


On the dynamics of the spin crossover in cobalt octaethylporphyrin molecular magnets in a terahertz pulsed magnetic field

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Article

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Abstract

The results of theoretical study of the spin crossover dynamics in the cobalt octaethylporphyrin molecule under the action of an external pulsed magnetic field with an induction of 36.8 T are presented. It is shown that, in the case of the high-spin state, under the action of a pulsed magnetic field, spin switching occurs in the system, and the system is characterized by a large relaxation time. In the case of the low-spin state, the system relaxes rapidly to the ground state. The temperature dependence of the product of the magnetic susceptibility and the temperature has a feature in the vicinity of 40 K related to the transition between spin states.