

Use of Polarized X-ray Absorption Spectroscopy for the Study of Ferromagnetic and Antiferromagnetic Multilayers

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The talk reviews the principles of polarized x-ray absorption spectroscopy with emphasis on magnetic transition metal multilayer systems. In particular, angle dependent measurements with circularly and linearly polarized x-rays are shown to provide unique information on the anisotropy of charge and spin in such systems. We will discuss applications where conventional magnetics techniques have failed to give a clear picture. They include some of the fundamental phenomena in magnetism such as the origin of the magnetocrystalline anisotropy and the origin of anisotropic exchange between an antiferromagnet and a ferromagnet.