

Abstract Submitted  
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**Study of the Topological Crystalline Insulator, SnTe and Sn-In-Te systems in the form of nanomaterials** M. SAGHIR, M.R. LEES, S.J. YORK, G. BALAKRISHNAN, The University of Warwick — We have studied the Topological Crystalline Insulator SnTe and the superconducting variant which arises due to the partial substitution of Sn atoms with indium,  $\text{Sn}_{1-x}\text{In}_x\text{Te}$ , in this rock salt structure. The observable topological features are thought to be enhanced by increasing the surface area to volume ratio of the materials and therefore suppressing contributions from the bulk. We report the first evidence for the growth of SnTe and SnInTe nanowires starting from bulk crystals. The nanowires produced are typically 20  $\mu\text{m}$  in length and 20 nm wide. The stoichiometries of these structures have been determined to compare with that of the source material. Various morphologies of nanomaterials are observed and the optimal conditions and processes involved to obtain these are discussed.

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