

CPPP 48 P ORGANISATION OF MAGNETIC COMPLEXES IN LIQUID CRYSTAL PHASES BY RATIONAL LIGAND FUNCTIONALISATION

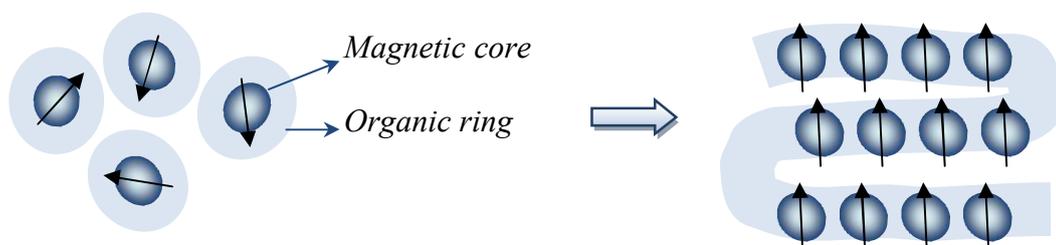
Diana Siretanu

*CNRS, UPR 8641, Centre de Recherche Paul Pascal (CRPP), Equipe “Matériaux Moléculaires Magnétiques”, 115 av. du Dr. A. Schweitzer, Pessac, F-33600, France, and Université de Bordeaux, UPR 8641, Pessac, F-33600, France.
E-mail: dsiretanu@crpp-bordeaux.cnrs.fr*

As modern technology is developing quickly, the desire for sophisticated functions requires new materials. In order to design this new generation of materials, hybrid systems are a strategy of choice as they can be easily process and also they can show multi-properties as well as possible synergetic effects. Recently, magnetic and photomagnetic complexes have been chemically modified to display liquid crystalline properties. Liquid crystal phases are one of the best examples of assemblies in which order coexist with fluidity that helps to orient, align, and organize molecular systems. For example, when Single-Molecule

Magnets are used as molecular objects, it should be possible to design hybrid systems (films, macroscopic objects) in which the easy axis of the magnetization of each molecular magnet is oriented in a same direction (see scheme below) and therefore to make a step forward possible applications in information storage.

This line of research is quite new and there are only a few examples of coordination compounds exhibiting paramagnetism,¹ superparamagnetism,² or thermally induced spin crossover,^{3,4} with mesomorphic properties induced by functionalization of peripheral ligands. In this communication, we will report on the synthesis and characterization of new systems that display both magnetic and liquid-crystal properties.



References

1. Y.G. Galyametdinov, et al., *Adv. Mater.*, **2008**, 20, 252
2. E. Terazzi, et al., *Angew. Chem. Int. Ed.*, **2008**, 47, 490
3. Y. Galyametdinov, *Angew. Chem. Int. Ed.*, **2001**, 40, 4269
4. P. Grondin, PhD Thesis in Bordeaux-1 University, **2007**