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Research Interests: synthetic coordination chemistry and molecular magnetism.

We are a synthetic inorganic group with interests in the areas of coordination chemistry and the magnetic applications of polymeric complexes. In particular we are interested in making single-molecule magnets (SMMs) and magnetic coolants.



Among the highlights are a $[\text{Mn}_6]$ Single-Molecule Magnet (left) with $U_{\text{eff}} = 86 \text{ K}$ and $[\text{Mn}_{10}]$ supertetrahedra (centre) and planar discs (right) as enhanced magnetic coolers.

SELECTED RECENT PUBLICATIONS

1. "Twisted" Single-Molecule Magnets. C. J. Milios, R. Inglis, L. F. Jones, S. Piligkos, E. K. Brechin, *Chem. Commun.*, **2011**, DOI: [10.1039/C1CC13558A](https://doi.org/10.1039/C1CC13558A).
2. Molecular Coolers: The case for $[\text{Cu}_5\text{Gd}_4]$. S. K. Langley, N. Chilton, B. Moubaraki, T. Hooper, E. K. Brechin, M. Evangelisti, K. S. Murray, *Chem. Sci.*, 2011, **2**, 1166.
3. A $[\text{Mn}_{32}]$ double-decker wheel. M. Manoli, R. Inglis, M. J. Manos, V. Nastopoulos, W. Wernsdorfer, E. K. Brechin, A. J. Tasiopoulos, *Angew. Chem. Int. Ed.*, 2011, **50**, 4441.
4. $[\text{Mn}^{\text{III}}_4\text{Ln}^{\text{III}}_4]$ calix[4]arene clusters as enhanced magnetic coolers and molecular magnets. G. Karotsis, S. Kennedy, S. J. Teat, C. M. Beavers, D. A. Fowler, J. J. Morales, M. Evangelisti, S. J. Dalgarno, E. K. Brechin. *J. Am. Chem. Soc.*, 2010, **132**, 12983.
5. Recipes for Enhanced Magnetic Cooling, M. Evangelisti, E. K. Brechin, *Dalton Trans.*, 2010, **39**, 4672.
6. Metal-organic calixarene nanotubes, S. Kennedy, G. Karotsis, C. M. Beavers, S. J. Teat, E. K. Brechin, S. J. Dalgarno, *Angew. Chem. Int. Ed.*, 2010, **49**, 4205.
7. Twisting, bending, stretching: strategies for making ferromagnetic $[\text{Mn}^{\text{III}}_3]$ triangles. R. Inglis, S. M. Taylor, L. F. Jones, G. S. Papaefstathiou, S. P. Perlepes, S. Datta, S. Hill, W. Wernsdorfer, E. K. Brechin. *Dalton Trans.*, **2009**, 9157