

Evolution of magnetic properties and spin kinetics of cuprates with doping

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Abstract

We have shown that properties of lightly doped quasi-layered cuprates can be described on the basis of topological excitation known as skyrmions both thermally excited and induced by quasi-localized electronic holes. We have calculated the average skyrmion radius r_0 and nuclear spin relaxation rate $1/T_1$ as a function of temperature and hole concentration. The results are in qualitative agreement with experiments. © Springer Science+Business Media, LLC 2006.

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Keywords

A. high T_c superconductors, E. nuclear magnetic resonance, Skyrmion