A Synthesis of CeCoIn₅ at Pohang Superconductivity Center

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CeCoIn₅ is known a heavy fermion superconductor having FFLO state at the high-fields and low temperatures. We synthesize the heavy fermion superconductor, CeCoIn₅, using In self-flux. In addition, we successfully substitute La for Ce and present resistivity data at low temperature region. The transition temperatures decrease with increasing La concentrations. We present the synthesis method and samples that we grew at Pohang Superconductivity Center.

Keywords: heavy fermion superconductor, CeCoIn5, FFLO state.