

Abstract Submitted
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DC Magnetization and Growth of Heavy-Fermion Superconductor CeCoIn₅ and CeIn₃ Crystal¹ TESFAYE GEBRE, National High Magnetic Field Laboratory, ERIC PALM, STANLEY TOZER, TIM MURPHEY, JU-HYUN PARK, NHMFL, JASON COOLEY, Los Alamos National Laboratory — The superconducting and magnetic state in heavy-fermion intermetallic compounds provides a promising realm of materials to study quantum critical behavior. Single crystals of the heavy-fermion superconductors CeCoIn₅ and CeIn₃ were synthesized from the pure element using an excess of Indium. The material crystallizes in the body tetragonal space group P4/mmm structure of HoCoGa₅ and has alternating layers of CeIn₃ and CoIn₂. The details of the flux growth technique used to grow CeCoIn₅ and CeIn₃, and the result of DC magnetization and transport measurements performed in the temperature range 1.9K to 100K will be reported.

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Tesfaye Gebre
National High Magnetic Field Laboratory

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