

Abstract Submitted
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Correlation Strength, Optical Conductivity and d-d excitons in high T_c cuprates¹ ANDREW MILLIS, Columbia University, XIN WANG, University of Maryland, LUCA DEMEDICI, CNRS-Universite de Paris Sud — A single site dynamical mean field analysis is presented of models of high T_c copper-oxide superconductors, including oxygen orbitals and both x^2-y^2 and $3z^2-r^2$ Cu d-orbitals. The optical conductivity, doping dependent effective mass and the e_g portion of the d-d exciton spectrum are determined. The details of the oxygen-oxygen hopping are shown to be unimportant. A general connection between d valence and the metal/charge transfer insulator phase boundary is outlined.

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