

Abstract Submitted
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Superconductivity in pure and Co-doped BaFe₂As₂ under high pressure¹ E. COLOMBIER, S. KIM, N. NI, A. THALER, S. L. BUD'KO, P. C. CANFIELD, Ames Laboratory/ISU, M. S. TORIKACHVILI, Dept. of Physics/SDSU — In-plane resistivity of pure and Co-doped BaFe₂As₂ single crystals was measured up to ~ 75 kbar in liquid media using piston-cylinder ($P < 25$ kbar) and modified Bridgman ($P < 75$ kbar) pressure cells. A dome-like ridge of superconductivity with T_c^{max} at ~ 55 kbar was induced in pure BaFe₂As₂. Dome-like $T_c(P)$ behavior was also observed for underdoped Ba(Fe_{1-x}Co_x)₂As₂. For overdoped samples T_c decrease under pressure, followed by filamentary superconductivity, was measured. The evolution of the pressure dependencies of the normal state resistivity, initial dT_c/dP , maximum T_c observed under pressure, with Co doping will be discussed.

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