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**Magnetotransport Properties of Compression Molded CrO<sub>2</sub>-Polyimide Composite** SANJAY MISHRA, The University of Memphis, KARTIK GHOSH, Southwest Missouri State University, JOE LOSBY, The University of Memphis, TED KEHL, Southwest Missouri State University, ANN VIANO, Rhodes College, KARTIK GHOSH COLLABORATION, ANN VIANO COLLABORATION — The conductivity and magnetotransport properties of compression molded half-metallic CrO<sub>2</sub>/Polyimide composites over a range of different metallic concentrations have been studied. The conductivity measurements on these composites show negative slope of resistance versus temperature. The magnetoresistance measurement indicates obvious enhancement at low temperatures. The maximum in magnetoresistance is found to be temperature and metal volume fraction dependent. Significant differences in high and low temperature magnetoresistive behavior in the composite have been observed. Thus, it is found that the polymer barrier can contribute to enhancing magnetoresistive properties of the composite.

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