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Growth and Intrinsic Physical Properties of the Kondo Insulator SmB_6 WILLIAM PHELAN, SEYED KOOHPAYEH, PATRICK COTTINGHAM, Johns Hopkins University, LESLIE SCHOOP, ROBERT CAVA, Princeton University, COLLIN BROHOLM, TYREL MCQUEEN, Johns Hopkins University
— SmB_6 is a long-studied Kondo Insulator that has come back into focus recently following theoretical predictions that it may harbor topologically protected surface states. Materials containing such surface states are referred to as topological insulators, and may impact technologically important areas such as quantum computing and spintronics. We report the preparation of single crystals of SmB_6 *via* the floating zone technique, and the impact of growth conditions on the physical properties, including low temperature electrical transport. These results provide insights into the nature of the anomalous low temperature state of SmB_6.

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