
# Frontier Science with X-ray Correlation Spectroscopies using Continuous Sources

**June 29 & 30, 2011**

**Robert Purcell Conference Center, Cornell University, Ithaca NY**

**The purpose:**
Future Energy Recovery Linac (ERL) and Ultimate Storage Ring (USR) x-ray sources will be able to deliver coherent hard x-ray beams that are hundreds of time more intense than at most existing storage ring x-ray sources. These intense beams will enable novel ways of probing structural dynamics in matter using correlation spectroscopy (XPCS).
The emphasis is on identifying opportunities and exploring high-impact experiments.

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**Don Bilderback**, Cornell University

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

**Wes Burghardt**, Northwestern University

"*XPCS During Shear"*

**Andrei Fluerasu**, National Synchrotron Light Source II

*"Dynamics in Soft-matter and Biological Systems: Trends and Opportunities at NSLS-II"*

**Sol Gruner**, Cornell University

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

**Christian Gutt**, Deutsches Elektronen-Synchrotron

*"X-ray Cross Correlation Analysis (XCCA) and Bond-order in Liquid and Glasses"*

**Stephen Kevan**, University of Oregon

"*Probing Magnetic Complexity with Coherent Soft X-ray Beams"*

**Karl Ludwig**, Boston University

*"Martensitic Transitions & Opportunities in Non-equilibrium Physics"*

**Larry Lurio**, Northern Illinois University

*"Prospects for X-ray Photon Correlation Spectroscopy from Liquid and Soft Matter Surfaces and Interfaces"*

**Simon Mochrie**, Yale University

*"Biophysics and Soft Matter"*

**Michael Pierce**, Argonne National Laboratory

"*XPCS on Surfaces: Challenges and Opportunities"*

**Maikel Rheinstadter**, McMaster University

*"Nanobiology: Membranes and Proteins in Motion"*

**Alec Sandy**, Advanced Photon Source

*"Scientific Trends and Opportunities from the Perspective of 8-ID"*

**Bogdan Sepiol**, University of Vienna

*"Nanoscale Dynamics, Atomic Diffusion"*

**Yuya Shinohara**, University of Tokyo

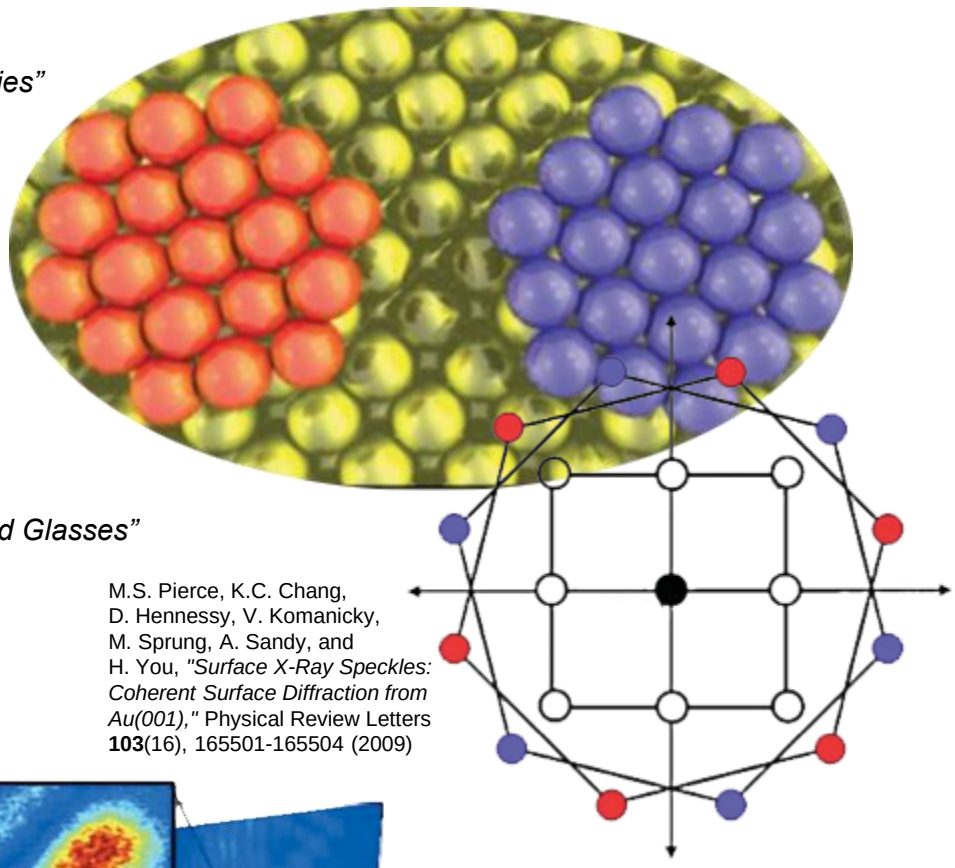
"Hierarchical *Dynamics of Soft Matter and Opportunities at Japanese Future Light Sources"*

**Michael Sprung**, Deutsches Elektronen-Synchrotron

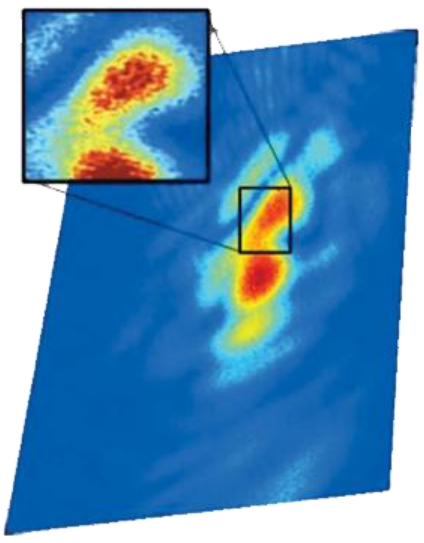
*"Scientific Trends and Opportunities: P10 @ PETRA III"*

**Mark Sutton**, McGill University

*"New Opportunities for XPCS"*



M.S. Pierce, K.C. Chang, D. Hennessy, V. Komanicky, M. Sprung, A. Sandy, and H. You, *"Surface X-Ray Speckles: Coherent Surface Diffraction from Au(001),"* Physical Review Letters **103**(16), 165501-165504 (2009)



CHESS SSRL DESY

High Energy Accelerator Research Organization (KEK)
Institute of Materials Structure Science (IMSS)
PF Photon Factory

**Organizers:**
**Mark Sutton** (McGill University),
**Simon Mochrie** (Yale University),
**Arthur Woll** (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