



Experiment title: Spin resolved photoemission on CrO ₂		Experiment number: HE-658
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Report:

An article with the abstract below has been submitted for publication.

Experimental investigation of the spin polarization in CrO₂

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Resonant spin resolved photoelectron spectroscopy and X-ray magnetic circular dichroism data on CrO₂ is presented. The data show a finite intensity and a high degree of spin polarization at the Fermi level. Comparison with an analysis of the resonance process shows that the data indicate a spin polarization of the electrons at the Fermi level in excess of 87%. The spin resolved photoemission data together with the X-ray dichroism data are shown to give strong experimental support for the labeling of CrO₂ as a ferromagnetic half-metal. A general agreement with recent electronic structure calculations is also found.