

Kondo Resonance in Magnetic Molecule Spintronics

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It has been shown that magnetic molecules adsorbed on metallic surfaces can be a very effective implementation of quantum gates. Within this perspective, we discuss the role played by many-body effects in these magnetic molecules to study spin dependent phenomena. We show that the physics associated to the Kondo regime is fundamental to understand the transport properties of these systems and that this regime can be a very effective scenario to read the system spin configuration with important implications for quantum information.