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

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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.

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