P1

2D MANGANESE(II) NETWORKS BASED ON V-SHAPED BIS(*P*-CARBOXYPHENYL)DIPHENYLSILANE: SYNTHESIS, STRUCTURES AND PROPERTIES

Angelica Vlad, Mirela-Fernanda Zaltariov, Maria Cazacu, Sergiu Shova

"Petru Poni" Institute of Macromolecular Chemistry, Aleea Gr. Ghica Voda 41A, 700487 Iasi, Romania

Two coordination networks based on V-shaped bis(*p*-carboxyphenyl)diphenylsilane (cpdps) ligand and Mn(II) ions: $\{[Mn_5L(cpdps)_4(HCOO)_2(H_2O)_2(DMF)_4]\cdot 6DMF\}_n$ (**I**) and $\{Mn_3(\mu\text{-}H_2O)_2(Hcpdps)_2(cpdps)_2(DMF)_2]\cdot 2DMF\cdot 12H_2O\}_n$ (**II**) were synthesized by conventional and solvotheramal methods and structurally characterized by X-ray single crystal diffraction. The pentanuclear and trinuclear manganese clusters in **I** and **II**, respectively, act as SBUs, while the V-shaped ligand links the SBUs leading to 2D coordination networks (Fig. 1).

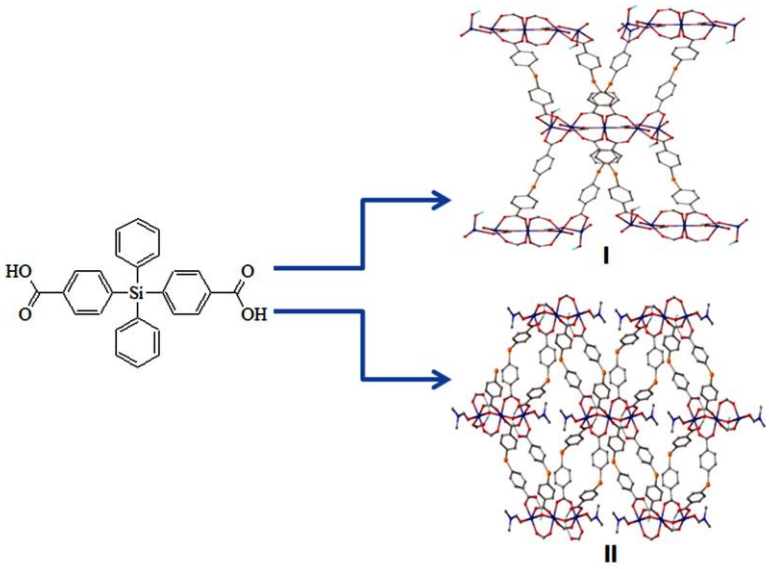

Figure 1. Obtaining of the Mn(II) coordination networks by conventional (**I**) and solvothermal (**II**) methods

Magnetic susceptibility measurements in the 0-300 K range of both coordination networks show the existence of anti-ferromagnetic exchange interactions between the Mn(II) ions. The thermogravimetrical data revealed a good thermal stability of both complexes, while the results of the water vapor sorption capacity in dynamic regime indicated good moisture stability of the manganese(II) coordination networks

Acknowledgements: This work was supported by a grant of the Ministry of National Education, CNCS – UEFISCDI, project number PN-II-ID-PCE-2012-4-0261 (Contract 53/02.09.2013)