

Vortragsankündigung

Mittwoch, 27. Juni 2018, 17 s.t.

Seminarraum I (JAK2AOG1.33), Jakob-Haringer-Straße 2a

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“Metal organic frameworks en route to applications”

The chemistry of porous coordination polymers (metal organic frameworks, MOFs) is developing at an extraordinary pace and calls for an interim evaluation of the present achievements and the obstacles for their transfer into commercial application, which will be attempted in this presentation. The properties of selected MOFs (viz. CPO-27, ZIF-4, MIL-101, MIL-53) will be discussed with respect to potential applications in energy storage, olefin/paraffin separation and catalysis. Our work aims at the detailed understanding of the synthesis of MOFs and the dominant interaction between the framework and the adsorbing or reacting molecules. Therefore, physico-chemical methods such as X-ray diffraction, sorption studies as well as ESR, NMR and in-situ-IR spectroscopy will be employed to analyze the local interaction sites in addition to the macroscopic testing of the novel materials. Particular attention will be given to the thermal and mechanical stability as well as the sensitivity of certain MOFs towards polar molecules such as water or ammonia.

