

Abstract Submitted
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Charge order correlations in Bi-based high-temperature cuprate superconductors measured by resonant x-ray scattering. EDUARDO DA SILVA NETO, Univ of California - Davis, MATTEO MINOLA, Max Planck Institute for Solid State Research, FABIO BOSCHINI, University of British Columbia, MARTIN BLUSCHKE, Max Planck Institute for Solid State Research, ALEX FRANO, University of California, Berkeley, RONNY SUTARTO, Canadian Light Source, ENRICO SCHIERLE, Helmholtz-Zentrum Berlin, FEIZHOU HE, Canadian Light Source, EUGEN WESCHKE, Helmholtz-Zentrum Berlin, GEORGE SAWATZKY, University of British Columbia, BERNHARD KEIMER, Max Planck Institute for Solid State Research, ANDREA DAMASCELLI, University of British Columbia — We use resonant x-ray scattering to measure the doping dependence of the charge order (or charge density wave) in the BSCCO 2212 high-temperature superconductor. We detect the charge order in the underdoped regime (between 0.07 hole doping and optimal doping). We also find that the charge order wave vector is doping dependent spanning $Q=0.25$ to $Q=0.29$, following inter-pocket scattering. Furthermore, our bulk sensitive results show an equivalence to the charge order previously measured on the surface of BSCCO 2212 by scanning tunneling spectroscopy [E. H. da Silva Neto, et al. *Science* 343, 393 (2014)].

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