

SUPPORTING INFORMATION

High-Density Chemical Intercalation of Zero-Valent Copper into Bi_2Se_3 Nanoribbons

Kristie J. Koski¹, Judy J. Cha¹, Bryan W. Reed², Colin D. Wessells¹, Desheng Kong¹, Yi Cui^{1,3}

¹Department of Materials Science & Engineering, Stanford University, Stanford, California 94305, USA

²Physical and Life Sciences Directorate, Lawrence Livermore National Laboratory, 7000 East Avenue, Livermore, California 94550, USA

³Stanford Institute for Materials and Energy Sciences, SLAC National Accelerator Laboratory, 2575 Sand Hill Road, Menlo Park, CA 94025, USA

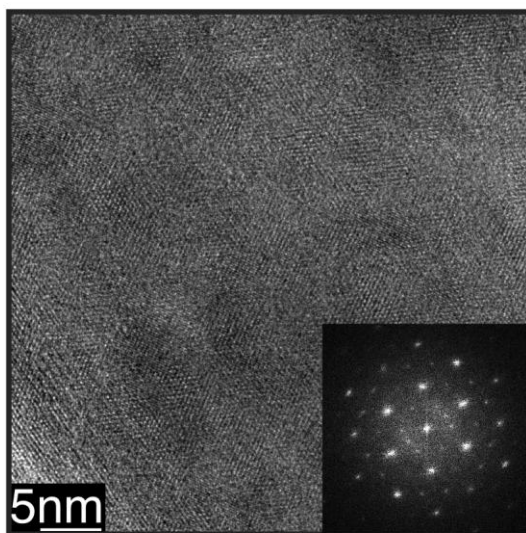


FIGURE 1: A high resolution TEM image of a 60 atomic percent copper-intercalated Bi_2Se_3 nanoribbon along with the fast Fourier transform (FFT), acquired with an aberration corrected FEI Titan at 300 keV, demonstrates that the material is single-crystalline. The FFT reflects the superlattice pattern seen in the main text. Measurements of atomic distances are 0.44 ± 0.06 nm, thus further confirming the lattice constant $a = 0.45$ nm from XRD.

Complete citation of reference 1 in the main text:

Coleman, J. N.; Lotya, M.; O'Neill, A.; Bergin, S. D.; King, P. J.; Khan, U.; Young, K.; Gaucher, A.; De, S.; Smith, R. J.; Shvets, I. V.; Arora, S. K.; Stanton, G.; Kim, H.-Y.; Lee, K.; Kim, G. T.; Duesberg, G. S.; Hallam, T.; Boland, J. J.; Wang, J. J.; Donegan, J. F.; Grunlan, J. C.; Moriarty, G.; Shmeliov, A.; Nicholls, R. J.; Perkins, J. M.; Grieveson, E. M.; Theuvsen, K.; McComb, D. W.; Nellist, P. D.; Nicolosi, V. *Science* **2011**, 331, 568.