Analysis of the Kondo resonance in a single quantum dot asymmetrically coupled to ferromagnetic electrodes with non-collinear magnetizations

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The Kondo effect is studied theoretically in the framework of the non-equilibrium Green function formalism. The system under consideration consists of a single quantum dot asymmetrically coupled to ferromagnetic electrodes, whose magnetic moments are non-collinear. The spin-dependent density of states, as well as the transport characteristics like differential conductance and tunneling magnetoresistance through the system are obtained using the equation of motion method. Numerical illustration of the mentioned quantities for a few magnetic configurations and coupling strengths is presented and discussed.

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