

Abstract Submitted  
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**Scanning Tunneling Microscopic investigation of a type-II Weyl semimetal surface**<sup>1</sup> HAO ZHENG, Princeton Univ, SHUANG JIA, International Center for Quantum Materials, School of Physics, Peking University, China Collaborative Innovation Center of Quantum Matter, Beijing,100, HSIN LIN, Centre for Advanced 2D Materials and Graphene Research Centre, National University of Singapore, 6 Science Drive 2, Singapore 117546, M ZAHID HASAN, Laboratory for Topological Quantum Matter and Spectroscopy (B7), Department of Physics, Princeton University, Princeton, New Jersey 08544, USA — Recent discovery of type-I Weyl fermions has generated a flurry of new research directions in topological materials. The crystal symmetry and spin-orbit-coupling induced tilting of the Weyl cone can lead to strong violation (type-II) of Lorentz invariance in a condensed matter system. In this talk, we will present the atomic resolution scanning tunneling spectro-microscopic investigation on a single-crystalline type-II Weyl semimetal  $\text{Mo}_x\text{W}_{1-x}\text{Te}_2$  for the first time. Interesting type-II Weyl Fermion and topological Fermi arc related physics will be discussed

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Hao Zheng  
Princeton Univ

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