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**Observing electronic structures on *ex-situ* topological insulator thin films** BO ZHOU, SIMES/Stanford/Oxford/LBNL, S.H. YAO, M.H. LU, Nanjing University, Z.K. LIU, SIMES/Stanford, Y.B. CHEN, Nanjing University, J.G. ANALYTIS, SIMES, C. BRUNE, Universitat Wurzburg, W.H. DANG, Peking University, S.-K. MO, LBNL, Z.-X. SHEN, I.R. FISHER, SIMES/Stanford, L.W. MOLENKAMP, Universitat Wurzburg, H.L. PENG, Peking University, Z. HUSSAIN, LBNL, Y.L. CHEN, Oxford — Topological insulators represent a new state of quantum matter with insulating bulk but conducting surface states formed by an odd number of Dirac fermions. We present our progress on the study of electronic structures of *ex-situ* grown topological insulator thin films by angle resolved photoemission spectroscopy (ARPES). We successfully obtained the topological band structures, after proper surface cleaning procedures, from HgTe films grown by molecular beam epitaxy and Bi<sub>2</sub>Te<sub>3</sub> nanoplates synthesized by vapor-solid method. This new development will not only enable us to study more topological insulators that cannot be measured by conventional *in-situ* ARPES technique, but also open the door to directly characterize the electronic properties of topological insulators used in functional devices.

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