

Soft X-ray Science at PETRA-III, DESY Hamburg

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The world's largest storage ring x-ray source PETRA-III features beamline P04 that delivers soft x-ray of high intensity, pure polarisation and very high coherence to a large variety of user experiments. In this presentation we highlight the qualities of this beam and present a selection of experimental method and instruments that are used at P04. The seminar will showcase selected science highlights with a focus on which science questions could be addressed by the advanced instrumentation. These include angle-resolved photoemission from solids, resonant elastic and inelastic photon scattering experiments, photoemission from liquid jets, holographic lensless x-ray microscopy and absorption spectroscopy from gasses and ions.