemed the beneficial owner of 4,888,307 shares of Common Stock, representing 3,873,920 shares of stock held indirectly and 1,014,387 shares of Common Stock as direct beneficial owner, or 23.1% of the outstanding shares of Common Stock.

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(b) Grace: shared voting power (with Whitmore and Spurgeon)  
3,573,920 Shares of Common Stock

Grace Investments: shared voting power (with Whitmore and Spurgeon)  
300,000 Shares of Common Stock

Whitmore: shared voting power (with Grace, Grace Investments and Spurgeon)  
3,873,920 Shares of Common Stock;  
and  
sole voting power  
1,014,387 Shares of Common Stock

Spurgeon: shared voting power (with Grace, Grace Investments, and Whitmore)  
3,873,920 Shares of Common Stock

(c) The transactions effected by the Filers during the past sixty days are set forth in Schedule A.

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SIGNATURE

After reasonable inquiry and to the best of its knowledge and belief, the undersigned certifies that the information set forth in this Statement with respect to it is true, complete and correct.

Dated: December 21, 2010

Bradford T. Whitmore

By: /s/ Bradford T. Whitmore  
Name: Bradford T. Whitmore

Grace Investments, Ltd.

By: /s/ Bradford T. Whitmore  
Name: Bradford T. Whitmore  
Its: General Partner

Grace Brothers, Ltd.

By: /s/ Bradford T. Whitmore  
Name: Bradford T. Whitmore  
Its: General Partner

Spurgeon Corporation

By: /s/ Jerald A. Trannel  
Name: Jerald A. Trannel  
Its: Vice President

SCHEDULE A

TRADE ACTIVITY FOR NANOPHASE TECHNOLOGIES, CORP.  
EFFECTED BY GRACE BROTHERS, LTD. FOR THE PREVIOUS

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60 DAYS.

| Date       | Security     | Amount of<br>Shares<br>Sold | Price per<br>Share |
|------------|--------------|-----------------------------|--------------------|
| 12/20/2010 | Common Stock | 590,000                     | \$1.07             |

TRADE ACTIVITY FOR NANOPHASE TECHNOLOGIES, CORP.  
EFFECTED BY BRADFORD T. WHITMORE FOR THE PREVIOUS  
60 DAYS.

| Date       | Security     | Amount of<br>Shares<br>Purchased | Price per<br>Share |
|------------|--------------|----------------------------------|--------------------|
| 12/20/2010 | Common Stock | 590,000                          | \$1.07             |