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Crystal growth of Pt-doped IrTe₂ SUNSENG PYON, Okayama University (present affiliation: The University of Tokyo), KAZUTAKA KUDO, MINORU NOHARA, Okayama University — IrTe₂, a layered compound with a triangular iridium lattice, exhibits a structural phase transition at approximately 250 K. Electric resistivity and magnetic susceptibility exhibit anomalies at the transition with hysteresis [1]. Charge-orbital density wave or orbitally induced Peierls effect, a crystal field effect are suggested as candidates of the origin of the transition [2-4]. On the other hand, superconducting phase emerges when the structural phase transition is suppressed by chemical substitution or intercalation [2,5]. Analysis of physical property using single crystal should be helpful to clarifying the relation between the ground states of IrTe₂ and superconductivity. Recently, Fang *et al.* reported the growth of single crystal of parent compound [4]. However, single crystal of superconducting sample had not been reported yet. For these reason, we studied superconductivity and the structural transition in platinum doped IrTe₂ single crystals. We successfully synthesized several composition of the Ir_{1-x}Pt_xTe₂ single crystal by flux method. From magnetization and transport measurement, we confirm the suppression of structural phase transition and emergence of superconductivity. Detail of the experiment will be discussed.

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