Session 6: Optics and Beam Coherence

Date: **Tuesday 3 August**
Time: **10:30 AM - 11:50 AM**

Session Chairs: **Kawal J. S. Sawhney**, Diamond Light Source Ltd. (United Kingdom); **Brian W. Yates**, Canadian Light Source Inc. (Canada)

Micro-imaging performance of multilayers used as monochromators for coherent hard X-ray synchrotron radiation

Paper 7802-22
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We present a systematic study in which multilayers of different composition (W/Si, Mo/Si, Pd/B4C), periodicity (from 2.5 to 5.5 nm), and numbers of layers have been characterised. 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.
These results can contribute to a better exploitation of the advantages of multilayer monochromators over crystal-based devices; i.e., larger spectral bandwidth and high photon flux density, which are particularly useful for synchrotron-based microradiography and
-tomography.