# Electronic interactions in effective cuprate models beyond a Cu Hubbard U

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Current theoretical studies of electronic correlations in transition metal oxides typically only account for the local repulsion (Hubbard U) between d-electrons even if oxygen ligand p-states are an explicit part of the effective Hamiltonian. Interatomic interactions such as Upd between d- and (ligand) p-lectrons, as well as the local interaction between p-electrons, are neglected. Often, the relative experimentally obtained information. By applying the merger of local density approximation and dynamical mean field theory to the prototypical case of the three-band Emery dp model for the cuprates, we demonstrate that, without any 'ad hoc' adjustment of the orbital splitting, the charge transfer insulating state is stabilized by the interatomic interaction Upd. Our study hence shows how to improve realistic material calculations that explicitly include the p-orbitals.