

Abstract Submitted
for the MAR15 Meeting of
The American Physical Society

Electronic band structure of Charge Density Wave Pd_xHoTe_3

SHANCAI WANG, YIPENG CAI, ZHONGHAO LIU, LEILEI JIA, YANGE ZHAO, Department of Physics, Renmin Univ. of China, T. QIAN, HONG DING, Institute of Physics, China academy of Sciences, JUNBAO HE, Department of Physics, Renmin Univ. of China, GENFU CHEN, Institute of Physics, China academy of Sciences — The origin of superconductivity and interplay between superconductivity and different ground states remains challenging. The Pd-intercalated HoT_3 , suppresses the charge density wave (CDW) order and leads to the superconductivity. Here we report the detailed Angle-resolved photoemission spectroscopy (ARPES) study of the electronic structure on Pd_xHoT_3 . In the CDW parent phase (HoT_3), we found out the Fermi surface topology, CDW gap symmetry have 2 fold symmetry, with one CDW vector. With further Pd-intercalations, the system evolves from 2-fold symmetry to 4-fold symmetry with two CDW vectors, and eventually into superconducting state. The evolution of the CDW gap symmetry, gap size and CDW caused shadow bands are discussed at different phases.

Shancai Wang
Renmin Univ of China

Date submitted: 14 Nov 2014

Electronic form version 1.4