Study of the interface of superconductor and topological insulator
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Shanghai Jiao Tong University — State-of-art Molecular beam epitaxy (MBE) has
been carried out to grow high quality topological insulator (TI) films on some BCS
s-wave superconductor (SC) substrates. The growth dynamics and the electronics
structures of the SC/TI interface were studied using high energy reflected electron
diffraction and ultralow-temperature scanning tunneling microscopy (STM). Elec-
tronic structure, superconducting gap, vortex dynamics would be reported in this
presentation. The superconducting state of the topological insulator due to approx-
imate effect and the formation of Majorana Fermion would be discussed.