



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

June 5, 2006

Mr. Jess Jankowski  
Nanophase Technologies Corporation  
1319 Marquette Drive  
Romeoville, Illinois 60446

**RE: Nanophase Technologies Corporation**  
**Form 10-K for the fiscal year ended December 31, 2005**  
**Filed March 15, 2006**  
**File # 0-22333**

Dear Mr. Jankowski:

We have reviewed your filings and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the fiscal year ended December 31, 2005

Item 9A. Controls and Procedures, page 31

1. We note your Chief Executive Officer and Chief Financial Officer concluded that your disclosure controls and procedures were effective to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the specified time periods. Confirm

to us, and revise future filings annual and quarterly filings to clarify, if true, that your officers concluded that your disclosure controls and procedures are also effective for the purpose of ensuring that material information required to be in these reports is made known to management and others, as appropriate, to allow timely decisions regarding required disclosures. Alternatively, you may simply conclude that your disclosure controls are effective or ineffective without defining them. Refer to Exchange Act Rule 13a-15(e).

Report of Independent Registered Public Accounting Firm, page F-3

2. Revise future filings to ensure that the accountants' report includes a conformed signature as required by Rule 2-02(a) of Regulation S-X.

Statement of Stockholders' Equity, page F-7

3. We note that you are required to register the shares you sold to Altana in the 2004 private placement. Please tell us what consideration or alternatives will be available to Altana if the shares are not registered and how you determined that classification in permanent equity is appropriate.

Statement of Cash Flows, page F-8

4. We note that your supplemental non-cash investing and financing activities include accounts receivable paid through the offset of long-term debt. Please tell us what these amounts relate to and how you considered the impact on your revenue recognition policy.

Note 7. Pledged Assets and Long-Term Debt, page F-17

5. We note that you recorded a debt discount and deferred revenue related to a promissory note held by BYK Chemie. Fully explain to us the rights and obligations of each party under this agreement. Please help us understand how you determined that the amount you recorded as deferred revenue is appropriate based on their rights to the new equipment and experimental products.

Note 15. Significant Customers and Contingencies, page F-23

6. We note that you received and "fully earned" \$600,000 during 2004 from RHEM. We also note that your amended agreement with RHEM was extended through 2009. Please help us understand how you determined that this payment was "fully earned" in 2004.

Note 17. Quarterly Financial Data, page F-25

7. Revise future filing to present gross profits as required by Item 302(a) of Regulation S-K.

Note 18. Administrative Actions, page F-25

8. Please provide a more comprehensive description of how the patent claims being brought against you could potentially harm your business and operating results and quantify the amount of any damages being sought. In addition, based on your current disclosures, it is not clear whether you believe a material loss related to this matter is probable, reasonable possible or remote. If you believe a material loss is probable or reasonably possible, revise future filings to provide all the disclosures required by SAB 5:Y and SFAS 5.

\* \* \* \*

Please respond to these comments within 10 business days, or tell us when you will provide us with a response. Please provide us with a supplemental response letter that keys your responses to our comments and provides any requested supplemental information. Detailed letters greatly facilitate our review. Please file your supplemental response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in their filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

Mr. Jess Jankowski

June 5, 2006

Page 4

If you have any questions regarding these comments, please direct them to Tricia Armelin, Staff Accountant, at (202) 551-3747, Anne McConnell, Senior Accountant, at (202) 551-3709 or, in their absence, to the undersigned at (202) 551-3768.

Sincerely,

John Cash  
Accounting Branch Chief