Contribution ID: **33** Type: **Poster**

Magnetic exchange coupling in 3d-4f molecular nanomagnets investigated by X-ray magnetic circular dichroism

Friday, 16 September 2011 12:25 (2 minutes)

Single-molecule magnets are exchange-coupled spin clusters showing slow relaxation of magnetization. In recent years, efforts have been intensified to increase the magnetization reversal barrier and thus enhance relaxation times by combining rare earth ions with transition-metal ions. Rare-earth ions exhibit very large magnetic anisotropies due to their strong spin-orbit coupling and their mostly unquenched orbital momentum. In this contribution we use X-ray magnetic circular dichroism to observe element-specific magnetization curves. In conjunction with SQUID magnetization and susceptibility measurements, we are able to obtain information about the magnetic coupling between 3d and 4f ions.

Please specify the session

Poster Session

Please specify poster or talk

Poster

Primary author: Dr DREISER, Jan Gui-Hyon (Paul Scherrer Institut)

Co-authors: Dr PIAMONTEZE, Cinthia (Paul Scherrer Institut); Prof. NOLTING, Frithjof (Paul Scherrer Institut); Prof. BRUNE, Harald (EPF Lausanne); Dr WEIHE, Hoegni (University of Copenhagen); Prof. BENDIX, Jesper (University of Copenhagen); Mr PEDERSEN, Kasper S. (University of Copenhagen); Prof. WALDMANN, Oliver (Freiburg University); Dr RUSPONI, Stefano (EPF Lausanne)

Presenter: Dr DREISER, Jan Gui-Hyon (Paul Scherrer Institut)

Session Classification: Poster session II and lunch

Track Classification: Poster Session II (Friday)