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Sharp

Dirac cone at a buried superconductor/topological insulator interface JUSTIN WAUGH, YUE CAO, QIANG WANG, University of Colorado at Boulder, ALEXEI FEDOROV, Lawrence Berkeley National Laboratory, Z.J. XU, GENDA GU, Brookhaven National Laboratory, DANIEL DESSAU, University of Colorado at Boulder — We have studied the fully buried interface of a topological insulator, Bi2Se3, with the conventional superconductor Nb. We characterized the chemical reactivity at the interface using core level photoemission spectroscopy. Using ARPES we are able to observe the sharp Dirac cone at the buried interface and characterize its details; including energy positions, band dispersion, and electronic scattering rates. All these measurements are carried out over a wide range of coverages, and set the stage for more advanced studies of this interface.

[X] Prefer Oral Session
[ ] Prefer Poster Session

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