

Supplementary Information

The controlled microfluidic formation of stable mixed phase HCP/FCC-UiO-67(Zr)-Benzoic acid through modification of water concentration

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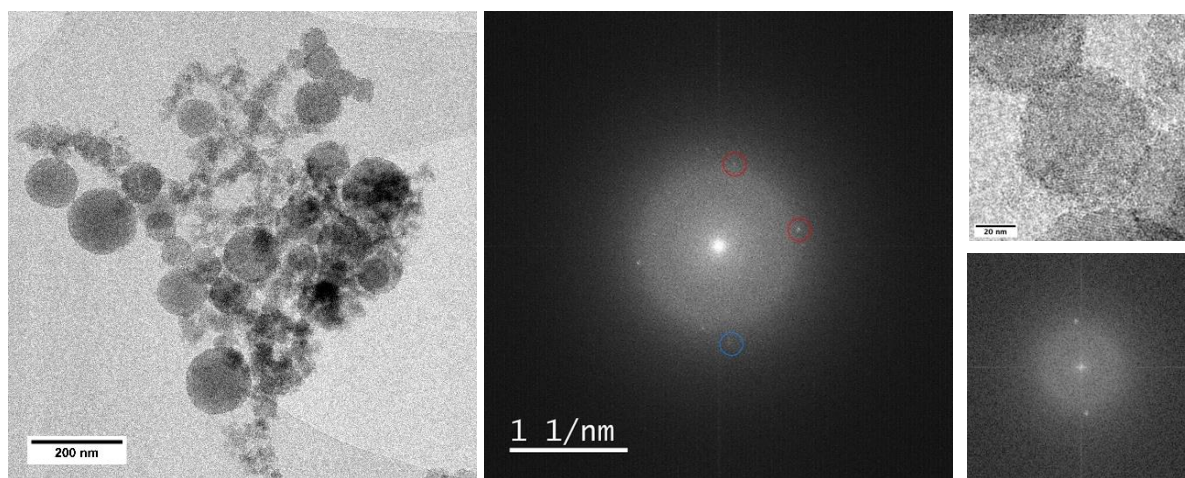
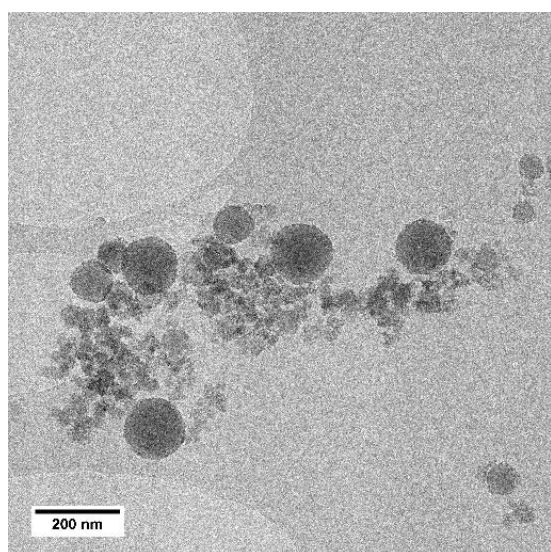
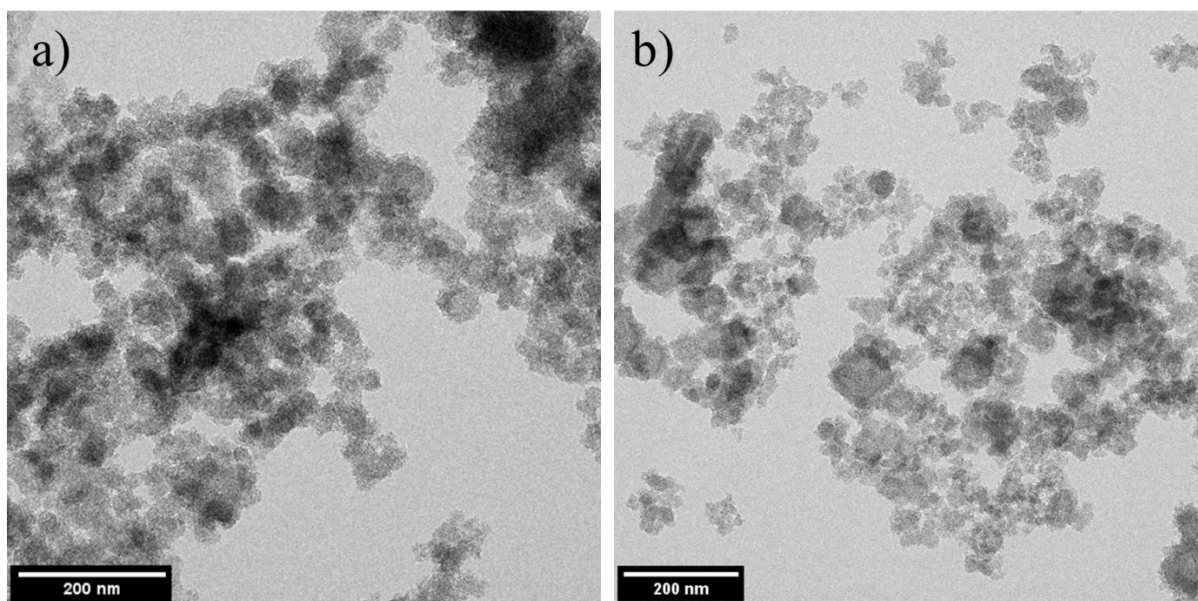


Fig. S1 TEM image (left) and FFT (middle) of MF60EQ product. The FFT is taken from the whole TEM image, with the red circles correspond to 14 angstrom spacings (which correspond to 7.2° 2θ in the XRD pattern), blue circle corresponds to 12 angstrom spacing (which correspond to 6.1 - 6.3° 2θ in the XRD pattern). FFT of one of the larger particles (top right) has spacing corresponding to 14 angstrom spacings (which correspond to 7.2° 2θ in the XRD pattern), indicating likely structure is HCP



Particle	Average Diameter (nm)	Standard deviation
FCC	29	6
HCP	101	28

Fig. S2 TEM image of MF60EQ product showing 2 distinct particles sizes, and table of average sizes



HCP particle diameter	Average Diameter (nm)	Standard deviation
MF40eq	63	13
MF50eq	68	12

Fig. S3 TEM images for a) MF40eq product and b) MF50eq product, alongside a table of average particle size for the larger HCP particles.

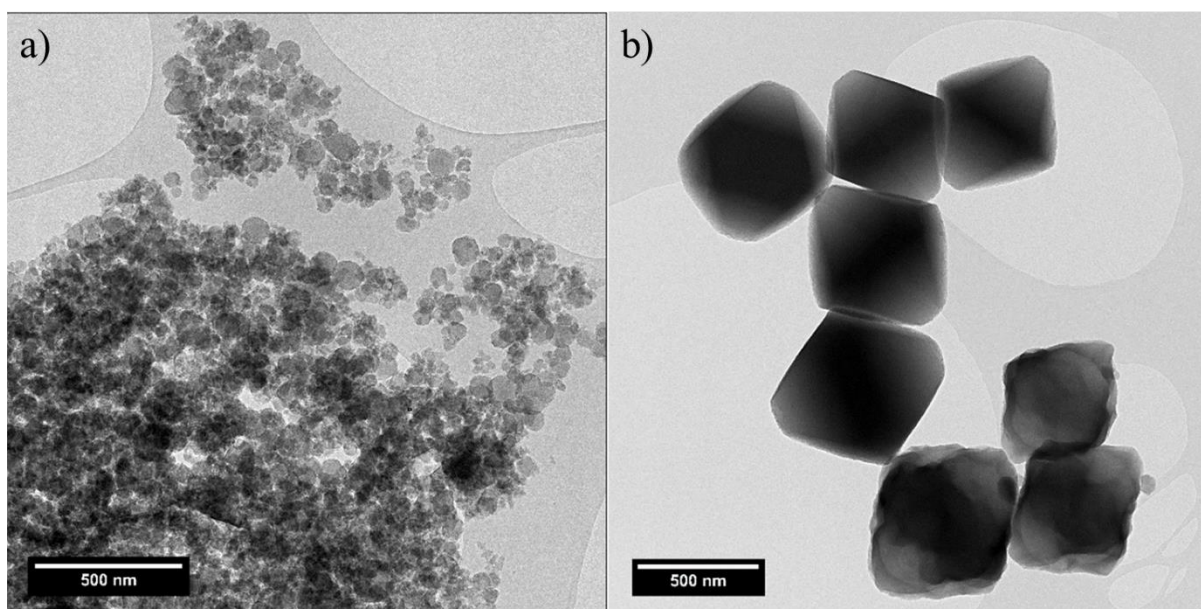


Fig. S4 TEM images for a) Batch60eq product and b) Batch product

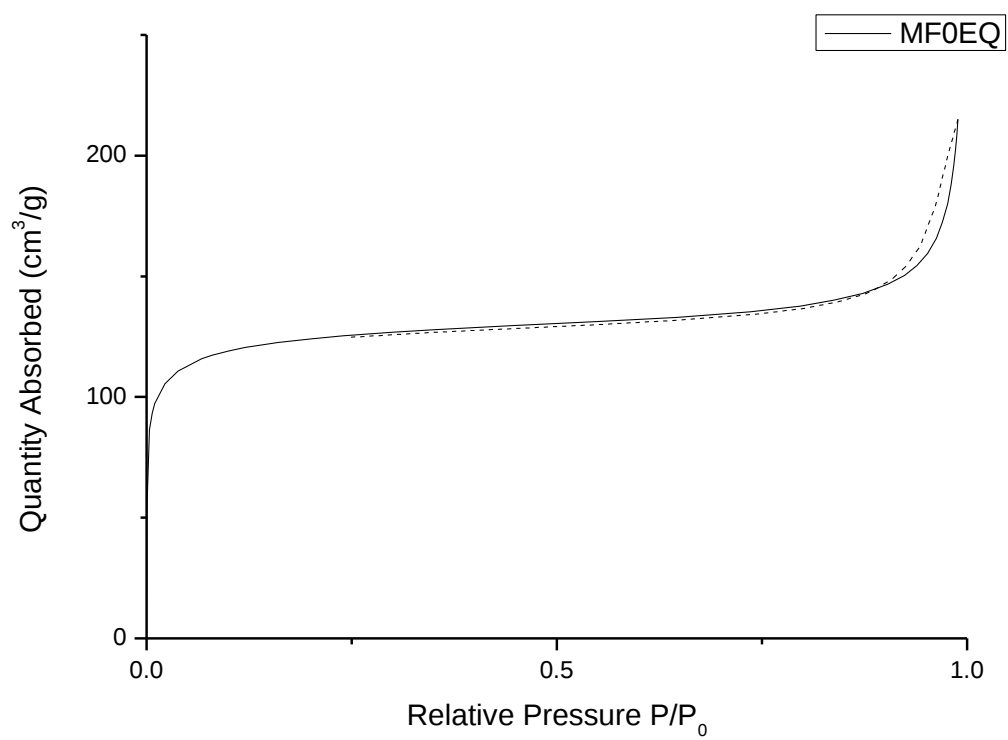


Fig. S5 N₂ Absorption isotherm of MF0EQ product

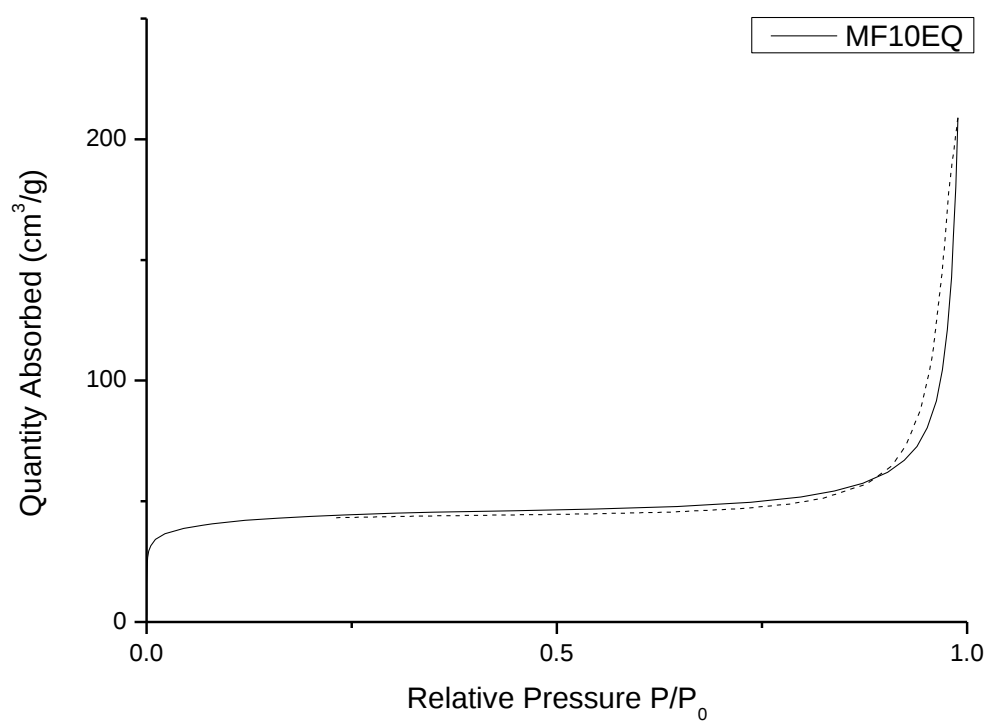


Fig. S6 N₂ Absorption isotherm of MF10EQ product

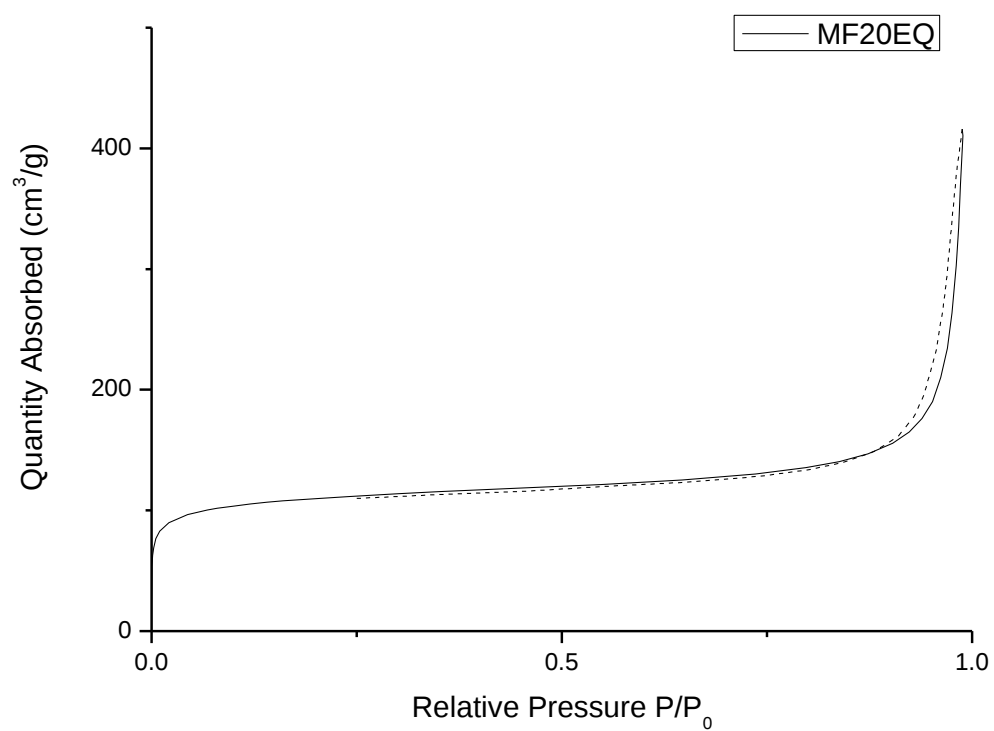


Fig. S7 N₂ Absorption isotherm of MF20EQ product

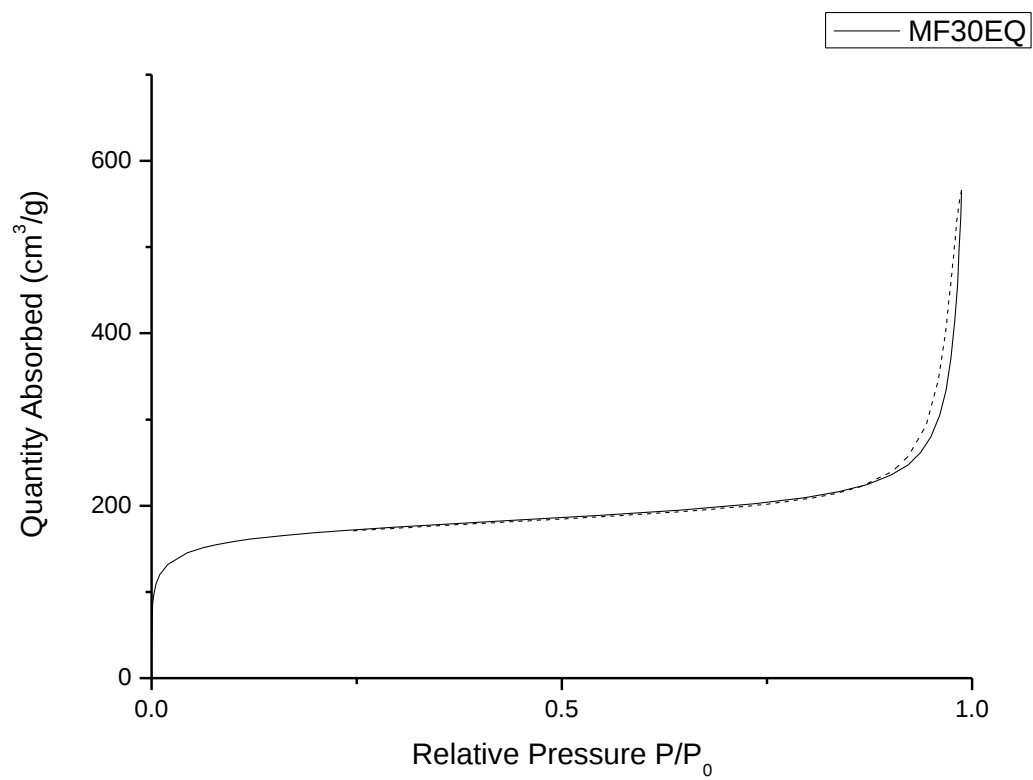


Fig. S8 N₂ Absorption isotherm of MF30EQ product

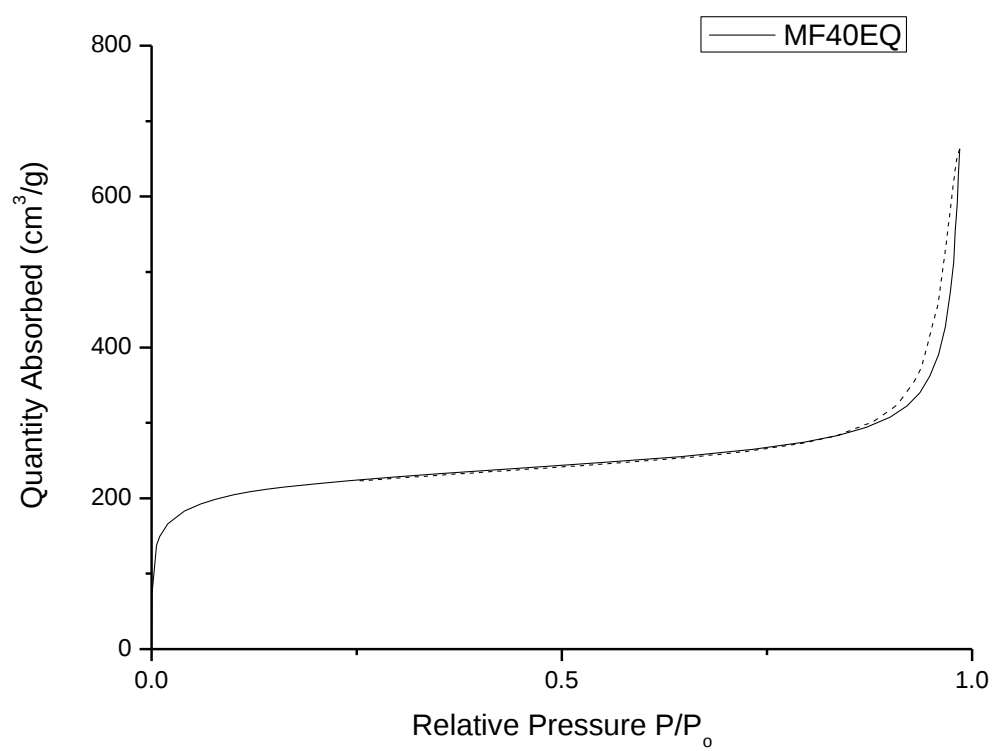


Fig. S9 N₂ Absorption isotherm of MF40EQ product

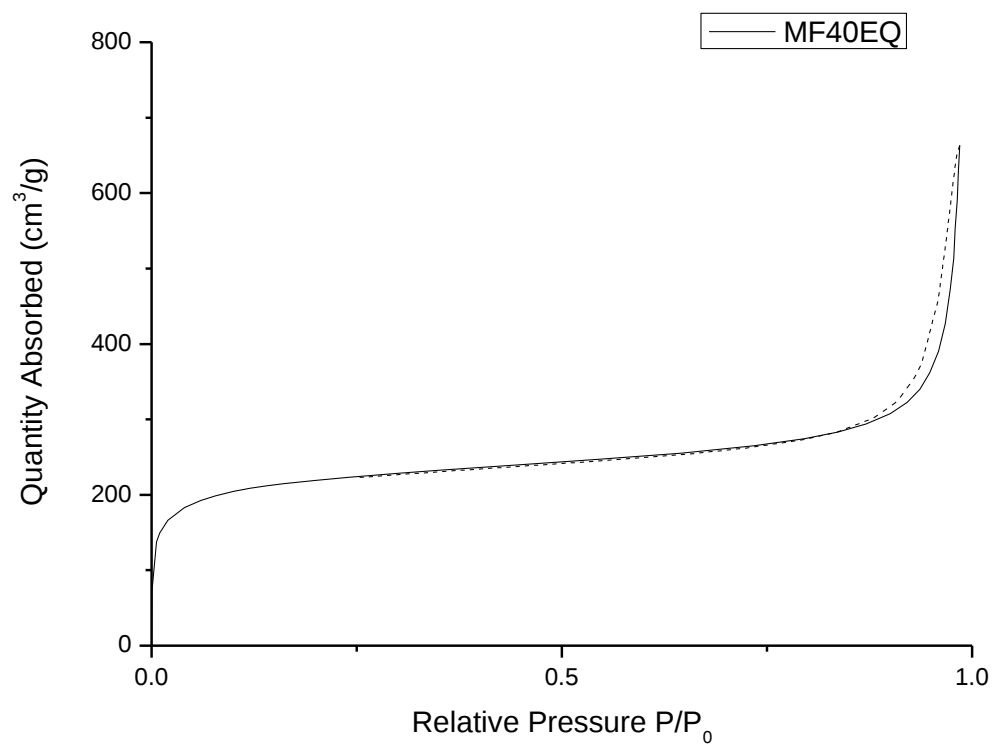


Fig. S10 N₂ Absorption isotherm of MF50EQ product

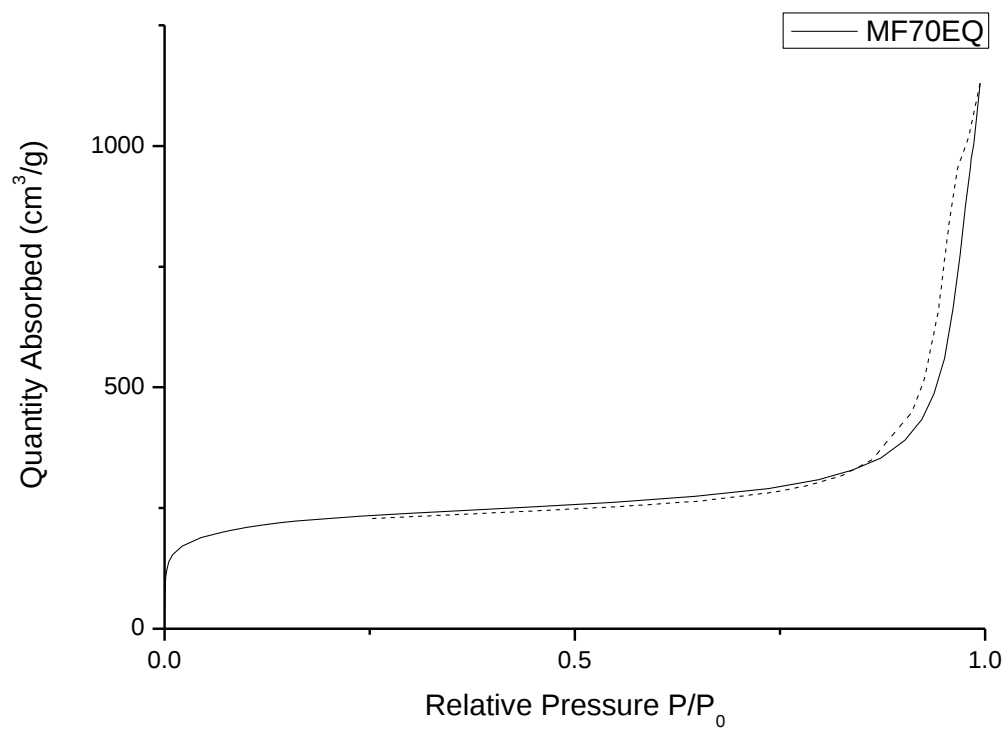


Fig. S11 N₂ Absorption isotherm of MF70EQ product

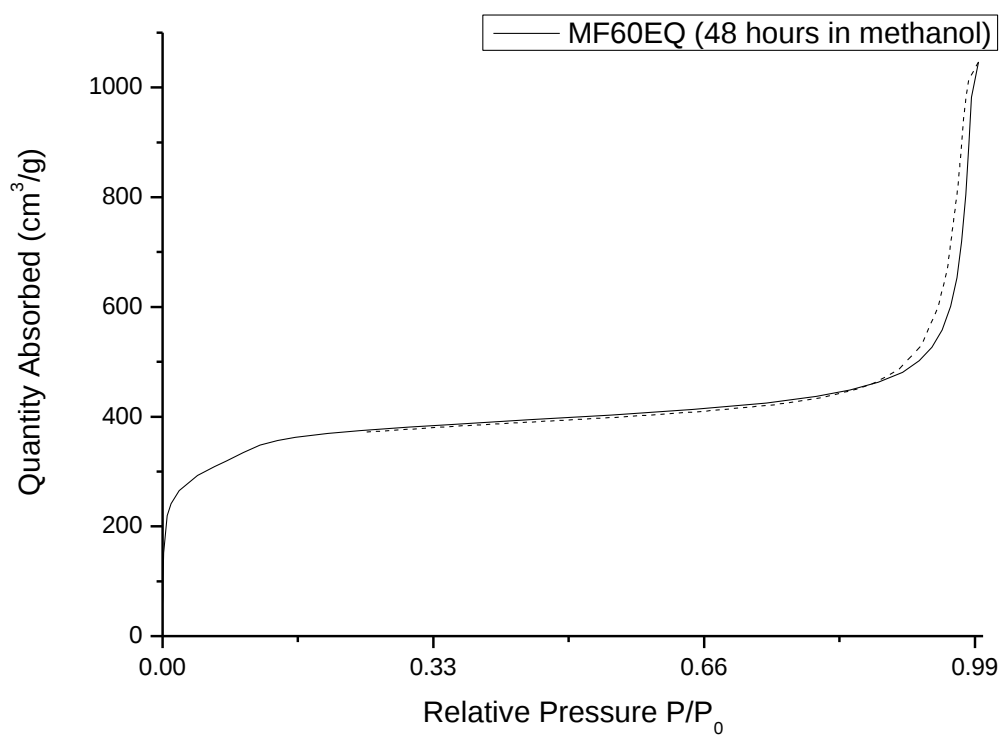


Fig. S12 N₂ Absorption isotherm of MF60EQ product (48 hours in methanol)

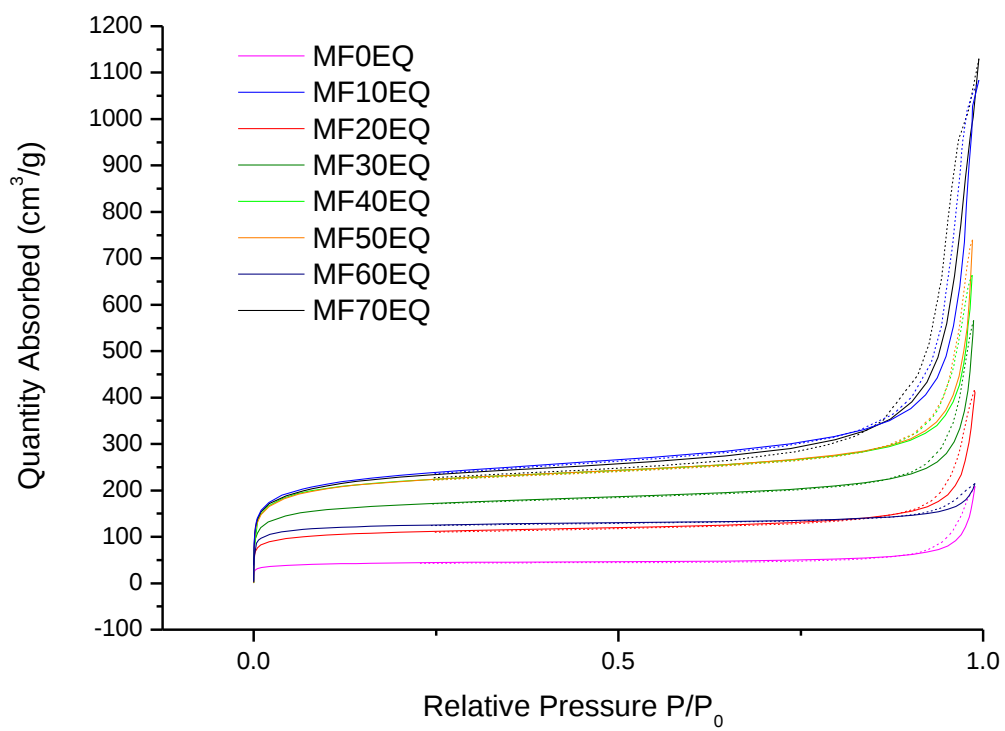


Fig. S13 Comparative N₂ isotherm graph for all microfluidic products