Newsletter
Of the
New York Microscopical Society

1 Prospect Village Plaza
(66F Mt. Prospect Avenue)
Clifton, New Jersey 07013-1918
GPS: Latitude 40.8648N, Longitude 74.1540W

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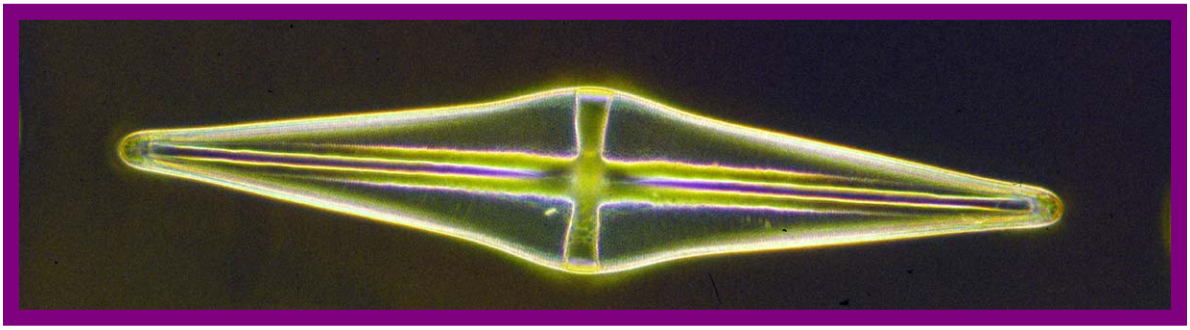
EAS & Banquet November2010

Diatom Stauroneis Acuta, 400x, Rheinberg Illumination



Save a Tree: Get The Newsletter By Email – It's Faster!

NYMS Board of Managers

Dues and Addresses

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

Junior (under age 18) $10 Annually
Regular $30
Student (age 18 or above) $20 Annually
Supporting $60 Annually
Corporate (includes one advertisement in NYMS News) $175 Annually
Life $300 (payable within the year)

To avoid missing notices:
Notify Mary and me if you have changed your address, phone or email.

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.

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.

From The Editor…if you have email:

Getting the newsletter by email means you receive bonus files that cannot be sent by "snail mail." Even if you continue your USPS delivery of the newsletter, NYMS needs your email address for reporting priority events and special news. Being able to contact you by email means better communication between us.

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To Order Your NYMS Lapel Pins

Send a check in the amount of $12.00 per pin to
New York Microscopical Society
c/o Mel Pollinger, 18-04 Hillery Street,
Fair Lawn, NJ 07410. To avoid shipping & handling charges, pins may be purchased directly at any NYMS meeting for $10.00.

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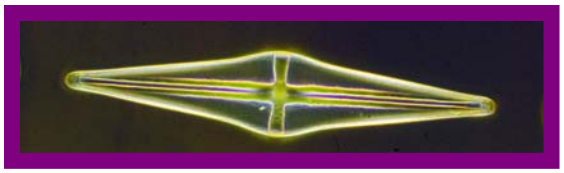
Buy and Read a Good Book on Microscopy.

(From Page 1)



Diatom Stauroneis Acuta

Digitized from a Fujichrome image of a prepared slide in the NYMS collection (NYMS# 1736). Taken with a 40x objective & 10x eyepiece using a combination of Rheinberg illumination and polarized light. Olympus microscope BH2-BHT, Olympus 35mm camera OM2n.

Imaging by Mel Pollinger.

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Dr. Bradley Amos: Honorary Fellow of R.M.S.

I just found out that Dr. Bradley Amos was made an honorary fellow of the Royal Microscopical Society in London earlier this year. Many of us recall that Brad Amos was the recipient of NYMS Ernst Abbe Award in 2005; we celebrated the event in an EAS ceremony in the presence of three invited speakers and numerous guests who gave us an insight in Dr. Amos fundamental role in the development of the confocal scanning microscope.

Brad Amos is a "Renaissance Microscopist" to the heart of anyone who feels passionate abour microscopy. As a teenager he painted delicate conoscopic figures in watercolors. In 2005 we went on a collecting trip to the nearby Celery Farm and brought home some chunks of moss and spent hours over the microscope passionately identifying what we brought home.

Brad Amos is also a contributor to "Stonechat" the journal of he UK Facet Cutter's Guild. Several articles about gems and polarized light have been published there. If you like to check out some of his interests this link may be a good starting point http://homepage.ntlworld.com/w.amos2/Brad%20Amos%27s%20Website/page6.html

Here is a story that just might amuse you: I had the audacity of trying to impress Brad Amos with an observation I had made on some hairs of milkweed seeds. The hairs are hollow and I had detected under the PLM a small amount of retardation whenever the fiber axis was parallel to either polar. That is reason to be puzzled. Proper fibers exhibit their maximum retardation in diagonal, not in parallel position. Careful observation showed the mantle to not be birefringent at all but to be lined inside with two opposite helix-like reinforcements, which were the cause of the birefringence. I told Brad Amos about my discovery. He smiled. Not such an uncommon arrangement in nature, indeed I might find that the two helixes crossed under an angle of about 60 degrees.

Jan Hinsch

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Thin, nematic film (0.4 micrometer) placed onto an isotropic substrate.

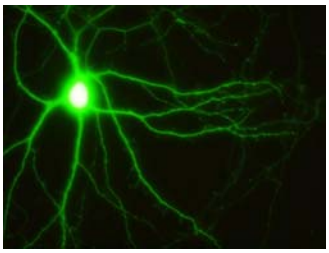
Polarizing microscope texture of a thin, liquid crystalline film. This periodic stripe structure with two different periodicities and different directions occurs in a nematic fluid, the simplest form of a liquid crystal. The nematic film is spread over the surface of an isotropic fluid (glycerine). The upper surface is free (in contact with air). In the nematic, the rod-like, elongated molecules are free to move around, but they try to remain parallel to each other. The average direction of orientation is called the director. The director is distorted in the vertical plane, as the nematic-air interface favors normal (perpendicular) orientation and the glycerine-nematic interface favors tangential (parallel) orientation. When the film is very thin--less than one micrometer--these distortions use too much energy and the system relaxes through the periodic pattern of in-plane director variations. The effect is similar to buckling instability of an elastic rod stressed at two ends; at some critical stress, the rod bulges.

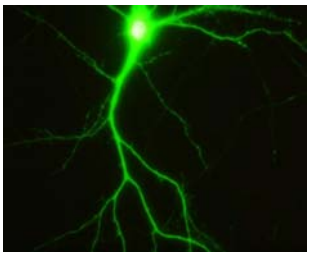
This image was created by Oleg D. Lavrentovich, director of the Liquid Crystal Institute and professor of chemical physics in the Chemical Physics Interdisciplinary Program at Kent State University. The complex, 3-D molecular arrangements in liquid crystals and other soft materials reflect a rich variety of physical mechanisms that represent the focus of Lavrentovich's research.

Recent research in Lavrentovich's lab (supported by National Science Foundation grants DMR 05-04515, DMR 07-10544 and DMR 09-06751), explore what the physical mechanisms are behind the complex, 3-D molecular architectures; what controls the molecular order in space; and what controls the time dynamics of this order. The goal is to learn how to construct self-assembled complex materials with unique structural, electric and optical properties. Liquid crystals have already been a technological revolution through their liquid crystal displays, and much more is on the horizon of current knowledge if we were to explore and utilize more complex molecular arrangements than those in these displays. (Date of Image: exact date unknown).

Public domain article submitted Dr. Earl Verbeek, Resident Geologist and Director of Education at Sterling Hill, courtesy of the National Science Foundation.

Neurons





Twelve days in culture.transfected with GFP. Objective40 Camera,Olympus 620; These neurons are still alive today in a culture dish dish.It is a first time we manage to transfectneurons.I dissect hipocampal neurons from 18 days old mouse embryos.The large white spot is just overblown light.we were interested in dendritic spines,so the picture is a bit over exposed.Microscope is a simple Olympus CK40 ,which we use for mostly for electrophysiology.

Submitted by Ms. Lidia Brandes, Toronto, Canada

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Excalibur

A couple of months back, Ben Glassman and I visited Tony Nikischer at his laboratory and museum in Peekskill, N. Y.

SEM

Mineral Museum

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NYMS Open Tuesday Evenings

NYMS Headquarters at Clifton, NJ will be open to members from 8:00pm to 10:00pm most Tuesday evenings. Those members wishing to visit must call Don O'Leary to confirm. Don's cell-phone number is (201) 519-2176.

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Mystery Photo for Nov-Dec 2010

Want to take a guess? Send it to me by email or call me: pollingmel@verizon.net, (201) 791-9826

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Answer to Mystery Photo for October 2010

Turkish Pastry

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Call for Papers

July 11-15, 2011 - Inter/Micro: 62nd Annual Applied Microscopy Conference, Chicago, IL, USA
Titles & Abstracts due by April 15, 2011
Contact: Therese Newman
e-mail: intermicro@mcri.org
Phone: 312-842-7100
Fax: 312-842-1078
www.mcri.org

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