

Abstract Submitted
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New ternary phosphide superconductors with the ThCr₂Si₂ parent structure NICHOLAS BERRY, CIGDEM CAPAN, University of California Irvine, GABRIEL SEYFARTH, Université de Montréal, University of California Irvine, ZACHARY FISK, University of California Irvine — Compounds with the ThCr₂Si₂ structure have been studied extensively for over 20 years for their interesting magnetic, superconducting, and heavy fermion properties. We have grown single crystals of new ternary phosphides in this structure in the form of AX₂P₂, with A being an Alkaline Earth Metal and X a transition metal. We have characterized the properties of these new materials with X-ray, heat capacity, resistivity, and susceptibility measurements and have discovered new superconductors.

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