

Abstract Submitted  
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**Magnetism and physical properties of topological half-Heusler compounds RPdBi**<sup>1</sup> RONGWEI HU, YASUYUKI NAKAJIMA, KEVIN KIRSHENBAUM, ALEX HUGHES, PAUL SYERS, JOHNPIERRE PAGLIONE, Center for Nanophysics and Advanced Materials, Department of Physics, University of Maryland, JEFFREY LYNN, NIST Center for Neutron Research — The non-magnetic half-Heusler compounds, YPdBi and LuPdBi, have been proposed by band structure calculations to be candidates for three-dimensional topological insulators. We present magnetic susceptibility, neutron scattering and electrical transport measurements on single-crystal samples of a series of rare earth containing half-Heusler compounds RPdBi, showing that RPdBi are semimetals with dominant p-type carriers which exhibit antiferromagnetism associated with the rare earth local moments.

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Rongwei Hu  
Center for Nanophysics and Advanced Materials,  
Department of Physics, University of Maryland

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