

Abstract Submitted
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Momentum and doping dependence of oxygen isotope substitution in cuprates N.C. PLUMB, University of Colorado, H. IWASAWA, Hiroshima Synchrotron Radiation Center, Hiroshima University, J.F. DOUGLAS, NIST, Boulder, T.J. REBER, University of Colorado, K. SATO, H. EISAKI, Y. YOSHIDA, H. BANDO, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, T. SAITOH, Tokyo University of Science, A. INO, M. TANIGUCHI, Hiroshima University, M. ARITA, K. SHIMADA, H. NAMATAME, Hiroshima Synchrotron Radiation Center, Hiroshima University, T. MASUI, S. TAJIMA, Osaka University, S. UCHIDA, University of Tokyo, Y. AIURA, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan, D.S. DESSAU, University of Colorado — We use angle-resolved photoemission spectroscopy at low photon energy to investigate the evolution of the isotope effect in cuprate superconductors as a function of k and doping. When ^{18}O is substituted for ^{16}O , the isotope shift in the main kink energy (previously only reported at the superconducting node) is seen to persist away from the node, while the location of the overall kink decreases in energy. We perform detailed analysis of the self-energy and isotope effect with the aim of acquiring new insights into how the electron-phonon interactions evolve over the Fermi surface for various dopings.

N.C. Plumb
University of Colorado

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