

The following news briefs are sent to you by the National Synchrotron Light Source at Brookhaven National Laboratory, Upton, New York nsls.bnl.gov

Science Highlight: How Bacteria Talk to Each Other

Contact: Fred Hughson (fhughson@molbio.Princeton.edu)

In a process known as quorum sensing, bacteria communicate with one another using chemical signalling molecules called autoinducers. This cell-cell communication allows a population of bacteria to coordinate the gene expression, and therefore the behavior, of the group. Recent work by researchers from Princeton University and the School of Chemistry, Polymers and Materials in Strasbourg, France, has led to the identification of a novel autoinducer, AI-2, that may serve as a 'universal' signal for communication between different bacterial species. AI-2 unexpectedly contains boron, an element that, while ubiquitous in the biosphere, has seldom been observed to play a role in biological processes. For more on this work, see:

<http://www.nsls.bnl.gov/newsroom/science/2002/09-Hughson.htm>

Science Highlight: Probing the Structure of Gold Nanowires

Contact: Ian Robinson (robinson@mrl.uiuc.edu)

Scientists working at NSLS beamline X16A have revealed the full three-dimensional structure of nanowires formed by deposition of gold on a stepped silicon surface using surface X-ray diffraction. The result is important because of the unusual band-dispersion properties previously reported for this system. The result is interesting because the gold atoms are neither imaged by STM, nor are involved directly in the electronic states responsible for the metallic behavior of the surface.

<http://www.nsls.bnl.gov/newsroom/science/2002/08-Robinson.htm>

Do you want your research featured as an NSLS Science Highlight?

Contact: Patrice Pages (pages@bnl.gov)

In order to highlight new science at the NSLS, the homepage now features two new Science Highlights every week. These highlights appear on the NSLS website, and can also be downloaded in a printer-friendly PDF format. In addition, they will be published in the annual NSLS Activity Report. Would you like your research featured as an NSLS Science Highlight? If you have a recent publication, just contact Patrice Pages, the NSLS Science Writer, about how to submit one. To view the 2002 Science Highlight archive, see:

<http://www.nsls.bnl.gov/newsroom/science/2002/>

LEES '02 Meeting to be held in Montauk, NY from October 14-18

Contact: Larry Carr (carr@bnl.gov) or Laszlo Mihaly (laszlo.mihaly@sunysb.edu)

The next Low Energy Electrodynamics in Solids meeting (LEES '02) will take place the week of October 14th-18th 2002, in Montauk (Long Island) NY. The meeting is being sponsored and organized by the NSLS, Brookhaven Lab, and Stony Brook Univ. This particular LEES meeting will feature synchrotron-based probes of electron dynamics, such as infrared and THz spectroscopies (including time-resolved), high-resolution photoemission, and inelastic x-ray scattering. A tour of the NSLS is planned for one afternoon. The conference web site can be found at:

<http://solidstate.physics.sunysb.edu/lees2002/>

Beamline Progress Reports Due by October 1, 2002

Contact: Lydia Rogers (lrogers@bnl.gov)

As part of our annual DOE reporting process, the NSLS is required to report certain information concerning each beamline to the Office of Basic Energy Sciences at the end of each fiscal year. Each beamline spokesperson and local contact was emailed a template report in August to complete and return electronically to NSLS User Administration by October 1. This is just a reminder that October 1st is only a week away!

Call for Experimental Abstracts: Deadline is October 31, 2002

If you conducted research at the NSLS between October 1, 2000, and September 30, 2001, please submit an experimental abstract at this time. All NSLS users are obligated to submit an abstract for research conducted at the NSLS in exchange for use of the synchrotron facilities. Abstracts are a necessary part of our Department of Energy reporting process and aid in our funding application process. All abstracts will be published in the 2002 Activity Report. Submission of your abstract requires two steps: (1) submission of a title online (2) Transfer of the abstract (text and figures) to our FTP site. Complete instructions can be found online at:

nslsweb.nsls.bnl.gov/nsls/pubs/abstracts/submit_instructions.htm

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/>

Abstracts: Users are obligated to submit abstracts.

<http://nslsweb.nsls.bnl.gov/nsls/pubs/abstracts/submit.asp>

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

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

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<http://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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This work was supported by the U.S. Department of Energy, Division of Materials Sciences and Division of Chemical Sciences, under Contract No. DE-AC02-98CH10886

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