

## ANOMALOUS MAGNETOTHERMOPOWER IN A METALLIC FRUSTRATED ANTIFERROMAGNET PdCrO<sub>2</sub>

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We report the temperature  $T$  and magnetic field  $H$  dependence of the thermopower  $S$  of an itinerant triangular antiferromagnet PdCrO<sub>2</sub> in high magnetic fields up to 30 Tesla. At high temperatures, the zero-field thermopower is positive with a value typical of good metals with a high carrier density. In marked contrast with typical metals, however,  $S$  decreases rapidly with increasing magnetic field, approaching zero at the maximum field scale for  $T > 70$  K (Fig. 1). We show here that this profound change in the metallic thermoelectric response is due to the strong interaction of the  $4d$  correlated electrons of the Pd ions with the field-induced spin chirality of frustrated Cr<sup>3+</sup> spins, thus shedding new light on the unconventional anomalous Hall effect that emerges in PdCrO<sub>2</sub> at elevated temperatures.

Category: LD (Low-D Magnetism)

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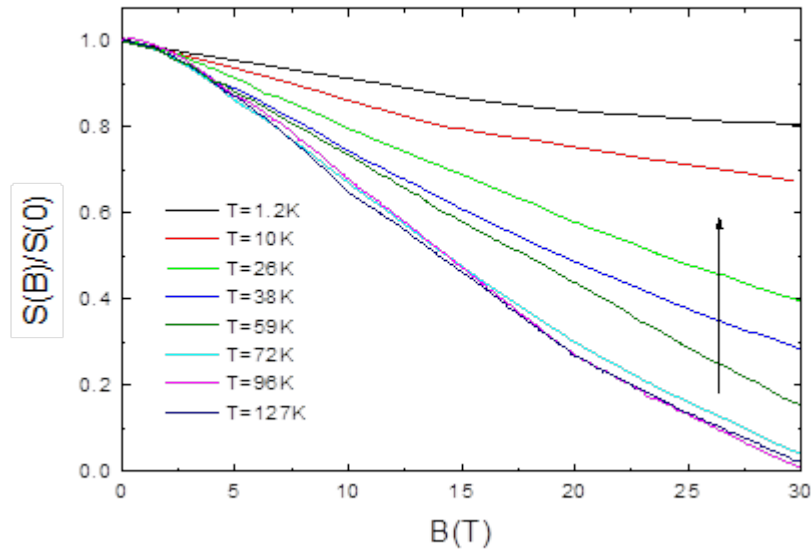


Fig. 1. The suppression of the normalized thermopower by an out-of-plane magnetic field decreases with lowering temperature, as indicated by the arrow.