

SYNTHESIS OF PTM RADICALS FUNCTIONALIZED IN *META*-POSITION BY CARBOXYLIC GROUPS: NEW BUILDING BLOCKS FOR SUPRAMOLECULAR CHEMISTRY

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Over the last few years, one of the most important challenges in the field of supramolecular chemistry has been dedicated to the design of molecular materials presenting remarkable physical and chemical properties together with outstanding characteristics. With the idea to associate in the same material magnetic properties and porosity [1], our group has developed an original strategy based on the use of stable polychlorotriphenylmethyl radicals (PTM) functionalized by para-carboxylic groups as building blocks. Following this approach, self-assembly of PTMTC or the use of its corresponding tricarboxylate as a ligand of paramagnetic cations have allowed the design of nanoporous materials [2] presenting magnet behaviors at low temperatures (Figure 1).

We present herein the work that is currently under progress in our laboratory to prepare PTM radicals substituted in meta-position by one, two or three carboxylic groups (Figure 2). Self-assembly or coordination chemistry using this molecules is expected to yield original structures together with remarkable magnetic properties.

References:

- [1] D. Maspoch, D. Ruiz-Molina, K. Wurst, N. Domingo, M. Cavallini, F. Biscarini, J. Tejada, C. Rovira and J. Veciana, *Nature Materials*, **2** (2003) 190-195.
 [2] D. Maspoch, N. Domingo, D. Ruiz-Molina, K. Wurst, J. Tejada, C. Rovira and J. Veciana, *C.R. Chimie* **8** (2005) 1213-1225

Figures:

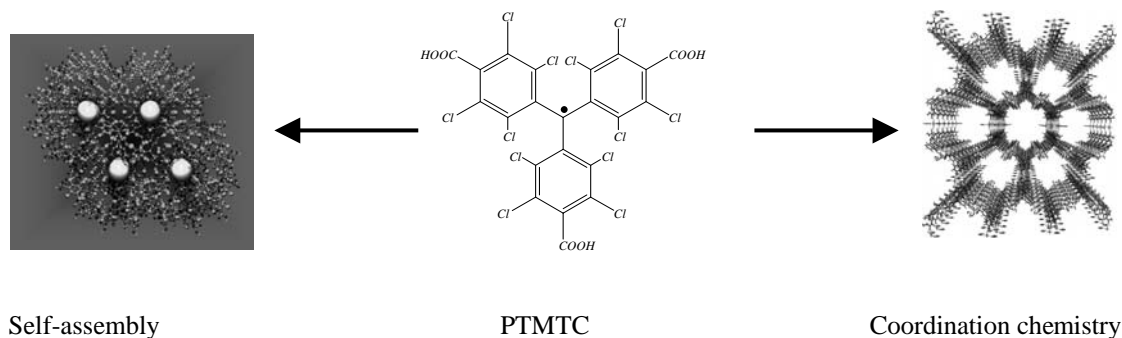


Figure 1.

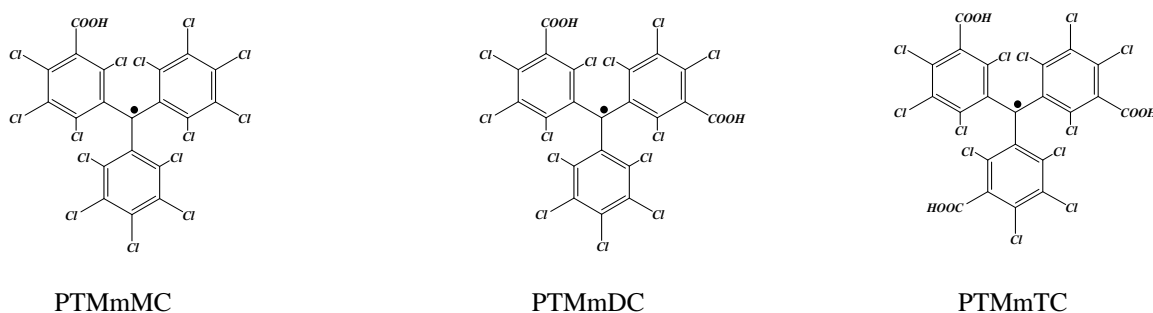


Figure 2.