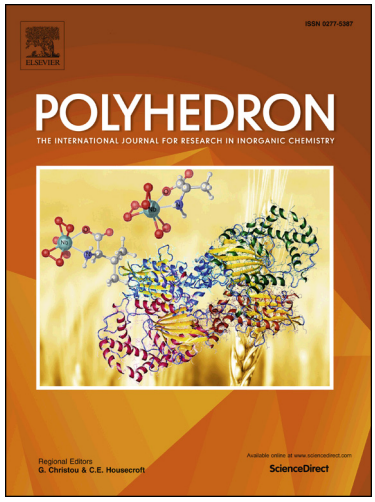

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Field-induced slow relaxation of magnetization in a mononuclear Co(II) complex of 2,6-bis(pyrazol-1-yl)pyridine functionalized with a carboxylic acid

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Abstract

Combining Co(II) with the 2,6-bis-(pyrazol1-yl)pyridine ligand functionalized with a carboxylic acid group (bppCOOH) results in the compound $[Co^{II}(bppCOOH)_2](ClO_4)_2 \cdot 2Me_2CO$, which shows a field-induced slow relaxation of magnetization as a result of the magnetic anisotropy of the distorted octahedral coordination of high-spin Co(II). Co(II)/Fe(II) solid solutions of bppCOOH have been prepared to study the influence of Co(II) on the spin crossover properties of Fe(II). Magnetic characterization of $[Fe_{0.92}Co_{0.08}(bppCOOH)_2](ClO_4)_2$ indicates that the Cobalt dopant leads to a reduction of $T_{1/2}$ and a loss of cooperativity of the spin transition.

Keywords: Single ion magnets / Magnetic properties / 2,6-bis-(pyrazol1-yl)pyridine / Coordination chemistry / Cobalt(II) /Spin crossover / Iron(II)