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Authors

Falcone, Roger W.
Schoenlein, Robert. W.
Kirz, Janos
et al.

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The Advanced Light Source achieves top-off, plans and operates new beam lines and experimental facilities.

T. Warwick, R. W. Falcone, R. W. Schoenlein, J. Kirz, B. Feinberg, Z. Hussain, H. A. Padmore, D. S. Robin, E. J. Moxon

Advanced Light Source, Berkeley, California, United States

With the successful upgrade of the ALS to top-off this year the brightness of the source and the coherent soft X-ray flux has been increased. Lattice modifications over the next few years will further reduce the emittance, keeping the ALS fully competitive with the world's highest brightness synchrotron sources.

Our strategic plan features dedicated beam lines to dramatically increase our capabilities for photo-emission, diffraction microscopy, x-ray correlation studies and high resolution inelastic scattering. Construction of the MAESTRO facility is planned to start in 2010 to provide nano-scale angle-resolved photoemission.

New experimental facilities are available to the user community. PEEM-3 is operational. Our ultra fast x-ray facility operates for the hard x-ray and soft x-ray programs using laser slicing. MERLIN is installed for ultra high resolution studies of strongly correlated electronic systems. A new soft x-ray microscope operates as the National Center for X-ray Tomography. Micro-diffraction operates with expanded energy range. A new facility for SAXS/WAXS is operational and a new STXM is in the design phase.

These developments will support the ALS scientific program for many years to come.

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