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Graphical Abstract_Research Article

Local Ferroelectricity in Thermoelectric SnTe above Room Temperature Driven by Competing Phonon Instabilities and Soft Resonant Bonding

Leena Aggarwal,^{1, ±} Ananya Banik,^{2, ±} Shashwat Anand,³ Umesh V. Waghmare,³ Kanishka Biswas^{2,*} and Goutam Sheet^{1, †}

¹Department of Physical Sciences, Indian Institute of Science Education and Research Mohali, Sector 81, S. A. S. Nagar, Manauli, PO: 140306, India and ²New Chemistry Unit and ³Theoretical Science Unit, Jawaharlal Nehru Center for Advanced Scientific Research, Jakkur, P.O., Bangalore 560064, India [±]LS and AB contributed equally to this work



We report direct observation of local ferroelectric ordering above room temperature in rocksalt SnTe, which is a topological crystalline insulator and a good thermoelectric material. Although SnTe is known to stabilize in a ferroelectric ground state (rhombohedral phase) below ~100 K, at high temperatures it is not expected to show any ferroelectric ordering forbidden by its globally centro-symmetric crystal structure (Fm-3m).

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