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Topological Surface State Observed in Superconducting (Ir1-xPtx)Te2 TIAN QIAN, HU MIAO, GANG XU, XI DAI, ZHONG FANG, AIFA FANG, NANLIN WANG, HONG DING, Institute of Physics, Chinese Academy of Sciences — Topologically non-trivial surface state is the hallmark of 3D topological insulators and topological superconductors, where spin-orbit coupling (SOC) plays an essential role. By Ir site doping of 5% Pt, the huge SOC material IrTe2 becomes a superconductor with maximal Tc = 3K. Our angle resolve photoemission spectroscopy (ARPES) study combined with LDA analysis demonstrate the surface states of (Ir1-xPtx)Te2 is toplogically non-trivial.

Tian Qian
Institute of Physics, Chinese Academy of Sciences

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