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Sommario/riassunto	In his Master project Sven Herrmann for the first time carried out fundamental investigations into the development of polyoxometalate based ionic liquids (POM-ILs). The POM-ILs were obtained by charge balancing inorganic polyoxometalate (POM) anions with sterically demanding tetraalkylammonium or tetraalkylphosphonium cations. By functionalization of lacunary Keggin clusters with 3d-transition metals and charge balancing with tetraalkylammonium cations of differing chain length, a model system for the correlation of the molecular structure with macroscopic materials properties was obtained. In a systematic approach the syntheses via self-aggregation is presented. Analytic methods comprise UV-Vis, FTIR, NMR, EPR and Mößbauer spectroscopy. For determination of the materials properties TGA and

DSC were carried out and rheological studies shed light onto the flow characteristics of the highly viscous materials. Contents  
Polyoxometalates and Ionic Liquids in General POM-ILs as New Class of Compounds Synthesis and Characterization of POM-ILs Reactivity Towards Azide and Carbonmonoxide Target Groups Researchers and students in the field of chemistry Practitioners in this area The Author  
Sven Herrmann obtained his Masters degree at the University of Erlangen-Nürnberg. He then joined the working group of Prof. Carsten Streb in the inorganic department at the University of Ulm to work on his PhD thesis that targets the development of polyoxometalate based ionic liquids (POM-ILs).

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