

# SPECTROSCOPY

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*The highly brilliant light from SPring-8 ranging from the hard to soft X-ray regions provides remarkable opportunities in the studies of electronic structures for a wide range of materials. Newly commissioned high performance beamlines for magnetic circular dichroism (BL39XU, BL25SU), Compton scattering (BL08W), nuclear resonant scattering (BL09XU) and photoemission spectroscopy (BL25SU) are beginning to produce important results that will have major impact on our understanding of condensed matter, primarily of magnetic materials.*

*In particular, a new helicity modulation technique for the hard X-ray region has been developed in SPring-8 for magnetic circular dichroism studies and has enabled the detection of signals weaker by orders of magnitude than that could be measured before, opening up new opportunities in the studies of magnetism, biology, etc. The photoemission experiments in the soft X-ray beamline are also unique in their energy resolution, the highest in the world in the soft X-ray region. This has enabled us to study fine structures near the Fermi level, such as Kondo peaks, using much higher photon energies than usually employed for such studies.*

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