
The 195th iCeMS SEMINAR

Fri 30 Oct 2015
16:00-17:30

From Functional Molecules to Designer Solids: Unique Opportunities Created by Liquid-Phase Epitaxy of Molecular Frameworks

Lecturer: **Prof Christof Wöll**
Karlsruhe Institute of Technology

Venue: **Room A1-001**
Katsura Campus, Kyoto University

Supramolecular chemistry holds unique prospects for the fabrication of novel functional materials. Precisely defined, nanometer-sized molecular subunits which may already be rather complex self-assemble to form even more complex structures which exhibit functionalities not provided by the individual building blocks.

In this presentation it will be made evident that supramolecular chemistry has in particular a huge potential with regard to the functionalization of surfaces and interfaces. We will demonstrate that this potential goes well beyond surface-templated assembly of two-dimensional networks of organic molecules (ligands) interacting through hydrogen bonds or ionic interactions^[1] and allows to construct three-dimensional, crystalline, perfectly ordered and oriented multilayers^[2].

[1] O. Shekhah, J. Liu, R.A. Fischer, Ch. Wöll, Chem. Soc. Rev., 40, 1081 (2011)

[2] J. Liu, W. Zhou, J. Liu, I. Howard, G. Kilibarda, S. Schlögl, D. Couprie, M. Addicoat, S. Yoneda, Y. Tsutsui, T. Sakurai, S. Seki, Z. Wang, P. Lindemann, E. Redel, T. Heine, Ch Wöll, Angew. Chemie Int. Ed. 54, 7441-7445 (2015)

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