

# Steven Dierker Named NSLS Chair

Diane Greenberg

Steven Dierker, a leader in synchrotron light research and administration, has been named Chair of the National Synchrotron Light Source (NSLS) Department, effective May 7. He succeeds Sam Krinsky, who served as Acting NSLS Chair from October 2000, following the retirement of NSLS Chair Michael Hart.

"Steve Dierker's long career in light-scattering at various laboratories and user facilities and his broad interests make him ideally suited to be NSLS Chair at this time," says Lab Director John Marburger. "He has good ideas about optimizing use of the existing beam lines and a clear vision for future facilities."

One of the world's most widely used and productive scientific facilities, the NSLS has 160 employees and a user-community of about 2,500 researchers a year from more than 400 universities, laboratories, and companies.

Commissioned in 1982, the NSLS has yielded advances in such diverse fields as biology and physics, chemistry and geophysics, and medicine and materials science. Its present annual budget is approximately \$35 million.

As the new NSLS chair, Dierker says his three major goals are to: keep the facility strong, increase the number of users, and pursue future technologies.

To keep the NSLS vibrant, Dierker will be an advocate for developing new applications of synchrotron radiation, updating the facility's scientific capabilities, and improving the 20-year-old building's infrastructure.

To attract additional users, Dierker endorses the concept of forming new communities of users, such as is being done around the protein-crystallography beam lines.

Says Dierker: "We view this as a prototype and so are using it as a model in the fields of, for instance, catalysis, chemical sciences, and environmental and geological sciences. By applying this concept in more fields, we will allow larger numbers of users to have easy and rapid access to a number of beam lines and to a variety of different techniques to solve their scientific problems."

## Next generation

"Currently, we are working on a promising next-generation research tool - a free electron laser," con-

tinues the new chair. "By combining the advantages of synchrotrons and lasers, this new tool could open up new research avenues."

In addition, Dierker points out, his department is pursuing studies of a new technology called a photon-injected energy recovery linac, or PERL. "A PERL facility would provide a much brighter light source than we have at present," he explained. "It would have ultra-short x-ray pulses capable of imaging ultra-fast chemical dynamics over an extremely short time span, measured in trillionths of seconds."

PERL would require the use of a superconducting linear accelerator, as well as other innovations. "This has become realistic because of the work at BNL's Accelerator Test Facility, which is a world leader in devising new types of accelerators," Dierker says.



## Facility-user experience

After earning B.S. degrees in both physics and electrical engineering in 1977 from Washington University, Dierker earned an M.S. and Ph.D. in physics from the University of Illinois, Urbana-Champaign, in 1978 and 1983, respectively. In 1983, he joined the Semiconductor & Chemical Physics Research Department at AT&T Bell Laboratories (now Lucent Technologies), and, in 1990, he joined the University of Michigan, where he was Professor of Physics and Applied Physics.

Dierker has been an NSLS facility-user since 1992. In initial experiments there, he developed a novel synchrotron technique, x-ray photon correlation spectroscopy, which uses coherent synchrotron beams to study colloidal systems and polymers.

Since 1996, Dierker has been a member of the Advanced Photon Source (APS) Users Organization at Argonne National Laboratory, where he served as chair of that organization from 1998 to 2000. Dierker also helped to plan the construction, design and operation of beamlines at the APS, with funding from DOE and the National Science Foundation.

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