

Biomolecular Structure from Nanocrystals and Diffuse Scattering

June 13 & 14, 2011

Robert Purcell Conference Center, Cornell University, Ithaca NY

The purpose:

To assess the state-of-the-art in the use of x-ray nanobeams (1) to determine biomolecular structures from micro/nanocrystals and (2) to obtain information from analysis of diffuse scattering by crystals and solutions of biomacromolecules.

The emphasis is on new approaches that are enabled by the hard x-ray nanobeams that will be possible with new continuous-duty x-ray sources.

Philip Anfinrud, National Institutes of Health

"Time-resolved Scattering of Proteins in Solution: new opportunities for an ERL"

Don Bilderback, Cornell University

"Energy Recovery Linac (ERL) and Ultimate Storage Ring (USR) Properties"

Martin Caffrey, Trinity College, Ireland

"Toward Rational Crystallization for Structure-Function Studies of Membrane Proteins"

Brian Crane, Cornell University

"Biological Opportunities with Solution Scattering"

Bob Fischetti, Argonne National Laboratory

"Data Collection from Nanocrystals with Reduced Radiation Damage"

Seth Fraden, Brandeis University

"Microfluidics to Produce and Manipulate Microcrystals"

Sol Gruner, Cornell University

"X-ray Detectors: State-of-the-art & Future Possibilities"

James Holton, Lawrence Berkeley National Laboratory

"Predicting and Processing Nanocrystal Diffraction Data"

Roger Sunahara, University of Michigan

"G Protein Coupled Receptor Structure Determination Enabled by Microdiffraction Technology"

Lee Makowski, Northeastern University

"Next Generation Solution Scattering"

Alex McPherson, University of California, Irvine

"The Challenge of Novel, Nanoscale Biological Samples"

George Phillips, University of Wisconsin, Madison

"Non-Bragg Scattering from Protein Crystals"

Doug Rees, California Institute of Technology

"Membrane Proteins and Membrane Potentials"

Ilme Schlichting, Max Planck Institute, Heidelberg

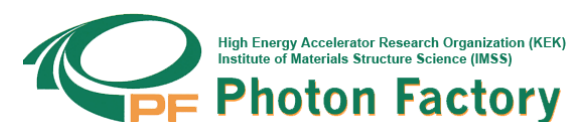
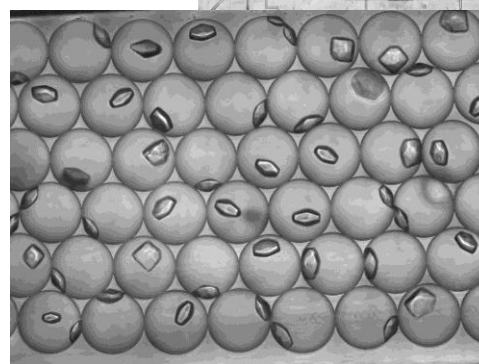
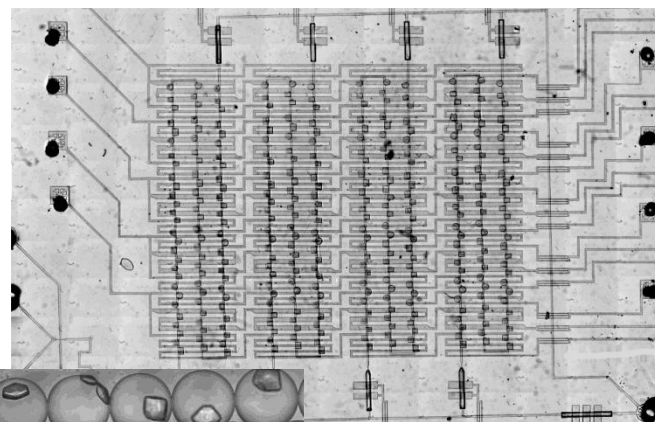
"Emerging Biological Opportunities with ERL/USR Beams" [tentative]

John Spence, Arizona State University & Lawrence Berkeley National Laboratory

"Nanocrystals, Injectors and Correlations for an ERL"

Dmitri Svergun, European Molecular Biology Laboratory

"Small-angle Scattering from Biological Solutions: potential of the ERL/USR Sources"



Organizers:

Ed Lattman (Hauptmann-Woodward Medical Research Institute),
Mavis Agbandje-McKenna (University of Florida),
Keith Moffat (University of Chicago),
Sol Gruner (Cornell University)



Go to http://erl.chess.cornell.edu/gatherings/2011_Workshops/index.htm

For more information contact Kathy Dedrick, User Administrator – 607-255-0920

