

Current induced magnetic interactions on nanomagnets

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Abstract – Maximum 100 words.

In this work we present a theory of spin dynamics on a dimeric molecular magnet located in a junction between two electrodes. We focus on the study of current induced modifications to the low energy spin dynamics. In this way we determine the current induced changes on magnetic coupling parameters. This work is based on the formalism developed for single magnets connected to leads of [1,2].

Our work is built upon the application of the Keldysh-Non-Equilibrium Green's Functions formalism to the magnetic dimer connected to non-equilibrium electrodes [2].

In particular we emphasize the effects associated with the antisymmetric spin exchange of the Dzyaloshinskii-Moriya type.

We discuss the consequences of the current modifications in antiferromagnetically coupled dimers such as the one described in [3].

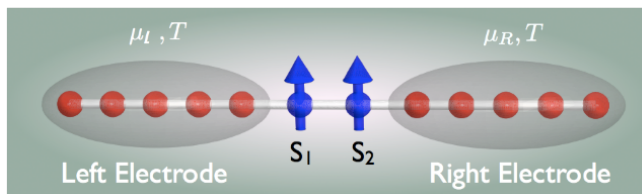


Figure 1: Schematic representation of a magnetic dimer connected to electrodes.

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References

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