

Interfacial and Processing Sciences
News Notes

August 16, 2000

**Environmental and Molecular Sciences Laboratory
Pacific Northwest National Laboratory**

News Notes, established to help keep our Users and others who have had a connection with us up-to-date on activities, events, capabilities, and interesting results, including short summaries of the work of users.

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Summer Visitors

We are near the end of our annual summer population increase. A wide variety of users, visiting faculty, and students arrive for a wide range of reasons, working on many projects and with different sources of support. We are particularly happy to have them here and appreciate the efforts of Terry Law and Courtenay Turner to help smooth the training needs and access requirements. To show the variety, the visitor (and home institution) are listed below:

Brian Palmer	Faculty, Hanford High School
Evan Adams	Richland High School
Daniel Allred	University of Washington
Ryan Boger	University of Notre Dame
Jon Gunther	Harvey Mudd College
Jackson Davis	University of Washington
Amanda Hedges	Eastern Oregon University
Marino Morra	Salt Lake City Community College
John "Tom" Cleaves	Washington State University
Brian Dockendorff	University of Washington
Laura Brown	Washington State University
Tom Hurt	Cornell University
Pornthep (Joe) Meethunkij	Yale University
Tiffany Coulter	University of Washington
Jennifer Elliott	University of Washington
Allan Tuan	University of Washington
Mohammad Islam	New Mexico Tech
Kwan-Young Lee	Faculty, University of Korea
Stephanie Alexander	Washington State University

Charles Shawley	Whitworth College
Kyle Littlefield	Hanford High School
Matt Noyes	Hanford High School
Paula Shukla	Hanford High School
Adam Still	Columbia Basin College
Chad Cooper	Yakima Valley College
Krista Hammack	Columbia Basin College
Jana Mounts	Columbia Basin College
Beatrice Koempel-Thomas	Yakima Valley College
Monesh Kapadia	Tulane University (grad); George Washington Medical School

Bill Rogers Managing PNNL Nanoscience and Nanotechnology Initiative

Bill Rogers, associate director for I&PS, is managing a new laboratory initiative in the nanoscience and technology area. This effort will include Laboratory-directed research and development efforts along with establishing different types of links with northwest universities and other national laboratories.

Developing Atmospheric Chemistry Studies

Several I&PS staff members will participate in a Houston Atmospheric Chemistry study starting in the middle of August. Mike Alexander will take an ion trap mass spectrometer to Houston in an attempt to do real-time organic analysis. Dan Gaspar will do some TOF-SIMS measurements on aerosol particulates collected during this several week study. Shuttha Shutthanandan is working to expand the PIXE (particle induced x-ray emission) capability in the accelerator laboratory to enable semi-automated analysis of atmospheric particulates. These efforts are being encouraged and coordinated by Len Barrie, a senior-level scientist who arrived at the laboratory in late 1999 and is leading the effort to expand PNNL efforts and capabilities in this area.

Two I&PS Staff recognized with Laboratory Director's Award

I&PS staff Don Baer and Tim Hubler (along with Gariann Gelston) were honored with the Fitzner-Eberhardt Award for Outstanding Contributions to Science and Engineering Education. They were selected for their significant contributions to science and engineering education through research experiences for students, teachers and faculty; curriculum development and enhancement; career guidance and mentoring; and enhancement of public understanding of science.

The annual award is presented in memory of Battelle scientists Richard Fitzner and Les Eberhardt, who died in a plane crash in 1992, cutting short their outstanding service and contribution to students, teachers and faculty. Fitzner and Eberhardt demonstrated commitment and dedication of their time and talents not only to their research, but also to the education and training of future scientists, engineers and technologists.

EMSL2000 Nanoscience and Nanotechnology Symposium a Success

EMSL2000, attracting approximately 250 participants, was a delightful success in terms of both the attendance and quality of the symposia and workshops. Both of the I&PS-organized activities (Nanoscience and Nanotechnology Symposium and the Scanning Probe and Other Nano-resolution Methods Workshop) were well received. Many of the invited speakers expressed enthusiasm for both the program and the possibility of working with EMSL staff and capabilities on future projects.

Dr. Yufei Gao departed August 10

Yufei Gao who has led the I&PS efforts involving MOCVD and TEM for the past 5 years has taken an industrial position and left PNNL on August 10. He has been a very productive member of the EMSL team, and contributed greatly to the selection and development of the capabilities that were included in the EMSL. One of his recent activities has included the growth of arrays of carbon nanotubes. I&PS staff will miss the interactions with him, as will our many users who utilized his knowledge and expertise with MOCVD and TEM. Users should be aware that access to these instruments may be more limited until we can identify some primary operators for them.

Population Boom in Surface and Interface Laboratory

The summer schedule has been particularly hectic in the Surface and Interface Laboratory. A lot of work has been conducted for both short-term and long-term projects. These range from reaction studies on oxides to examination of ancient bronze and isotope studies of fungi in farm animal byproducts. There have been both short-term (a Washington State University materials science class) and long-term (Hanford High School teacher and three students) user interactions with us. However, both Dan Gaspar and Mark Engelhard have been working at a feverish pace and putting in very long hours so that the arrival of new babies would not unduly impact lab activities. Connor Lee Gaspar (August 6) and Kylie June Engelhard (August 16), although very welcome additions to the I&PS family, will somewhat limit the ability of Dan and Mark to meet all user demands during August and possibly part of September.

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