FAKULTÄT FÜR CHEMIE

universität wien

Einladung zum Vortrag
Im Rahmen des Seminars für Physikalische Chemie und Materialchemie von

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„Mesoporous Materials for Energy Storage and Sensing Applications"

Nanoporous materials, including non-siliceous phases such as carbon or metal oxides, continue to be of broad interest for a variety of applications beyond catalysis. Today, human society faces pressing technological, environmental, and social challenges in such fields as energy conversion, energy storage, or sensing. Porous materials contribute to many approaches to solve these issues. For example, porous carbon may serve as an electrode material in next-generation lithium-based battery cells. Porous metal oxides can serve as active components in highly efficient sensors for trace amounts of harmful gases or for environmental monitoring. Porous semiconductors are frequently employed as resistive gas sensors, while porous ceramics or polymers are used for capacitive humidity sensors. This presentation will focus on the synthesis of various porous materials by structure replication and will show some examples of their utility in the above-mentioned fields of application. By controlling nanostructure and porosity, the applied synthesis approaches offer an opportunity to create functional materials with well-defined properties in terms of sensor response to analyte gases (by surface-chemical reactions), sensitivity to humidity (by vapor adsorption), or storage of electrochemically active guest species (in battery electrodes), to name a few.

Freitag, 30. Juni 2017, 15:00 Uhr
Seminarraum 2
Währinger Straße 42, 1090 Wien

Wolfgang Kautek – Institut für Physikalische Chemie
Freddy Kleitz, Klaus Richter, Hans Flandorfer –
Institut für Anorganische Chemie - funktionelle Materialien

Bernhard Keppler Dekan	Lothar Brecker Vizedekan	Veronika Somoza Vizedekanin