Quantum molecular-based chains: a density matrix renormalization approach[1]

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Molecule-based nanostructures manifesting magnetic hysteresis in the absence of long-ranged magnetic order are polynuclear clusters or one-dimensional structures based on an interplay between antyferromagnetic and ferromagnetic interactions along a chain. Recently it has been shown that such a behavior can be also found for canted antiferromagnetic chains, where only one type of spins and one type of iteractions are present. In order to study thermodynamic properties of such systems a quantum Heisenberg model is considered by means of the density-matrix renormalization technique.

9.7 cm

Keywords: Molecular magnetism, Quantum Heisenberg model;
Density-matrix renormalization-group method

[1]Supported by NoE MAGMANet - EU project No NMP3-515767

13.4 cm

Subject category :

2. Quantum and Classical Spin Systems

Presentation mode :

poster

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