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TU Wien, Institut für Angewandte Physik, E134
1040 Wien, Wiedner Hauptstraße 8-10
Yellow Tower „B“, 5th floor, SEM.R. DB gelb 05 B



Metal-Organic Frameworks - Synthesis, Characterization and Applications in Separation Science

Metal-organic Frameworks or MOFs are a comparable new class of porous crystalline materials that consist of inorganic, often oxidic, network nodes, called secondary building unit (SBU) and organic linkers that interconnect the SBUs. The ease with which these linkers can be modified via organic synthesis allows to generate very specific, highly adjusted materials for applications in gas separation, sensing, and catalysis. Such systematic modification encompasses MOF pore sizes, the chemical environment in the micro-pores, the flexibility of the framework and others. Over the course of almost a decade, the MOF group at the Technical University Freiberg has addressed the determination of fundamental physico-chemical properties of these materials as well as basic principles of the synthesis of the most common representatives of these materials. A particular focus is given on the use of MOFs as gas-chromatographic materials, not only for gas separation but also via inverse chromatography for the determination of various thermodynamic properties of the MOF materials themselves.

All interested colleagues are welcome to this seminar lecture (45 min. presentation followed by discussion)

Friedrich Aumayr
(LVA-Leiter)

Markus Valtiner
(Seminar Chair)