



# Newsletter

Of the

## New York Microscopical Society

1 Prospect Village Plaza  
(66F Mt. Prospect Avenue)  
Clifton, New Jersey 07013-1918



Nov-Dec 2008

N.Y.M.S. (973) 470-8733

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## Annual Banquet and Speaker Announcement

### New York Microscopical Society 2008 Fall Lecture Series

#### Application of Microscopy to Industrial Problem Solving: From Polarized Light to Cryo Electron Microscopy

**Dr. John R. Reffner, Ph. D.**

**Annual Banquet Sunday December 7, 2008,  
12:00 pm, New York Microscopical Society, in  
Clifton, New Jersey**

The Central Analytical Microscopy Group at Rohm and Haas provides support for a broad range of Research and Technical Service projects from across the company. In this talk three examples of novel uses of microscopy to support a variety of projects will be presented. The first example is an application of Polarized Light Microscopy to the characterization of Ion Exchange Resins. The second is an example of the use of Cryo-Electron Microscopy to support research and development of state-of-the-art latex polymers. The third example is the use of Optical Profilometry to understand defects in films.

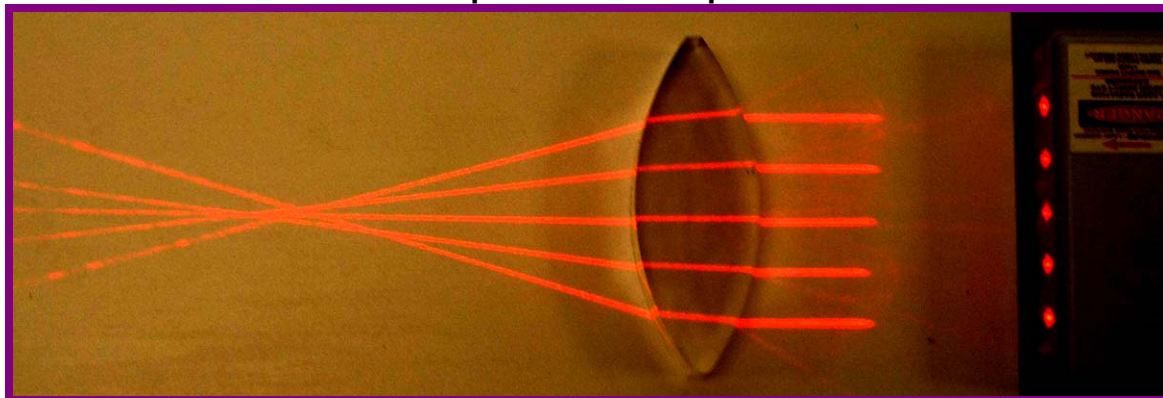
John R. Reffner leads the Microscopy Group in the Central Analytical Support Department of Rohm and Haas, Co. He joined Rohm and Haas in 1991 after receiving a Ph.D. from The University of Massachusetts in Polymer Science and Engineering (1991) and a BS in Chemistry from Rensselaer Polytechnic Institute (1985). His research efforts have focused on characterization of polymer morphology, cryo electron microscopy, and a broad range of applications of imaging to industrial problem solving.

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Don O'Leary, Arthur Coates and John A. Reffner setting up the Society's I.R. microscope teaching system.

#### Use Of Microscope Class: Example of Refraction



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**The Mission of the New York Microscopical Society** is the promotion of theoretical and applied microscopy and the promotion of education and interest in all phases of microscopy.

### **Dues and Addresses**

Please remember to mail in your Dues to Mary McCann, Membership Chair (see this page for address).

Junior (less than 18 years old) \$10

Annual \$30 (students  $\geq$  18 years old \$20)

Supporting \$60

Life \$300 (payable within the year)

Corporate \$175 (includes one advertisement in NYMS News)

To avoid missing notices:

Notify Mary if you have changed your address, phone or email.

### **Alternate Meeting Notifications**

Please note that due to time constraints in publishing, some meeting notices may be available by calling Mel Pollinger at 201-791-9826, or by visiting the NYMS website.

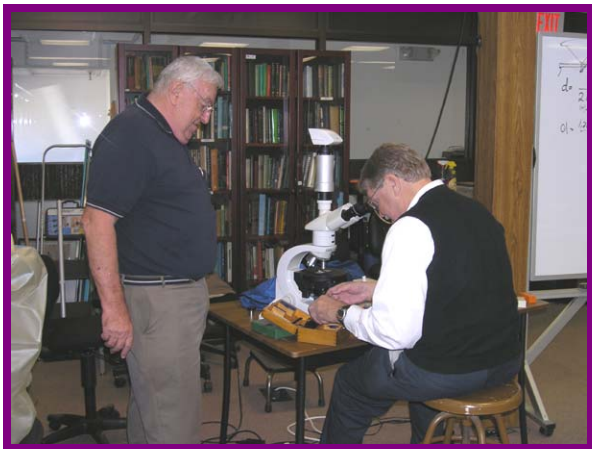
***Buy and Read a Good Book on Microscopy.***

## Fall 2008 Courses and Classes at NYMS. Microscope Use, Theory and Hands-on Workshops.



Dr. Angela Klaus: Discussion on morphology, phase contrast and fluorescent imaging of spermatozoa from genus *Drosophila*.

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Dr. John A. Reffner: Setting up for instruction on phase contrast, Kohler, numerical aperture, illumination, and pinhole diffraction patterns for testing lenses. Assisted by NYMS Educational Chair, Mr. Donald O'Leary.

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Mr. Jan Hinsch: Instructing a class on setting-up a microscope, its parts, theory of numerical aperture and resolution.

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Mr. Dennis O'Leary: Theory and demonstration of refraction and diffraction of light, Rheinberg, dark-field, oblique and Kohler illumination. Instruction also included Hoffmann Modulation Contrast and phase contrast methods.

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Mrs. Mary McCann: Instruction on polarized light used as a visual enhancement tool. Understanding and using incident and reflected light differential contrast methods. Instructor McCann seen here giving personal assistance to a student.

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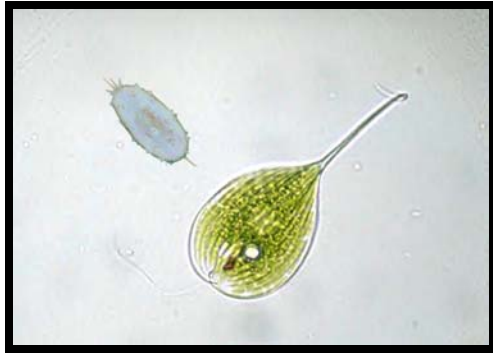
## Lehigh University SEM Courses

On May 31 through June 12, 2009, Lehigh University is offering courses in scanning electron microscopy and other micro analytical techniques. For information contact Sharon Coe, Phone: 610-758-5133, Fax: 610-758-4244, email: [Sharon.coe@lehigh.edu](mailto:Sharon.coe@lehigh.edu)  
Visit their website: [www.lehigh.edu/microscopy](http://www.lehigh.edu/microscopy)

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## Answer to September 2008 Mystery photo



Phacus is the correct answer for the green euglenoid. Arthur Coates took the prize with an even more precise description: *Phacus longicauda*. The attacking blue critter is actually an Photo-Shopped image of a "Horned Melon" made to look like a micro-predator.

**Horned melon:** The horned melon, also called melano, African horned cucumber or melon, jelly melon, hedged gourd, English tomato, or kiwano, is the vine *Cucumis metuliferus* and is of African origin. It is grown for its fruit, which looks like an oval melon with horns. The fruit of this plant is edible, but it is used as often for decoration as for food ( an occassional photomicrographs).



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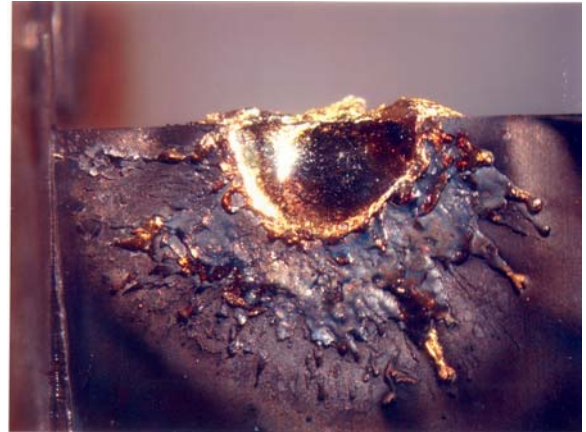
## A Note Regarding NYMS at EAS

Two laptops were set up, one alternated between the microscope and image files, the other was connected to the projector to show jpeg image files, and Powerpoint presentations. Instead of the folded cardboard we used last year, I brought our projector screen. The subjects were a variety of living rotifers, prepared slides, micro, macro and nature images and also recently photographed individual images of our antique microscopes. The visuals as well as the double-eraser pencils received many compliments. The pencils seemed to produce an extraordinary amount of curiosity and giggles amongst the attendees. Copies of our newsletters were distributed, which seemed to create real interest regarding our society. Membership applications were taken by some and many questions regarding NYMS were posed and answered. In all, it

was an enjoyable event. The booth was attended primarily by myself, Pete Diaczuk and new member Victoria Panariello. Seymour Perlowitz showed up, on occasion, bearing gifts of pizza and iced tea.

Mel Pollinger

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Mystery Photo – Do you think you know what it is? Email or phone me your answer. > Mel

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## Microscopical Surplus Available

Remember the "good ol' days" when we could obtain a microscope or parts for one at a "user" show, like the Baltimore show, or the Antique Scientific Instrument Show at the Doubletree in Somerset, N.J. Well, NYMS has brought back those days in its basement surplus area. Contact Don O'Leary for details (see page 2).

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## Need a Microscope or part?

Visit NYMS' Surplus Department when you visit NYMS at our new home in Clifton, New Jersey.

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**\*Historical Volume Numbering for NYMS' Newsletters will be continued.**

Got something you want to sell, trade or publish in the Newsletter? Write, call or send an email message to:  
201-791-9826 or [pollingmel@verizon.net](mailto:pollingmel@verizon.net)  
or  
Mel Pollinger, Editor  
NYMS Newsletter  
18-04 Hillery Street  
Fair Lawn, NJ 07410

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Regarding how you can receive future newsletters, you may choose one of the following methods:

1. Regular mail, folding may damage images: Do nothing.
2. Email with undamaged full color images, pdf file: Needs your active email address.