

Supplementary Information

<https://drive.google.com/file/d/1gboZOYYhcd-FTHnJgA6R8E8gGQRLy5nc/view?usp=sharing>

Video S1. Wettability demonstration of the Janus mat.

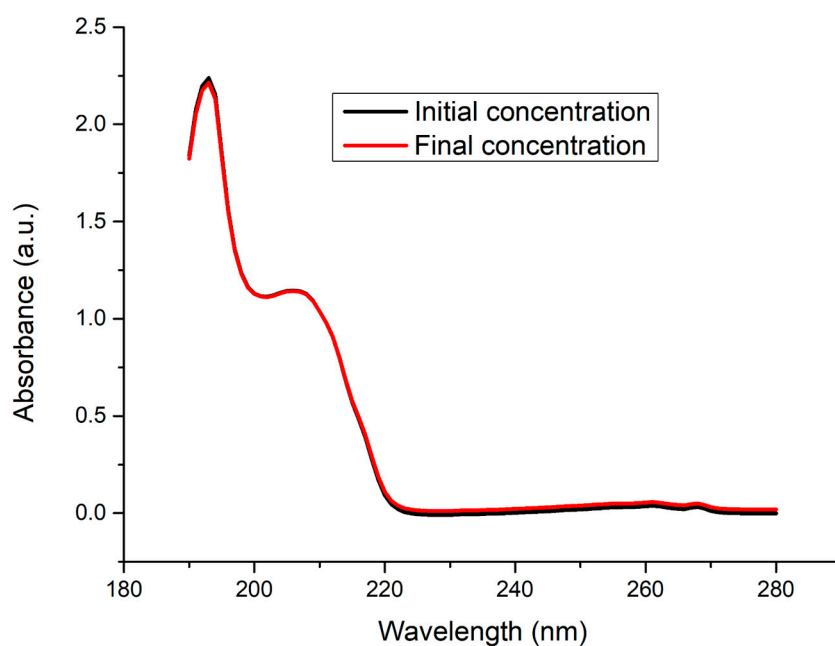


Figure S1. UV-Vis spectra of the toluene solution before (black) and after (red) a filtration experiment through a control PVA membrane.

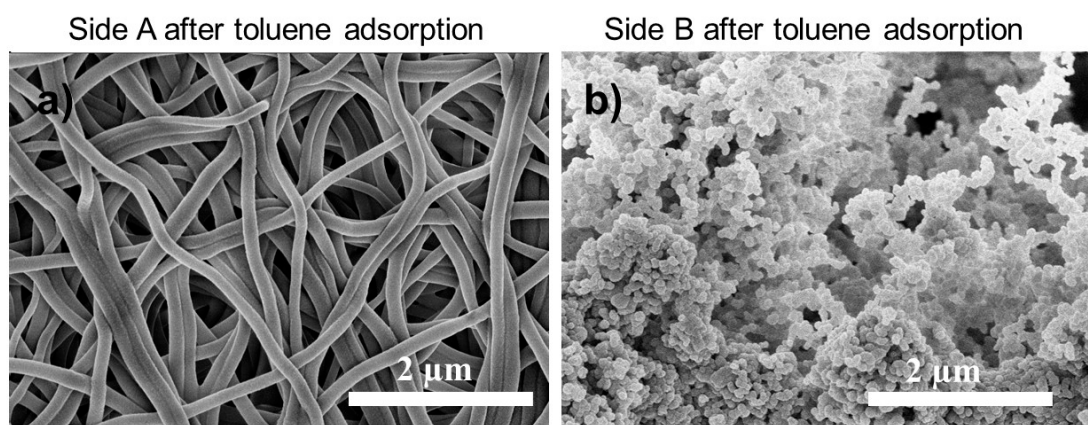


Figure S2. FE-SEM image of the membrane after toluene adsorption: a) Side A , b) Side B.

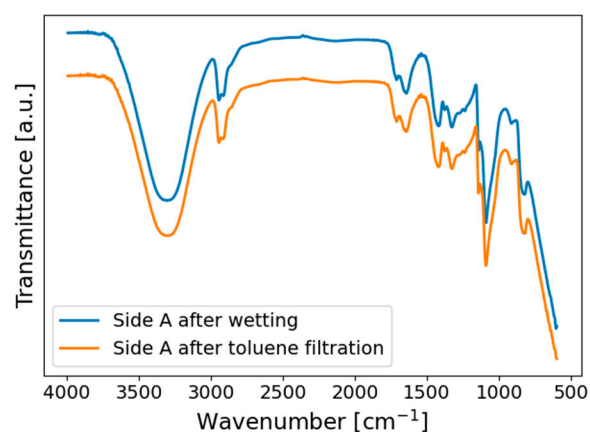


Figure S3. FTIR spectra of Side A of the membrane after filtration of toluene (blue) and a control solution using solely water, without toluene (orange).

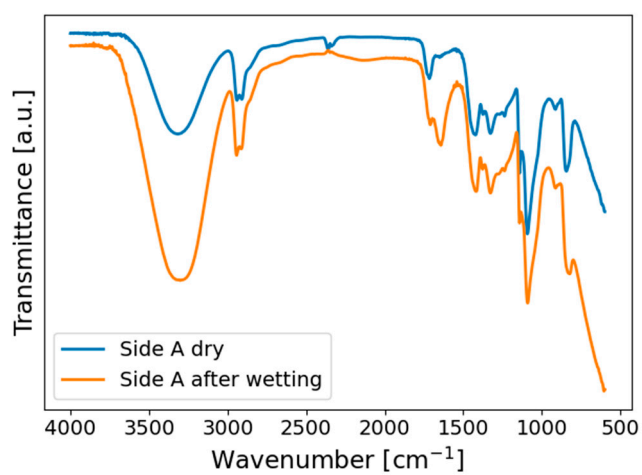


Figure S4. FTIR spectra of Side A of the membrane before (blue) and after (orange) filtration using water.