

Abstract Submitted
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Universal spectral weight transfer in high temperature superconductors JEFF GRAF, Lawrence Berkeley Lab, GEY-HONG GWEON, KYLE MCELROY, SHUYUN ZHOU, CHRIS JOZWIAK, University of California Berkeley, ELI ROTENBERG, Lawrence Berkeley Lab, ANDREAS BILL, University of California Berkeley, T. SASAGAWA, University of Tokyo, H. EISAKI, AIST, S. UCHIDA, University of Tokyo, H. TAKAGI, DUNG-HAI LEE, ALESSANDRA LANZARA, University of California Berkeley — High resolution angle resolved photoemission spectroscopy (ARPES) studies of the electronic structure of several cuprate families, over the entire phase diagram, from undoped to highly overdoped regime are reported. A detailed study of the one-electron dynamics as a function of momentum, temperature and doping is presented. A universal spectral weight transfer is observed for all systems and discussed in terms of a strong interplay between the electron-lattice and electron-electron interaction in these materials.

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