

EINLADUNG ZUM INSTITUTSKOLLOQUIUM

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"Performance of zeolitic membranes formed by the stacking of zeolitic nanoblocks"

Abstract: Assymetric zeolitic membranes have a large potential in the separation of gases and liquids, like in gas separation, pervaporation and nanofiltration. Functionalised zeolitic membranes show an important potential in catalytic membrane reactors.

The new approach of stacking small nanoscaled zeolitic blocks to form zeolite membranes has shown to open new perspectives for the preparation of ultra-thin membrane top layers, combining good separation power with high permeation. The high permeability is due to the way of stacking of the nanoblocks, leading to clear bi-porous materials containing not only the micropores inside the zeolitic nanoblocks, but at the same time many small mesopores of a view nanometer in between the stacked nanoblocks. This stacking and the resulting bi-porosity leads to material properties that are deviating from the standard zeolite properties. Therefore we call these membranes zeolitic membranes.

This contribution will present the synthesis method used to make this type of membranes on porous support tubes. The zeolitic nanoblocks used are silicalite-like. Results of the structural characterisation of the membranes will be shown (SEM, TEM, N₂ adsorption/desorption, permporometry).

Datum: **Donnerstag, 06.12.2007**

Zeit: **15 Uhr**

Ort: WISTA-Gelände, Berlin-Adlershof
Wilhelm-Ostwald-Straße 3 (IBZ), 12489 Berlin

Gäste sind herzlich willkommen!