

Supplementary Information: Surface Modification and Porosimetry of Vertically Aligned Hexagonal Mesoporous Silica Films

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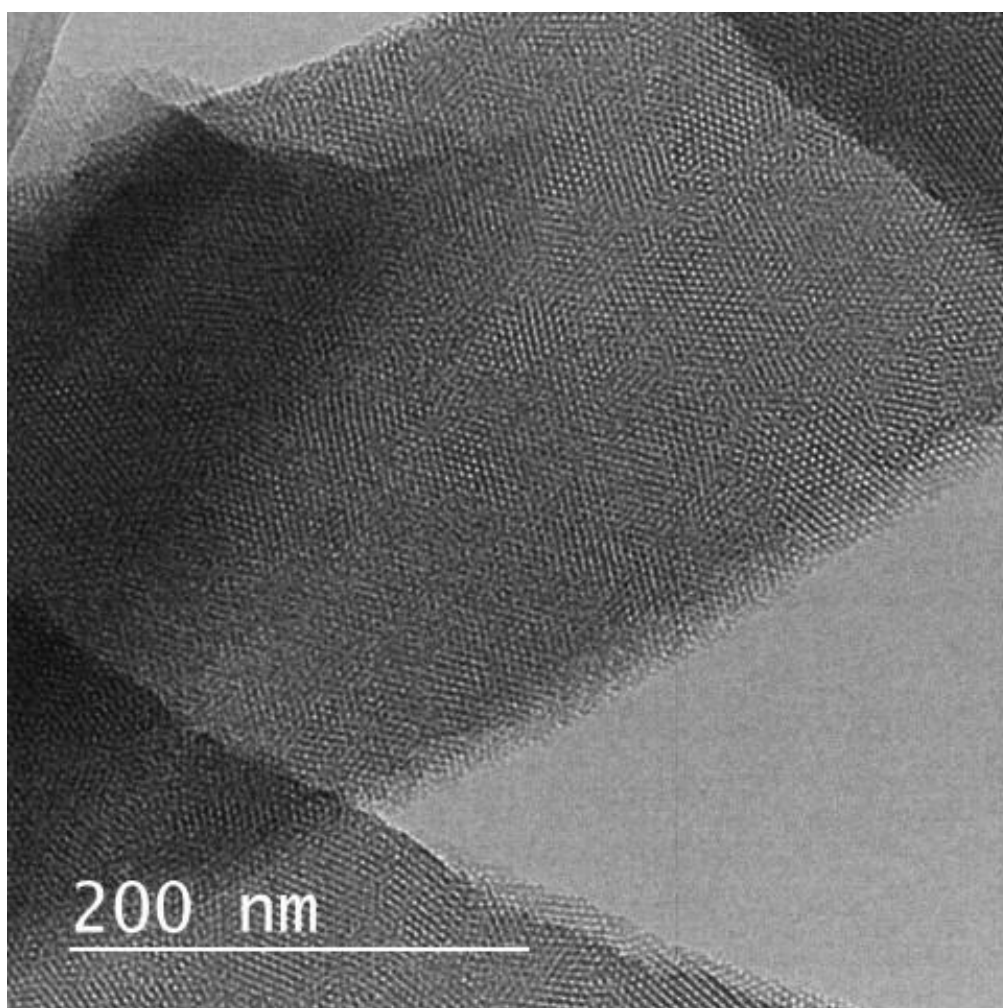


Fig. S1 Transmission electron micrograph through flakes scraped onto a TEM grid from an EASA silica film deposited at -1.3 V for 20 s.

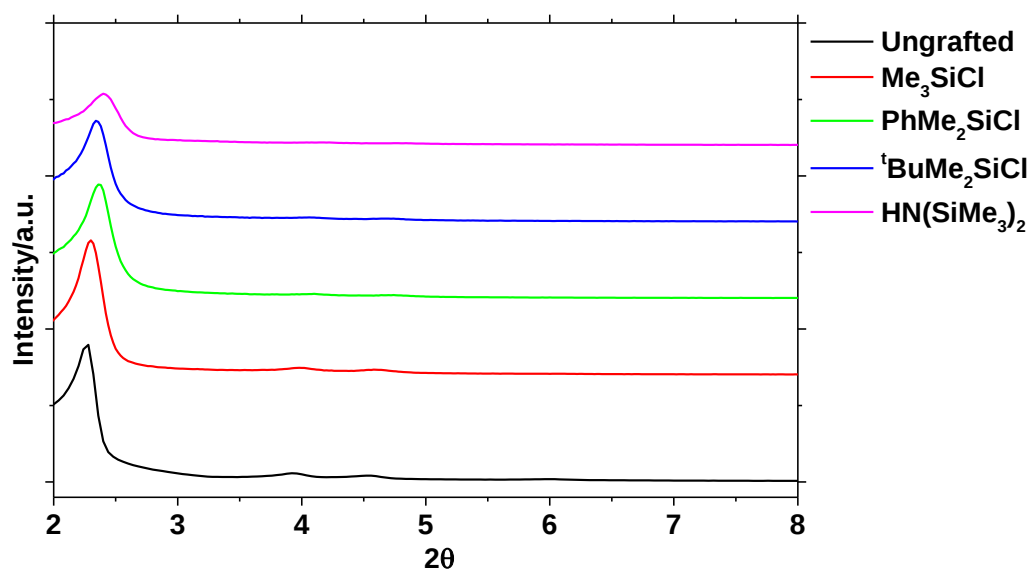


Fig. S2 SAXS patterns of grafted and ungrafted mesoporous silica powders.

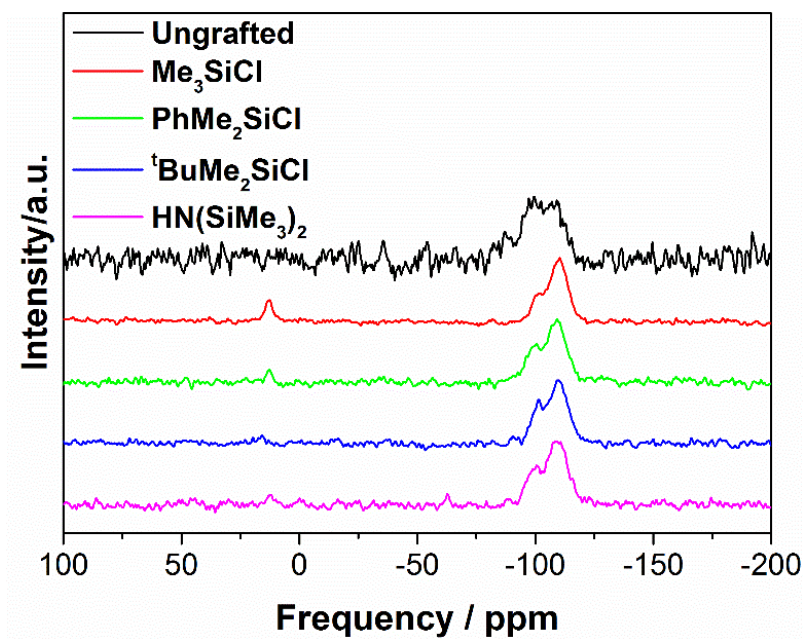


Fig. S3 Direct acquisition ${}^{29}\text{Si}$ MAS-NMR spectra of the mesoporous silica samples.

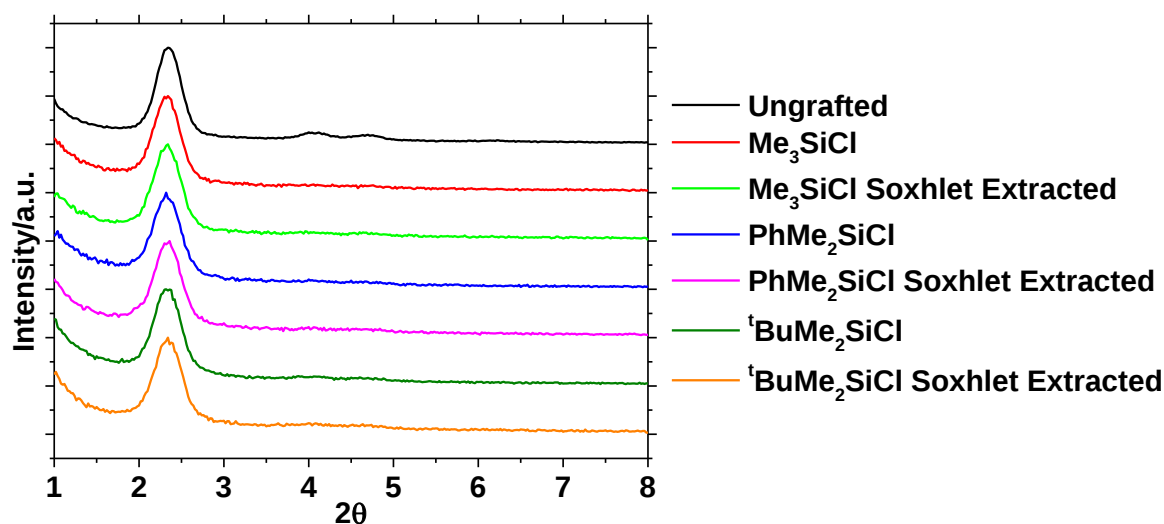


Fig. S4 GISAXS patterns of grafted and ungrafted mesoporous silica films deposited on TiN.

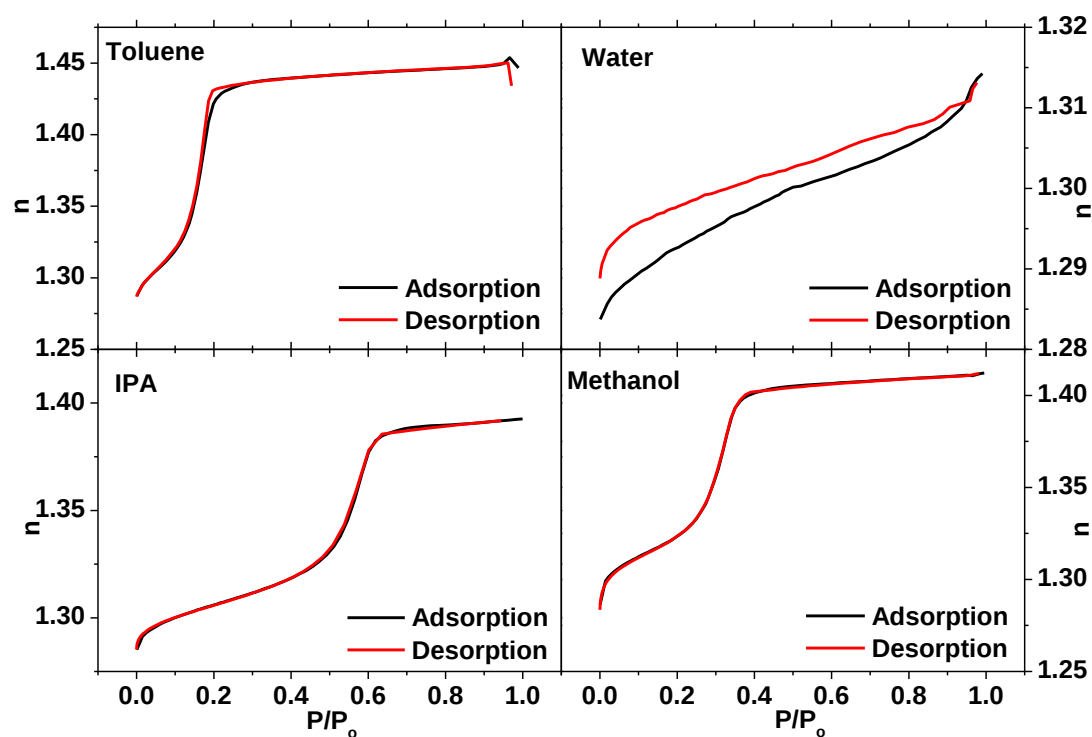


Fig. S5 Plots of refractive index (n) of an EASA mesoporous silica film grafted with Me_3SiCl vs solvent vapor partial pressure during adsorption and desorption of toluene, water, isopropyl alcohol or methanol.

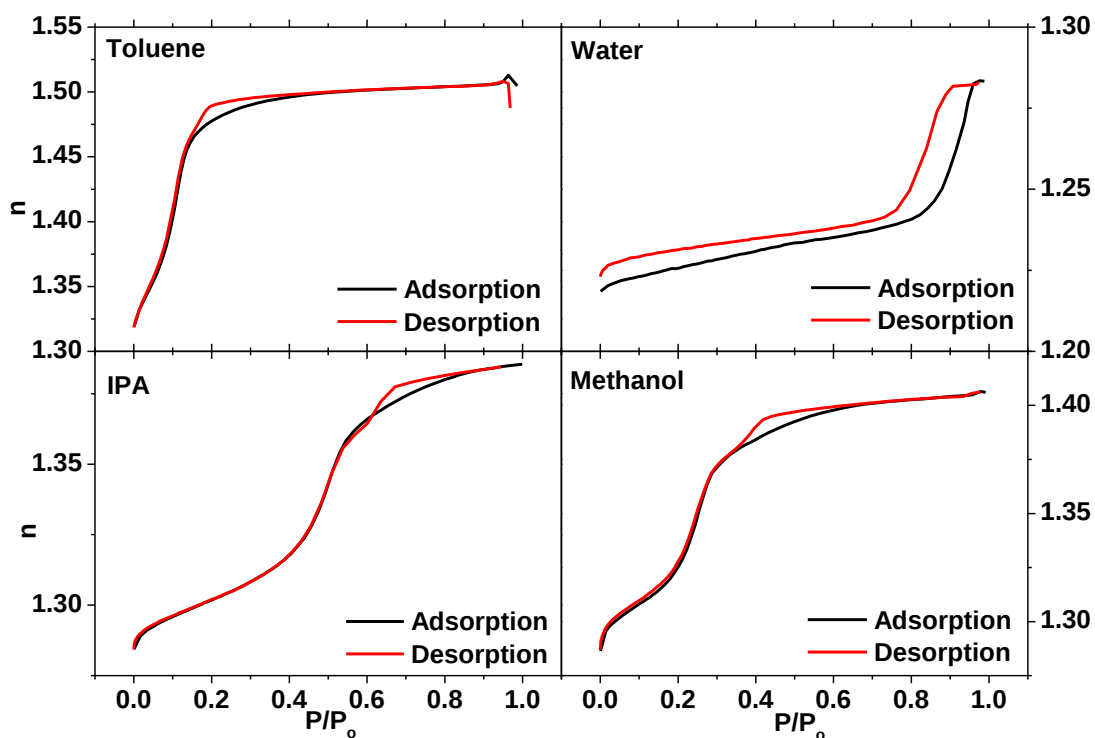


Fig. S6 Plots of refractive index (n) of an EASA mesoporous silica film grafted with PhMe_2SiCl vs solvent vapor partial pressure during adsorption and desorption of toluene, water, isopropyl alcohol or methanol.

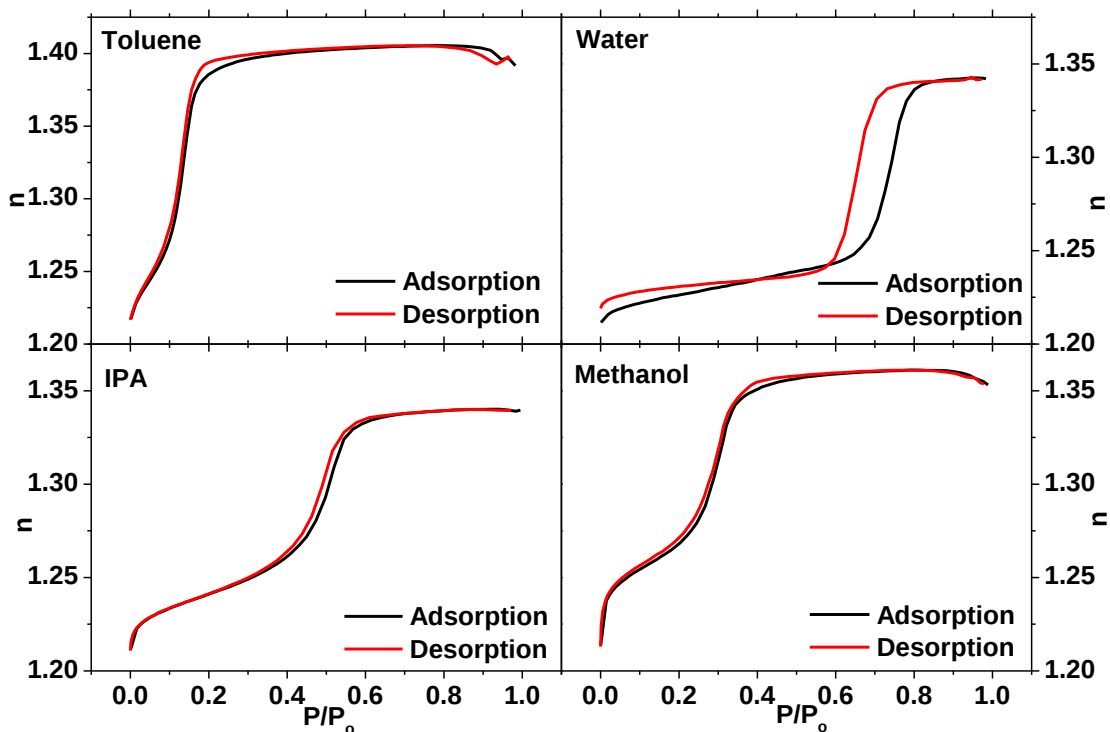


Fig. S7 Plots of refractive index (n) of an EASA mesoporous silica film grafted with $^t\text{BuMe}_2\text{SiCl}$ vs solvent vapor partial pressure during adsorption and desorption of toluene, water, isopropyl alcohol or methanol.