The 94th iCeMS SEMINAR

Wed 02 Nov 2011
16:00-17:30

SURMOFs: Progress Report

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Venue: 2nd floor Seminar Room (#A207)
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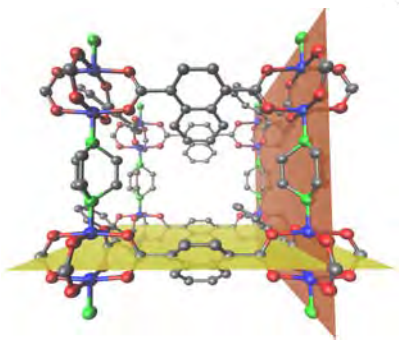
Layer-based, multicomponent MOFs, i.e. $[M(L)(P)_{0.5}]$ are particularly suited for stepwise liquid-phase epitaxy (LPE) of surface mounted crystals and films of MOFs ("SURMOFs"; M = Zn, Cu; L = arene dicarboxylic acids, e.g. 1,4-naphtalene dicarboxylate (ndc); P = pillar ligands, e.g. 1,4-diazabi-cyclo(2.2.2)octane (dabco) and functionalized derivatives of L and P]. The two principal growth directions [100] (red) and [001] (yellow) of Fig. 1 are perpendicular to the most dense lattice planes. The oriented growth of SURMOFs of type **1** as well as homochiral, multilayer hybride, post deposition modified SURMOFs and data on the evaluation of the selective gas adsorption properties will be presented based on in situ monitoring the LPE using surface Plasmon resonance (SPR) and quartz crystal microbalance (QCM).



References

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c) D. Zacher, K. Yusenko, A. Bétard, S. Henke, M. Molon, T. Ladnorg, O. Shekhah, B. Schüpbach, T. de los Arcos, M. Krasnopolski, M. Meilikhov, J. Winter, Andreas Terfort, C. Wöll, R. A. Fischer, *Chem. Eur. Journal* **2011**, *17*, 1448-1455.
d) Zacher, R. Schmid, C. Wöll, **R. A. Fischer**, "Surface Chemistry of Metal-Organic Frameworks at the Liquid/Solid Interface: A Perspective", *Angew. Chem.-Int. Edit.* **2011**, *50*, 176-199

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