

Spin transition and relaxation dynamics coupled to a crystallographic phase transition in a polymeric iron(II) spin-crossover system.

Autorzy

I. Krivokapic

Cristian Enachescu

Robert Bronisz

Andreas Hauser

Rok wydania

2008

Czasopismo

Chemical Physics Letters

Numer woluminu

455

Strony

192-196

DOI

10.1016/j.cplett.2008.02.088

Kolekcja

Naukowa

Język

Angielski

Typ publikacji

Artykuł

Streszczenie

The spin-crossover compound $[\text{Fe}(\text{bbtr})_3](\text{ClO}_4)_2$ (bbtr = 1,4-di(1,2,3-triazol-1-yl)butane) forms a poly-meric hexagonal sheet structure. It shows an abrupt thermal spin transition with 13 K wide hysteresis around 105 K, as evidenced by single crystal optical spectroscopy. The transition temperature for the thermal high-spin?low-spin transition on cooling as well as the relaxation kinetics just below T_c ; depend upon the history of the sample. This is typical for a nucleation and growth mechanism and domain formation. In contrast, the high-spin?low-spin relaxation following the light-induced population of the high-spin state at low temperatures is governed by the intersystem crossing process.

Adres publiczny

<https://doi.org/10.1016/j.cplett.2008.02.088>

Strona internetowa wydawcy

<http://www.elsevier.com>