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Superconducting and normal state properties of single crystalline RFeAsO-based materials[1] J.J. HAMLIN, C.A. MCELROY, B.D. WHITE, D.Y. TUTUN, N. KANCHANAVATEE, Y. HEO, A.N. ELLINGTON, M.B. MAPLE, Department of Physics, University of California, San Diego, La Jolla, CA 92093, USA — We report electrical resistivity, Hall effect, magnetoresistance, magnetization, and specific heat measurements on single crystals of several RFeAsO-based materials (R = rare-earth). We also discuss the effects of lattice compression on the magnetic and superconducting transition temperatures. These single crystal studies benefit from significantly sharper signatures of the transitions, compared to earlier studies on polycrystalline samples.

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James Hamlin
Department of Physics, University of California,
San Diego, La Jolla, CA 92093, USA

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