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Science Highlight: Scientists Develop Technique to Determine Molecular Structure of Heterogeneous Surfaces

Contact: Dan Fischer (dfischer@bnl.gov)

Scientists have refined a technique that uses the very intense light emitted by the NSLS to determine the structure of chemically heterogeneous surfaces with a submillimeter resolution. The description of the technique and its application to the study of varying densities of surface-bound molecules - each about one thousand times smaller than the diameter of a human hair - appears as the cover story of the January 13, 2003, issue of Applied Physics Letters. For more on this work, see:

<http://www.bnl.gov/bnlweb/pubaf/pr/2003/bnlpr011703a.htm>

Congressman Tim Bishop and DOE's Ray Orbach visit NSLS

Contact: Liz Seubert (lseubert@bnl.gov)

On Monday, December 30, Raymond Orbach, the Director of DOE's Office of Science, journeyed to BNL to meet with U.S. Representative Timothy Bishop, the newly elected First District Congressman, who was visiting the Lab for the first time. Highlights of Bishop's brief tour of the Lab included a stop at the National Synchrotron Light Source (NSLS). For details on their visit, see:

<http://www.nsls.bnl.gov/newsroom/news/2002/bishop.htm>

Workshop Summary: Frontiers in Synchrotron X-Ray Microbeam Diffraction

Contact: Jim Ablett (jablett@bnl.gov)

The Workshop on Frontiers in Synchrotron X-Ray Microbeam Diffraction was held on January 10, 2003 in the Hamilton seminar room in the Chemistry Department at BNL, with a large gathering of over 40 attendees. The purpose of this workshop was to inform the scientific, university and industrial community of the plans to design and install a state-of-the-art microdiffraction instrument at NSLS mini-gap undulator beamline X13B. For more information on the workshop and the plans for the new instrument, see:

www.nsls.bnl.gov/newsroom/events/workshops/fsxmd/summary.htm

DOE Nanoscale Science Research Centers Workshop: February 26-28, 2003

On February 26-28, 2003, the first national users meeting for DOE's Nanoscale Science Research Centers will take place in Washington, DC. It will provide a forum for communication on nanoscience among agencies, policymakers, and scientific community. It will also provide a forum for discussion of user policies and research opportunities in nanoscale science. For more information, please see the workshop website at:

http://www.ornl.gov/doe_nsrc_workshop/

RapiData 2003: A Practical Course on Macromolecular X-Ray Diffraction Measurement

Contact: Bob Sweet (sweet@bnl.gov)

Synchrotron radiation has become an indispensable tool for many macromolecular crystallography groups. Synchrotron beam time is such a scarce commodity that it pays for some workers to enhance their skills by participating in an intensive hands-on training program. To provide such an educational experience, a course in Rapid Data Collection and Structure Solving will be held April 6-11, 2003. It is sponsored in part by a grant from the National Center for Research Resources of the National Institutes of Health. This course will address the ideas behind conventional methods for diffraction data collection, will emphasize aspects unique to the synchrotron experience (MAD phasing, rapid structure solving), and will give students practical experience in work on their own specimens. For more details on the course, including application procedures, see:

<http://www.px.nsls.bnl.gov/RapiData2003/>

2003 NSLS Users' Meeting set for May 19-21, 2003

Contact: Lydia Rogers (lrogers@bnl.gov)

The 2003 NSLS Annual Users' Meeting will take place May 19-21, 2003. Each year, this meeting brings together scientists from many diverse disciplines to share their recent accomplishments and visions of the future. It also provides them with the opportunity to visit with old friends and to forge new relationships. Because the focus of the meeting is on the science produced using synchrotron radiation, the infrequent or new synchrotron user is encouraged to attend. Through workshops, invited talks, the poster session, and the informal interactions, there will be numerous opportunities to learn about new

frontiers in synchrotron-based experimentation and how these will impact individual research interests. Full details about the meeting and workshops, and all the latest information, can be found at:

<http://www.nsls.bnl.gov/newsroom/news/2003/06-UsersMtg.htm>

Changes to Review Procedures for New and Renovated NSLS Beamlines

Contact: Lonny Berman (berman@bnl.gov)

Most everyone is aware that new or renovated NSLS beamlines must undergo, as a condition of operational approval, a formal review by the NSLS Beamline Safety Review Committee. This review consists of the drafting and submission, by beamline staff to the NSLS, of documents and drawings which address various matters including the beamline design and equipment and personnel protection among others, in accordance with guidelines described in the NSLS ES&H Policy and Requirements Manual LS-ESH-PRM-1.3.5b (see <http://nslsweb.nsls.bnl.gov/nsls/Manuals/P&RMan/LS-ESH-PRM-1.3.5b.html>). Following their submission, the documents and drawings are formally reviewed at a meeting of the Beamline Safety Review Committee, and recommendations regarding conditions for operational approval are made by the committee. Thereafter, a Beamline Readiness Review Walkthrough, in the presence of a subset of the committee, occurs at the beamline to determine its readiness to commence operations.

Recent circumstances have made it clear that an additional preliminary review of new or renovated beamlines is called for, in which preliminary designs of the beamline and its major components are reviewed. This sort of early review should occur prior to the construction or renovation of the beamline in question, and can assist in identifying aspects of the beamline design that require addressing, or further review (perhaps by a different committee), prior to the beamline's construction or renovation (after which it may otherwise be very difficult to address problems).

Therefore, we will now be calling for new or renovated beamlines to undergo a preliminary review in addition to the existing formal final review. We will be posting guidelines pertaining to the preliminary review in the above Policy and Requirements Manual.

Input Needed for User Network Access Outside BNL Firewall

Contact: Peter Siddons (siddons@bnl.gov)

The NSLS is looking into the possibility of providing network connections to users which are outside of the BNL firewall, and which should ease many of the restrictions which DOE places on *.bnl.gov addresses. We would like to hear from users who would want to take advantage of such a connection so that we can assess numbers. We would also like to know what are the services which cause difficulties under the existing system. Please send email to Pete Siddons (siddons@bnl.gov) if you are interested.

The December NSLS Newsletter is now online

Contact: Nancye Wright (wrightl@bnl.gov)

The December 2002 issue of the NSLS Newsletter is now available online and in print. To receive a printed copy, please email Nancye Wright at wrightl@bnl.gov. To view and download the online version, go to:

www.nsls.bnl.gov/newsroom/publications/newsletters/2002/02-nov.pdf

Job Opportunities at the NSLS

A number of scientific and technical job opportunities are available now at the NSLS. See the NSLS web site for details:

<http://www.nsls.bnl.gov/organization/Admin/jobs.htm>

User Obligations and Reminders

Pre-Registration: All users must pre-register for each visit. <http://www.nsls.bnl.gov/users/newusers/>

Foreign Nationals: All foreign nationals must submit Form BNL-473. Those without active appointments must arrive Monday-Friday by 3 p.m. (no weekends/holidays).

<http://www.nsls.bnl.gov/users/newusers/>

Training: All users who require training/retraining must arrive Monday-Friday by 3 p.m. (no weekends/holidays).

Publication References: Users (except proprietary) are obligated to submit references for all published work.

<http://www.nsls.bnl.gov/newsroom/publications/references/>

End of Run Form: All users are asked to complete the End of Run survey at the end of each experimental run.

www.nsls.bnl.gov/users/procedures/end_of_run/end-of-run.asp

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www.nsls.bnl.gov/newsroom/publications/listservers.htm - nsls-news

If you would like to suggest a news item, please send a message to nslsinfo@bnl.gov.

The current and past issues of the NSLS e-News are available on the web at:

<http://www.nsls.bnl.gov/newsroom/publications/enews/>

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