Doping dependence of chemical potential in Iron Pnictides by Photoemission

MADHAB NEUPANE, Department of Physics, Boston College, Chestnut Hill, MA 02467, P. RICHARD, WPI Research Center, Tohoku University, Sendai, Japan, Y.-M. XU, Department of Physics, Boston College, Chestnut Hill, MA 02467, K. NAKAYAMA, T. SATO, T. TAKAHASHI, Tohoku University, Sendai, Japan, X. DAI, Z. FANG, N. L. WANG, IOP, Chinese Academy of Sciences, Beijing, China, Z. WANG, Department of Physics, Boston College, Chestnut Hill, MA 02467, H. DING, IOP, Chinese Academy of Sciences, Beijing, China — Recently superconductivity has been discovered in many iron pnictides when they are properly doped with charge carriers. It is important to study the chemical potential change as a function of charge carriers. We have performed a systematic photoemission study of core level shift and valence band as a function of doping. We will report our experimental results and comparisons to the first principal band calculations.