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Transport properties of superconducting high indium-doped SnTe single crystals CHENG ZHANG, RUIDAN ZHONG, GENDA GU, QIANG LI, Brookhaven National Laboratory — The discovery of topological crystalline insulator SnTe has ignited a search for the predicted topological superconductors. Recently, we performed the transport measurement on a series of indium-doped SnTe single crystals ($\text{Sn}_{1-x}\text{In}_x\text{Te}$). Hall measurement shows that carrier type changes when indium doping level is between $x = 0.2$ and 0.3 . Weak anti-localization effect and Shubnikov-de Hass oscillations was found in $x = 0.45$ samples, which have the highest superconducting transition temperature at 4.5 K. Both superconducting and normal state properties of high indium-doped SnTe will be discussed.

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