Advanced Photon Source
» an Office of Science User Facility

Calendar of Events *beta*

Also available in RSS and iCalendar formats.

To report an event that is not listed, contact webmaster.

March 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
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[Previous Events]

ICAL
HCALENDAR

TODAY

Mar 25
Friday

Studies of Iron-Carbon-Oxygen Phases at Extreme Conditions: Single Crystal and Multigrain Analysis, Spin Transition, Synthesis of High Pressure Phases
Speaker: Barbara Lavina, HiPSEC and Department of Physics and Astronomy University of Nevada, Las Vegas
XSD Presentation
401/A1100 @ 11:00 AM
View Description

User Science Seminar
APS Seminar
401/A1100 @ 12:00 PM

On the Performance of Multilayers Used as Monochromators for Coherent X-ray Imaging with Hard Synchrotron Radiation
Speaker: Alexander Rack, European Synchrotron Radiation Facility
XSD Presentation
401/A1100 @ 1:30 PM
View Description
We present a systematic study in which multilayers of different composition (W/Si, Mo/Si, Pd/B4C, Ru/B4C, W/B4C), periodicity (from 2.5 to 5.5 nm), and numbers of layers have been characterized. Particularly, we investigated the intrinsic quality (roughness and reflectivity) as well as the performance (flatness and coherence of the outgoing beam) as a monochromator for synchrotron radiation hard X-ray micro-imaging. The results indicate that the material composition is the dominating factor for the performance. Current experiments at 32-ID of APS are foreseen combined with a round-robin of different multilayer laboratories to verify and understand the influence of the material composition. This is of high importance for synchrotron-based hard X-ray imaging which has become a widely applied tool for probing the microstructure of bulk samples. The high spatial resolution and different contrast modalities available here strongly depend on using coherent beams from highly brilliant sources. In order to satisfy the demand for a high flux of quasi-monochromatic photons, multilayer-coated mirrors are commonly used as monochromators. This comes at the cost of reduced energy resolution and stronger non-uniformities in the incoming beam profile. By helping scientists and engineers specify the design parameters of multilayer monochromators, our results can contribute to a better exploitation of the advantages of multilayer monochromators over crystal-based devices for X-ray imaging.
[Hide]

UPCOMING

Mar 28
Monday

In Situ Experiments in X-ray Imaging -- Application to Materials Science
Speaker: Eric Maire, Mateis Lab, Institu National des Sciences Appliquees (INSA)
XSD Presentation
431/C010 @ 3:00 PM
View Description

Mar 30
Wednesday

APS/Users Operations Monthly Meeting
APS Meeting
402/AUD @ 2:30 PM

Apr 1
Friday

User Science Seminar
APS Seminar
401/A1100 @ 12:00 PM

Apr 8
Friday

User Science Seminar
APS Seminar