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Temperature dependence of EPR linewidth in one-dimensional magnets: A quasi-classical approach

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Abstract

An analytical expression for the EPR linewidth of an exchange-coupled 1/2-spin chain originating from uniform Dzyaloshinskii-Moriya interaction is derived using a quasi-classical approach. The expression successfully reproduces the results obtained by numerical quantum mechanical calculations based on Green's function method at $T > 2J/k_B$. © 2013 Allerton Press, Inc.

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