

Abstract Submitted  
for the 4CF11 Meeting of  
The American Physical Society

**Effect of interactions and degeneracy on transmission through a single molecule** MICHAEL STEFFERSON, JARRED HUDSON, CHARLES STAFFORD, University of Arizona — Electron transmission through a single-molecule junction in the Coulomb blockade regime is analyzed in the isolated resonance approximation for molecules with degenerate HOMO and/or LUMO orbitals. Electron-electron interactions are included in a capacitive charging model derived from pi-electron effective field theory. For the case of a buckyball junction with Pt electrodes, we find that the number of transmission channels is limited by the five-fold degenerate HOMO resonance.

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Date submitted: 14 Sep 2011

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