

Abstract Submitted
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Flux growth at ambient pressure of millimeter-sized single crystals of LaFeAsO, LaFeAsO_{1-x}F_x, and LaFe_{1-x}Co_xAsO JIAQIANG YAN, S. NANDI, J.L. ZARESTKY, W. TIAN, A. KREYSSIG, B. JENSEN, A. KRACHER, K.W. DENNIS, R.J. MCQUEENEY, A.I. GOLDMAN, R.W. MCCALLUM, T.A. LOGRASSO, Ames Laboratory and Department of Physics and Astronomy, Iowa State University, Ames, Iowa 50011 — Millimeter-sized single crystals of LaFeAsO, LaFeAsO_{1-x}F_x, and LaFe_{1-x}Co_xAsO were grown in NaAs flux at ambient pressure. The as-grown crystals have typical dimensions of $3 \times 4 \times 0.05\text{-}0.3 \text{ mm}^3$ with the crystallographic *c*-axis perpendicular to the plane of the plate-like single crystals. Various characterizations confirmed the high quality of our LaFeAsO crystals. Co and F were introduced into the lattice leading to superconducting LaFe_{1-x}Co_xAsO and LaFeAsO_{1-x}F_x single crystals, respectively. The distribution and control of Co and F dopants will be discussed. - Ames Laboratory is operated for the US Department of Energy by Iowa State University under Contract No. DE-AC02-07CH11358.

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