Supporting Information

for

A 3D-polyphenylalanine network inside porous alumina: Synthesis and characterization of an inorganic–organic composite membrane

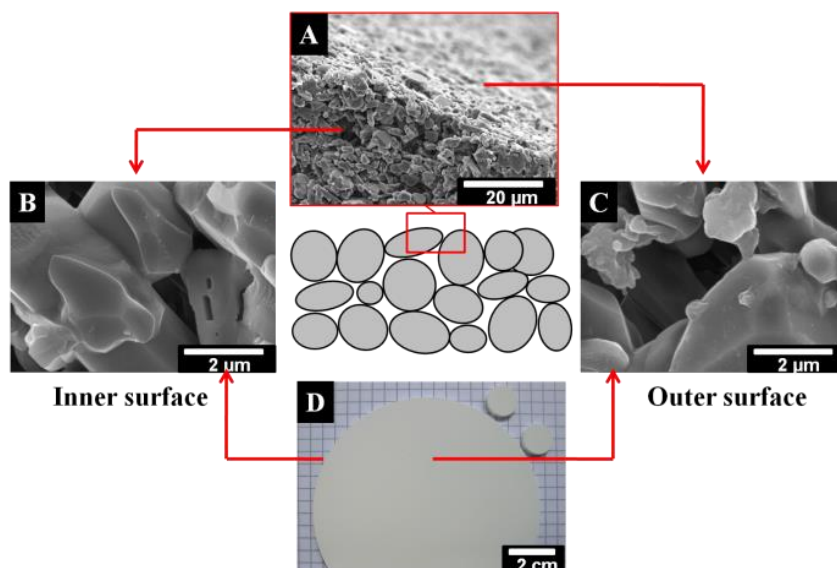Jonathan Stott and Jörg J. Schneider

Additional experimental data

Figure S1:(A) SEM image of the edge of used ALOX-membranes. (B) SEM image of the inner surface, (C) SEM image of the outer surface and (D) photographimage of the ALOX-membranes. (Center) schematic of the ALOX-membrane morphology with their pore geometry.
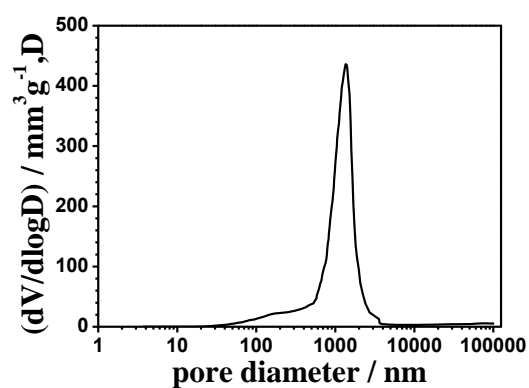

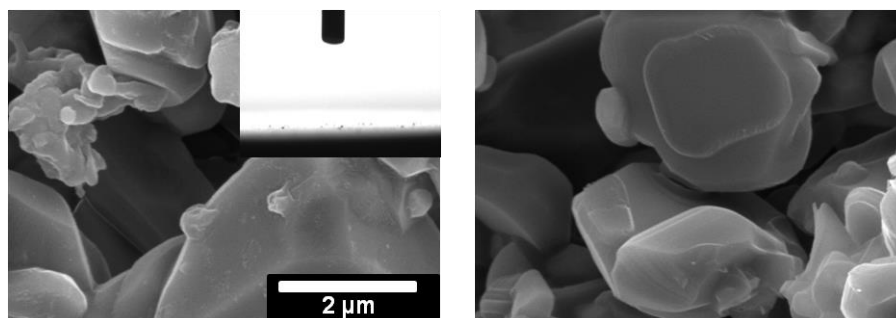**Figure S2:** Hg-porosimetric measurement of a neat ALOX-membrane.

Figure S3: SEM image and water contact angle 2 µL drop size) of the outer surface of neat ALOX-membrane (left). SEM image of the inner surface of the ALOX-membrane.
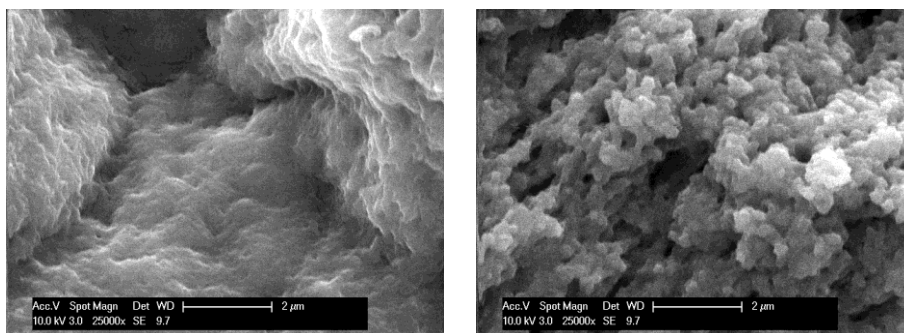
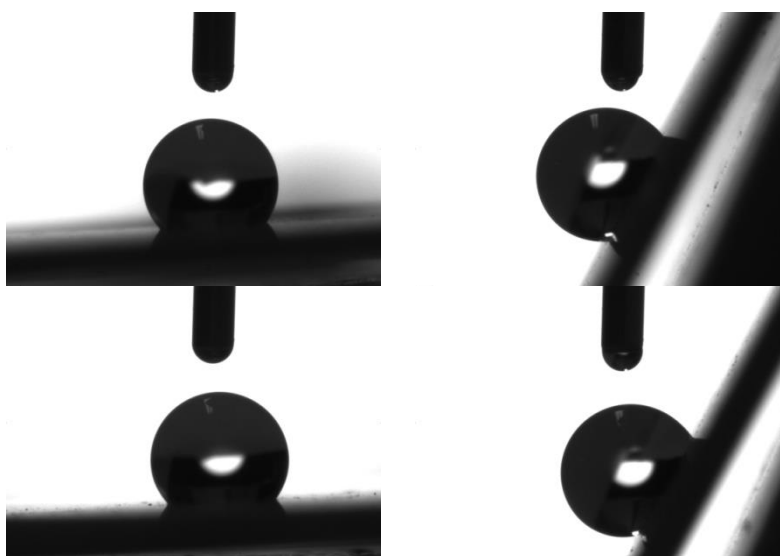**Figure S4:**SEM images of polyphenylalanine synthesized in solution of pure DCM (left) and pure THF (right).

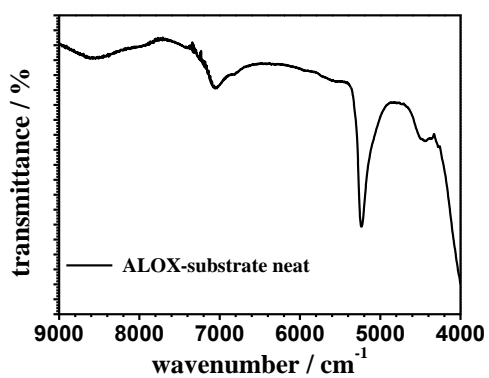**Figure S5:** Water contact angles at flat orientation and tilted orientation of the pPA-functionalized ALOX-membrane.

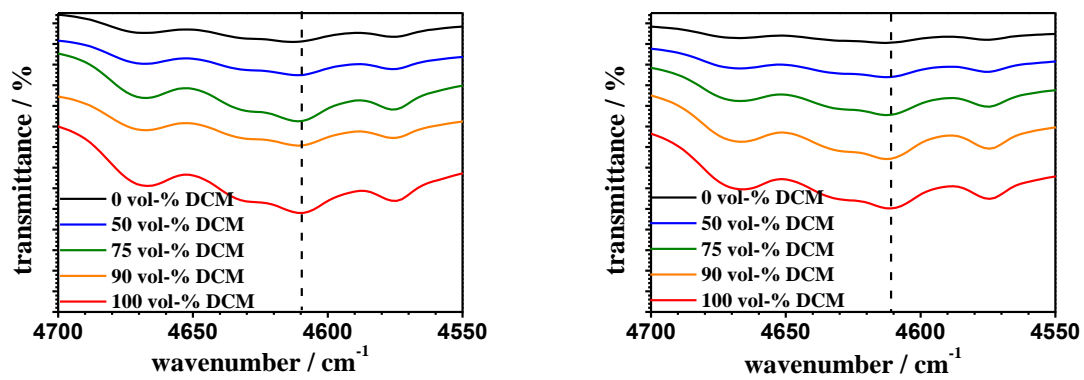**Figure S6:** NIR-spectrum of neat ALOX-membrane (as achieved).

Figure S7: NIR spectra of the polyphenylalanine functionalized ALOX-membranes from different solvent mixtures before (left) and after (right) treatment with $CHCl_3$/DCA solvent mixture at different wavenumber regions after the grafting process. Dotted line indicates the maxima of the combination band at 4611 respectively 4610 cm^{-1} of the polyphenylalanine functionalized membrane from pure DCM.