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Title:	Switchable Multiple Spin States in the Kondo description of Doped Molecular Magnets
Authors:	Kumar, Sanjeev (/jspui/browse?type=author&value=Kumar%2C+Sanjeev)
Keywords:	molecular magnets Spin States phase diagrams
Issue Date:	2017
Publisher:	Nature Publishing Group
Citation:	Scientific Reports, 7
Abstract:	We show that introducing electrons in magnetic clusters and molecular magnets lead to rich phase diagrams with a variety of low-spin and high-spin states allowing for multiple switchability. The analysis is carried out for a quantum spin-fermion model using the exact diagonalization, and the cluster mean-field approach. The model is relevant for a number of molecular magnets with triangular motifs consisting of transition metal ions such as Cr, Cu and V. Re-entrant spin-state behavior and chirality on-off transitions exist over a wide parameter regime. A subtle competition among geometrical frustration effects, electron itinerancy, and Kondo coupling at the molecular level is highlighted. Our results demonstrate that electron doping provides a viable mean to tame the magnetic properties of molecular magnets towards potential technological applications.
Description:	Only IISERM authors are available in the record.
URI:	https://www.nature.com/articles/srep42255 (https://www.nature.com/articles/srep42255) http://hdl.handle.net/123456789/2676 (http://hdl.handle.net/123456789/2676)
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