

Abstract Submitted  
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**Is CrO<sub>2</sub> Fully Spin Polarized? Analysis of Andreev Spectra and Excess Current** TOMAS LOFWANDER, Department of Microtechnology and Nanoscience - MC2, Chalmers University of Technology, SE-412 96 Goteborg, Sweden, ROLAND GREIN, MATTHIAS ESCHRIG<sup>1</sup>, Institut fuer Theoretische Festkoerperphysik and DFG-Center for Functional Nanostructures, Karlsruhe Institute of Technology, 76128 Karlsruhe, Germany — We report an extensive theoretical analysis of point-contact Andreev reflection data available in the literature on ferromagnetic CrO<sub>2</sub>. We find that the spectra can be well understood within a model of fully spin-polarized bands in CrO<sub>2</sub> together with spin active scattering at the contact. This is in contrast to analyses of the data within extended Blonder-Tinkham-Klapwijk models, which lead to a spin polarization varying between 50% and 100% depending on the transparency of the interface. We propose to utilize both the temperature dependence of the spectra and the excess current at voltages above the gap to resolve the spin-polarization in CrO<sub>2</sub> in a new generation of experiments.

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