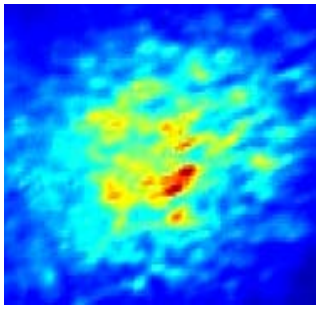
Oleg G. Shpyrko
CNM Distinguished Postdoctoral Fellow
Theme: Electronic and Magnetic Materials & Devices
Phone: 630-252-7540
Fax: 630-252-4646
E-mail: oshpyrko@anl.gov

Center for Nanoscale Materials, Bldg. 440, A-233
Argonne National Laboratory
9700 S Cass Ave
Argonne, IL 60439-4806

Research summary:



My research interests are primarily in utilizing newly available coherent 3rd and 4th generation synchrotron x-ray sources to studies of dynamics in condensed matter systems characterized by complex disorder. These include meso- and nanoscopically heterogeneous, disordered or non-equilibrium systems ranging from soft materials such as liquids, glasses and colloids to electronic and magnetic materials, in particular structure and dynamics of magnetic domains.

Selected recent publications:

"Direct Measurement of Antiferromagnetic Domain Fluctuations"
O. G. Shpyrko, E. D. Isaacs et al., *Nature* 447, 68 (2007)

"Microscopic and Macroscopic Signatures of Antiferromagnetic Domain Walls"
R. Jaramillo**,** T. F. Rosenbaum**,** E. D. Isaacs**, O. G. Shpyrko** et al., *Phys. Rev. Lett.* 98, 117206 (2007)

"Surface Freezing in Gold-Silicon Liquid Alloy"
O. G. Shpyrko, R. Streitel, V. S. K. Balagurusamy et al., *Science* 313, 77 (2006)

"Capillary Filling of Anodized Alumina Nanopore Arrays"
K. J. Alvine, **O. G. Shpyrko**, P. S. Pershan, K. Shin and T. P. Russell, *Phys. Rev. Lett*, 97, 175503 (2006)

"Surface Induced Atomic Scale Demixing in BiSn Eutectic Alloy"
O. G. Shpyrko, A. Grigoriev, R. Streitel et al., *Phys. Rev. Lett.* 95, 106103 (2005)