

Abstract Submitted
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Anisotropic physical properties of RSn_2 ($\text{R} = \text{Gd} - \text{Lu}$) single crystals EMILIA MOROSAN, MICHAEL MEHLMAN, LIANG ZHAO, THOMAS SANDERS, Physics and Astronomy, Rice University — A wealth of magnetic and electronic properties (including metamagnetism, spin glass, non Fermi liquid behavior etc) has been observed in rare earth intermetallic compounds. The availability of these systems in single crystal form is imperious for characterizing their complex behavior. We are reporting the anisotropic physical properties of single crystals of the orthorhombic RSn_2 compounds ($\text{R} = \text{Gd} - \text{Lu}$). Complex anisotropic $\text{H} - \text{T}$ phase diagrams are observed in GdSn_2 , which has an antiferromagnetic ground state below 27.5 K, with two more transitions at lower temperatures. The magnetic field induces metamagnetic phase transitions in several of the R members of the series.

Emilia Morosan
Physics and Astronomy, Rice University

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