

## Copper coordination compounds with spherical morphology based on methylcyclosiloxanes functionalized with carboxyl groups as ligands

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Cyclosiloxanes having at each silicon atom a methyl and a carboxylic acid coupled through thioether bridge were used to coordinate copper. The dual character conferred by the co-existence in molecule of the two opposite groups, high hydrophobic methyl and hydrophilic carboxyl, induces surfactant behaviour of these ligands, thereby enabling them to form aggregates when the concentration is above the critical value. When copper acetate is added over these in a polar medium, the metal is coordinated by the carboxyl groups at the interface leading to the formation of microspheres. This morphology was emphasized by SEM and TEM microscopies of the pristine samples and confirmed by SEM images of the thermal decomposition residue, while the structure and composition of the material were estimated by IR spectroscopy and EDX, respectively. The hydrophilicity of the resulted materials was evaluated by water vapour sorption analysis in dynamic regime.

