

Priority Programme

“Material Synthesis near Room Temperature”



Project Description – Project Proposal

Intermetallic Nanoparticle Synthesis in Ionic Liquids

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Summary of proposal

We propose a research project on the synthesis of novel MOF materials from ionic liquids. It will focus on the synthesis and characterization of new ionic liquids that contain building blocks of MOF materials as part of their ionic structure. Thus, MOF building blocks will be provided in a specific, pre-organized, ionic structure (among other things liquid crystalline and chiral ionic liquids) and strong structural effects of this matrix on the MOF synthesis are expected. Furthermore this method of using an ionic liquid should provide a synthetic route near room temperature. It includes cleaning of the obtained MOF structure from remaining ionic liquid solvent and other reactants as well as structural characterization of the obtained MOF material to verify the structural outcome of the novel synthetic strategy proposed in this project.