

NEW AND/OR INTERESTING IN MICROSCOPY

✱ **SMALL WONDERS.** A new season of "Small Wonders" on the Discovery Channel has just started. This is a picture puzzle, usually taken on an SEM, with clues. You have to guess the answer and win a prize!

It is only shown on TV in Canada as it is on @Discovery Canada, every Monday evening 8-9 PM (Pacific time). It is usually the last item on the show. If you are not in Canada, you can still participate in the competition from the website:

www.exn.ca/@discovery.ca

Click on the Small Wonders icon down the right hand side.

If you want to see the show, you can download "RealPlayer" onto your computer.

If you go to the Archives at the bottom of the Small Wonders page, you can see some of the images from last year. Challenge: see if you can tell what the picture is before you see the answer!

Thoughts on how to improve this activity would be most appreciated and may be provided to:

Dr. Elaine Humphrey (University of British Columbia)

email: ech@unixg.ubc.ca

✱ **Biological Tips & Tricks.** Some four years of biological discussions from the microscopy listserver have been archived in a searchable format. Just point your browser to:

www.biotech.ufl.edu/~emcl/

and follow the tips link.

✱ **Current Titles.** A new edition of Current Titles, a bibliography of recent publications from the National Center for Electron Microscopy is now available. Copies may be obtained by contacting Jane Cavlina at (510)486-6036 or one can find a

searchable on-line version on the web site:

<http://ncem.lbl.gov>

The One-Angstrom Microscope at NCEM is now fully operational and performs better than expected. Information limit below 0.9Å has been measured. NCEM is now accepting proposals for this instrument. In addition, the SPLEEM, a unique spin-polarized low energy electron microscope is now also on line and ready to accept user proposals.

✱ **Makingsenseofscience** is a series of illustrated science books for children, teenagers and families. The authors are scientists who are prominent in their fields and who have an interest in furthering the public understand of science.

The series is edited by Fran Balkwill, who has written six previous books for young readers with Mic Rolph.

The books are innovative, authoritative and fun, covering a wide range of science and technology subjects.

The latest in the series, *A Leaf In Time*, has just been announced. The book is about energy, plants and people. It also carries a warning about the health of our vulnerable planet.

Full details about *Makingsenseofscience* at:

www.portlandpress.com/books/sensesci.htm

✱ **Lehigh Microscopy School Celebrates 30 Years of Excellence: June, 2000**

Since 1971, nearly five thousand engineers and scientists from more than 26 countries have attended Lehigh University's short courses on the principles and application of Scanning and Analytical Electron Microscopy. These 4-day and 5-day lecture and lab courses are given by noted experts in this growing field. Course attendees are exposed to an unparalleled array of modern SEMs, AEMs, AFMs and SPMs.

Classes are held on the campus of Lehigh University in Bethlehem, PA, and are sponsored by Lehigh's Department of Materials Science and Engineering and its Materials Research Center.

Information concerning the school may be found under "Coming Events" on page 7 of this issue, or by contacting Sharon Coe at (610)758-5133 or sharon.coe@leigh.edu.

Helical Imaging of Helical Structures

Carl Abby, T.R.P.I Facility, U.A.L.L.

Imaging helical structures, especially biomolecular ones such as alpha-helices and DNA molecules present interesting challenges. The U.A.L.L. imaging facility has in particular been working on imaging such molecules end-on, using the electron microscope. The helix travelling in a direction parallel to the magnetic field of an electromagnetic wave. This allows the electrons to follow the structure and the helix is imaged onto a flat surface (the film, phosphor screen, CCD camera, etc.) and form a 2D image. This may be solved by performing a 2D Fast Fourier Transform on the image and then "stretching" it in the third dimension, using the known periodicity of the molecule's helix (obtained from e.g. x-ray diffraction studies).

We recently received the above from Carl Abby, Director of the Time-Reversed Positron Imaging Facility at U.A.L.L. on the southeast coast. He was trying to beat the arrival of Hurricane Floyd, but it looks like his email got caught by Gert just as it was being sent

--- Editor

FRONT COVER IMAGE

Second Prize

Just For Fun Micrograph Contest

M&M '99 in Portland, OR

"Y2K"

If only the millenium bugs were so easy to detect! These net-winged midge larvae (*Horiaia*) from Nepal seem happy to munch the circuit pathways towards the year 2000. Just wait until spring when they'll become trout bait.

Tracey Pepper, Iowa State University



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COMING EVENTS

- ✓ October 20/22 '99: **Asbestos Analysis by Transmission Electron Microscopy** (McCrone Research Institute), Chicago, IL Nancy Daerr: (312)842-7100, eMail: ndaerr@mcri.org
 - ✓ October 22 '99: **5th California Microscopy Colloquium** (CA State Universities & Northern CA Microscopy Society). San Francisco State University. <http://online.sfsu.edu/~camicro/>
 - ✓ October 25/29 '99: **American Vacuum Society's 46th International Symposium** Seattle WA, Della Miller: (408)246-3600, fax: (408)246-7700
 - ✓ Nov 10 '99: **27th Scottish Microscopy Symposium**. University of Glasgow. <http://www.abdn.ac.uk/~nhi691/smg99.htm>
 - ✓ Nov 14/19 '99: **1999 Eastern Analytical Symposium**. Somerset, NJ. (302)738-6218, eMail: easinfo@aol.com, <http://www.eas.org/>
 - ✓ Nov 15/18 '99: **EuroFE '99**. Toledo, Spain. www.cmp-cientifica.com/EuroFE/schedule.htm
 - ✓ Nov 30/Dec 3 '99: **CIA '99, ChemAsia/InstrumentAsia/AnaLabAsia, and ANALYTICAL 2000—Munich**. Singapore. Kallman Associates (U.S. pavilion): (201)652-7070, Fax: (201)652-3898
 - ✓ March 12/16 '00: **High Resolution Electron Microscopy in Materials Science Symposium** (TMS Physical Metallurgy Committee) Nashville, TN, Diane Albert, Los Alamos Natl Lab: (505)665-2266, Fax: (505)667-5268
 - ✓ April 3/4 '00: **Microscopy of Composite Materials V** (RMS & Oxford Centre for Advanced Materials and Composites) St. John's College, Oxford, U.K. +44-1865-248768, Fax: +44-1865-791237
 - ✓ April 9/13 '00: **FOCUS ON MICROSCOPY 2000** (12th Annual Meeting of International Conference on Confocal Microscopy). Shjirahama, Japan. <http://lasie.ap.eng.osaka-u.ac.jp/fofm>
 - ✓ April 11/13 '00: **MICRO 2000** (Royal Microscopical Society) London www.rms.org.uk
 - ✓ May 9/12 '00: **SCANNING 2000** San Antonio, TX., Mary K. Sullivan: (201) 818-1010, Fax: (201)818-0086, scanning@fams.org
 - ✓ May 22/June 2 '00: **PASEM 2000** (Univ. of Maryland) College Park, Md., Tim Maugel: (301)405-6898, tm11@umail.umd.edu
- LEHIGH MICROSCOPY SCHOOLS**
- ✓ June 12/16 '00: SEM and X-ray Microanalysis
 - ✓ June 11 '00: Introduction to SEM and EDS
 - ✓ June 19/23 '00: Advanced Scanning Electron Microscopy
 - ✓ June 19/23 '00: Quantitative X-ray Microanalysis
 - ✓ June 19/22 '00: Analytical Electron Microscopy
 - ✓ June 20/23 '00: Atomic Force Microscopy
 - ✓ June 19/23 '00: Microdiffraction
 - ✓ June 21/23 '00: Cryo SEM
- For further information, contact Ms. Sharon Coe at Tel.: (610)758-5133 or by eMail at sharon.coe@lehigh.edu
- ✓ June 22 '00: **16th Annual Short Course on Molecular Spectroscopy** (Miami University) Oxford, OH. <http://www.muohio.edu/~sommeraj>
 - ✓ June 23 '00: **2nd International Conference on Scanning Probe Microscopy in Biomaterials Science**. Bristol, U.K., Dr. Klaus Jandt: k.jandt@bris.ac.uk
 - ✓ June 26/30 '00: **7th Asia-Pacific Conference on Electron Microscopy** Singapore. eMail: micngml@nus.edu.sg or medlab2@nus.edu.sg <http://www.med.nus.edu.sg/micsoc7/apem>
 - ✓ July 8/13 '00: **2nd Meeting of the International Union of Microbeam Analysis Societies**. Kailua-Kona, Hawaii. www.microanalysis.org/iumas2000/
 - ✓ July 9/14 '00: **12th European Congress on Electron Microscopy**. Bruno, Czech Republic. <http://www.eurem2000.isibno.cz/regform.html>
 - ✓ July 27/29 '00: **International Kunming Symposium on Microscopy** (Chinese Electron Microscopy Society) Kunming, P.R. China. IKSM Office: IKSM@aphy.iphy.ac.cn
 - ✓ August 13/17 '00: **Microscopy & Microanalysis '00** (MSA) Philadelphia, PA. Maryanne Rebedeau: (708)361-6166, mas@tradeshownet.com
 - ✓ September 3/8 '00: **11th International Congress of Histochemistry** York, U.K., www.med.ic.ac.uk/external/ichc_2000
 - ✓ November 19/23 '00: **First International Conference on Advanced Materials Processing** Rotorua, New Zealand. Prof. Nigel Sammes: n.sammes@walkato.ac.nz

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