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Influence of Correlated Hybridization on the Conductance of Molecular Transistors¹ JONG-CHIN LIN, University of California, Davis, FRITHJOF ANDERS, Universitat Bremen, DANIEL COX, University of California, Davis — We study the spin-1/2 single-channel Anderson impurity model with correlated (occupancy dependent) hybridization for molecular transistors using the numerical renormalization-group method. Correlated hybridization can induce nonuniversal deviations in the normalized zero-bias conductance and, for some parameters, modestly enhance the spin polarization of currents in applied magnetic field. Correlated hybridization can also explain a gate-voltage dependence to the Kondo scale similar to what has been observed in recent experiments.

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