Supplementary Information

Super-Assembled Periodic Mesoporous Organosilica Membranes with Hierarchical Channels for Efficient Glutathione Sensing

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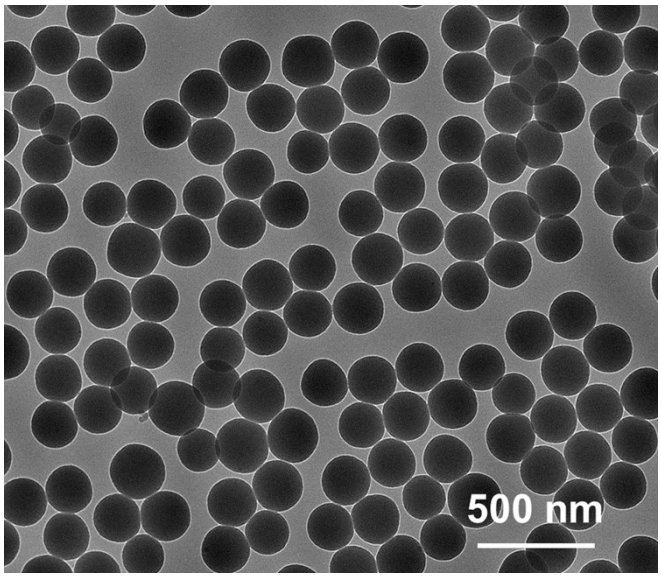

Fig. S1 TEM image of the mesostructured organic-inorganic hybrid nanoparticles before structural transformation.

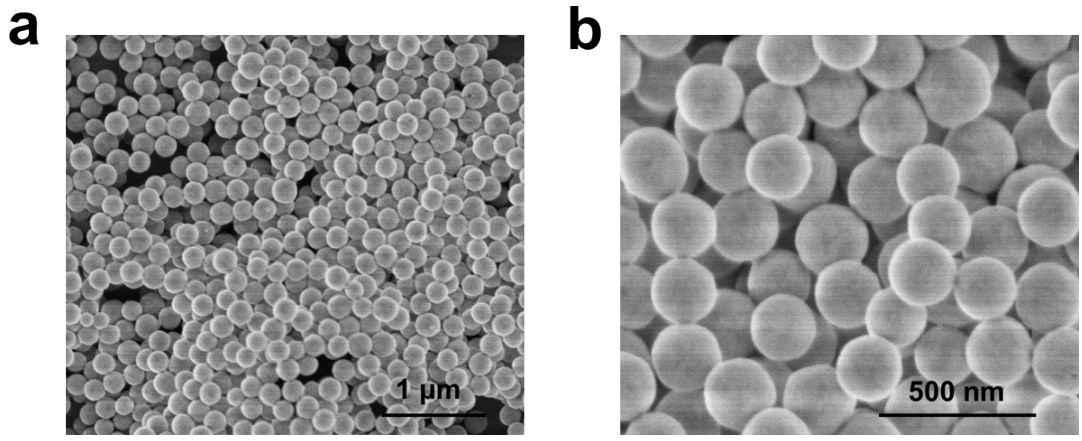

Fig. S2 SEM image (a) and magnified view (b) of the thioether-bridged PMOs with yolk-shell structure.

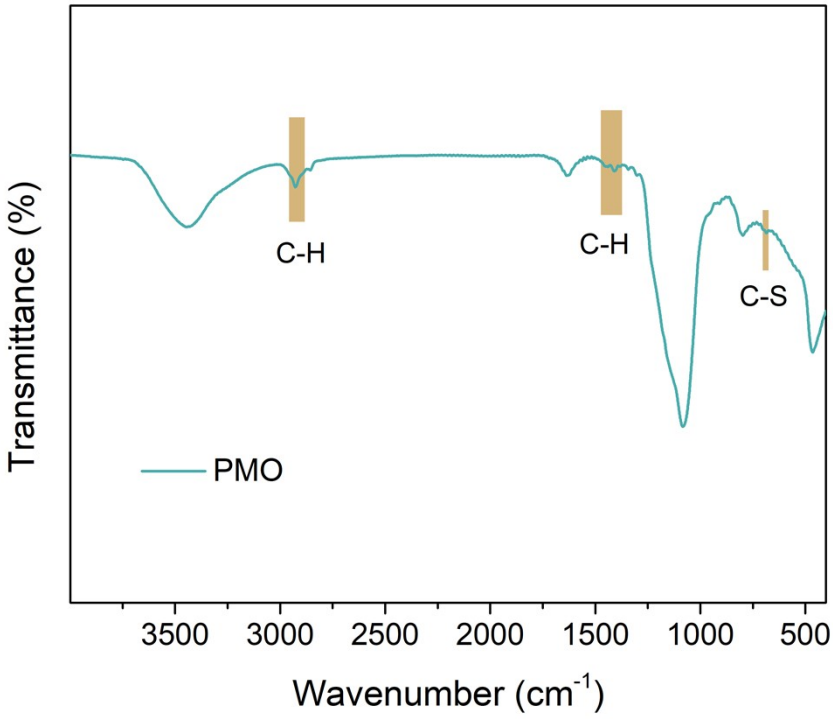

Fig. S3 FT-IR spectra of as-made PMOs.

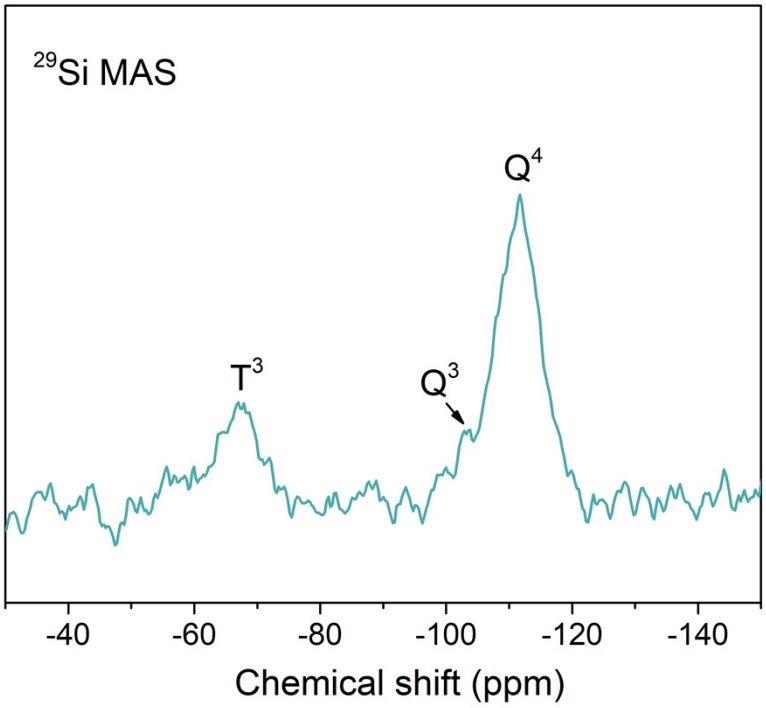

Fig. S4 ^{29}Si MAS NMR spectra of as-made PMOs.

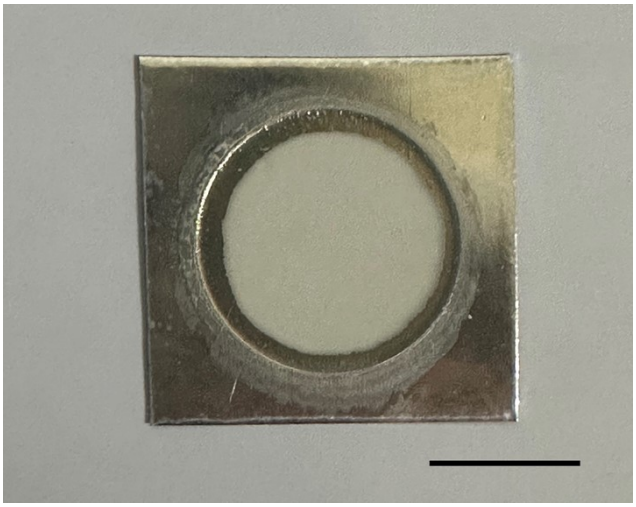

Fig. S5 Optical image of the pure AAO (Scale is 1 cm).

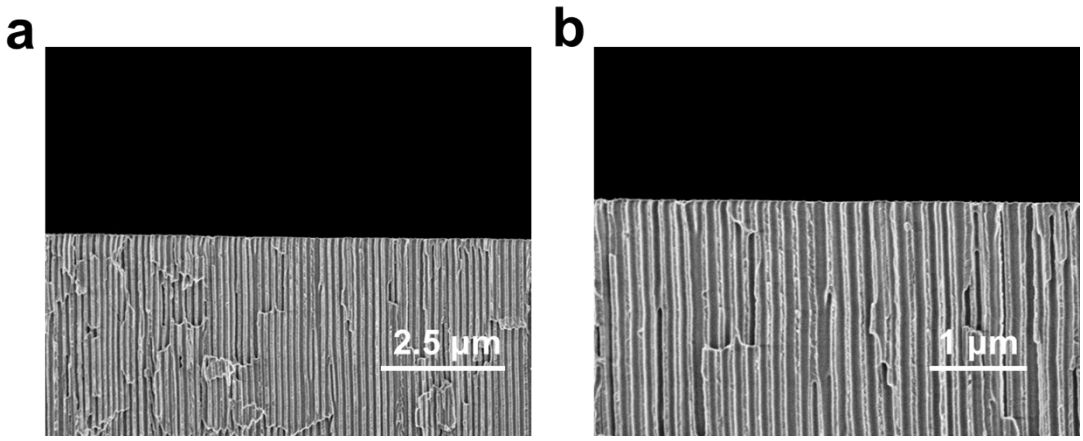

Fig. S6 Cross-sectional SEM images (a, b) of the AAO membrane.

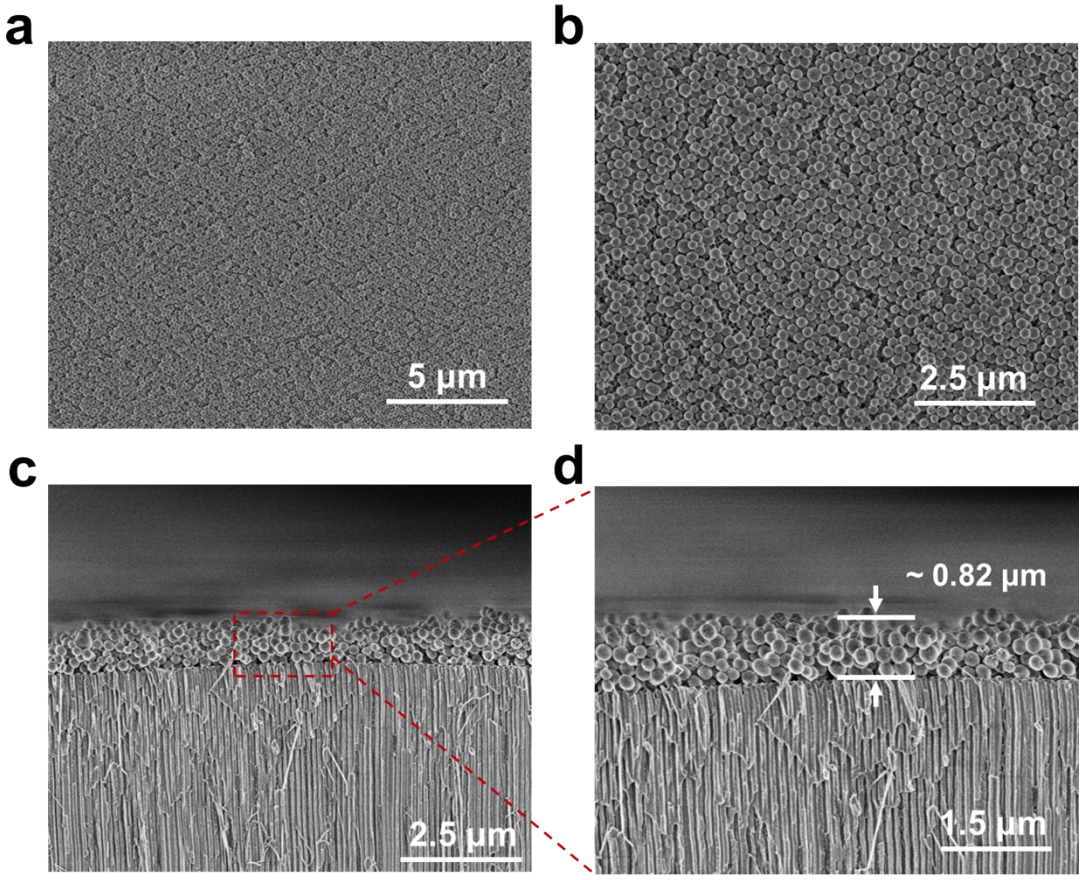

Fig. S7 Surface SEM images (a, b) and cross-sectional images (c, d) of the PMO/AAO membrane with 25 wt % loading of PMOs.

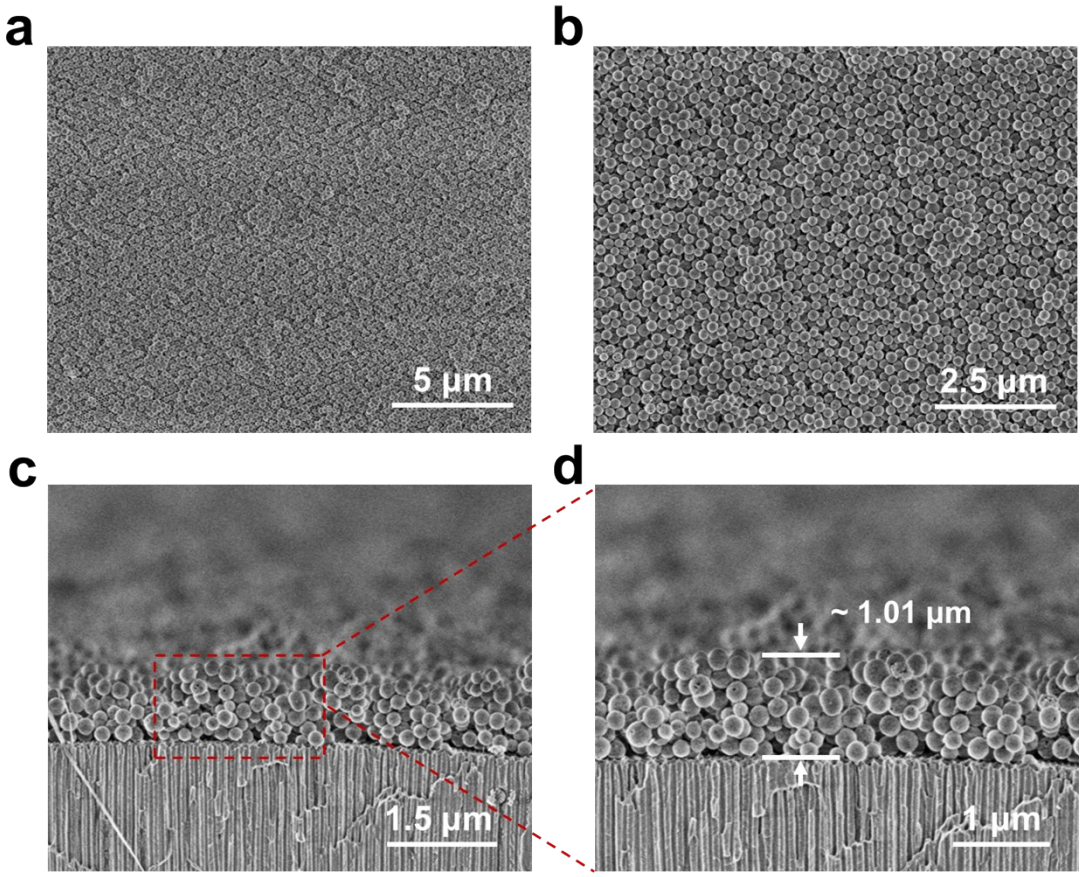

Fig. S8 Surface SEM images (a, b) and cross-sectional images (c, d) of the PMO/AAO membrane with 30 wt % loading of PMOs.

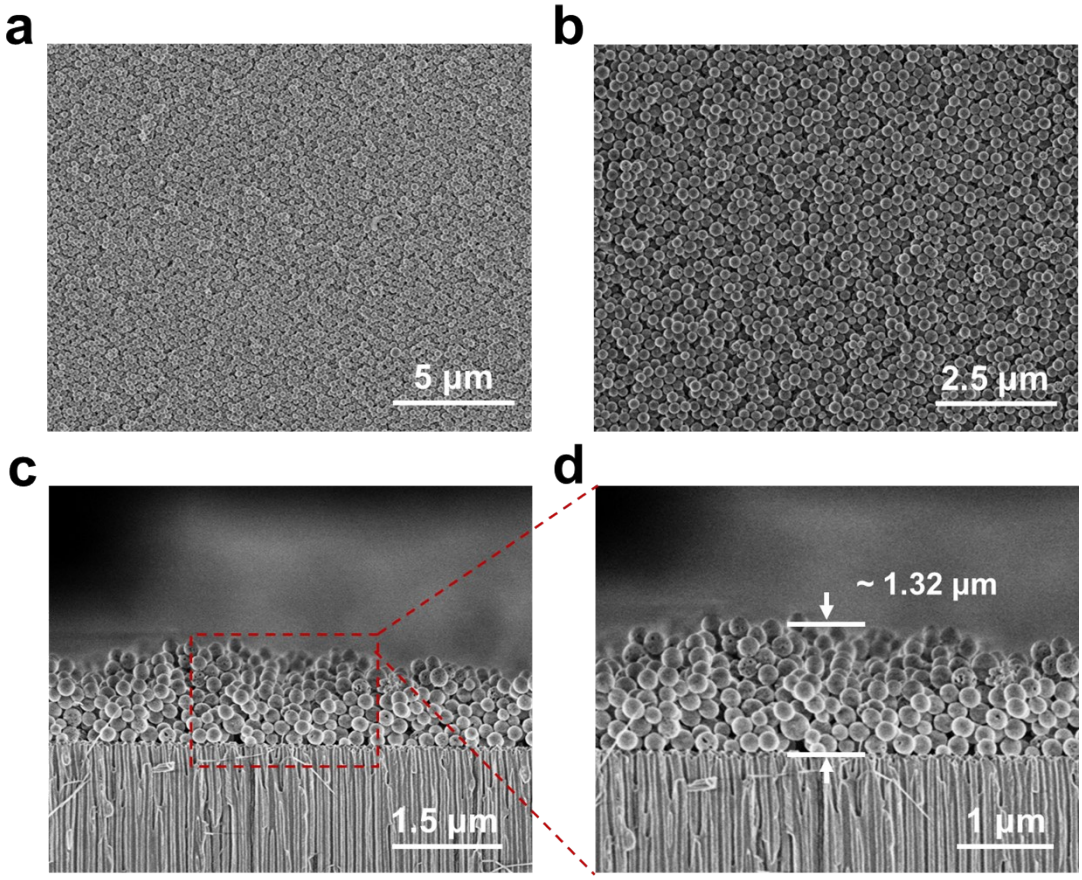

Fig. S9 Surface SEM images (a, b) and cross-sectional images (c, d) of the PMO/AAO membrane with 35 wt % loading of PMOs.

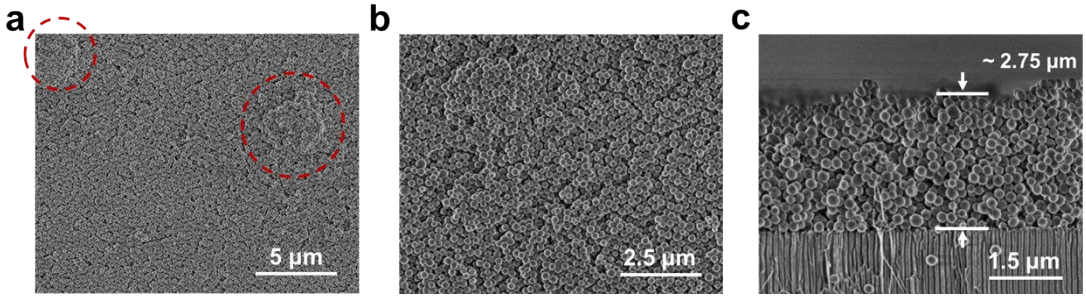

Fig. S10 Surface SEM images (a, b) and cross-sectional image (c) of the PMO/AAO membrane with 45 wt % loading of PMOs.

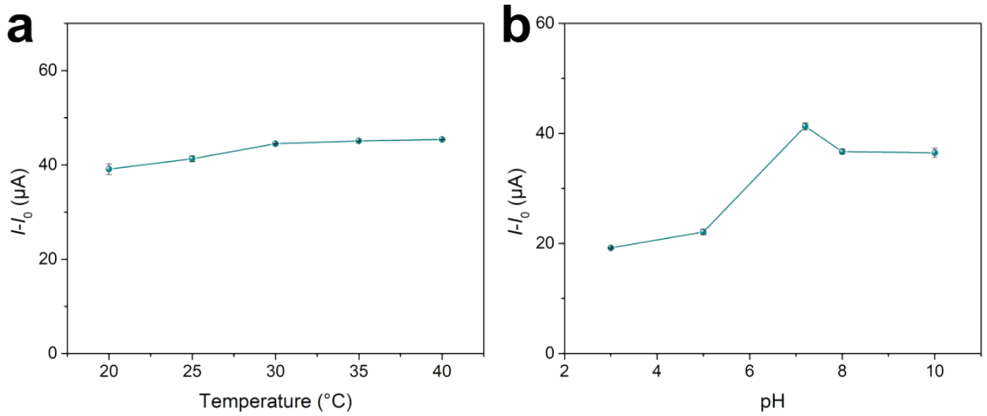

Fig. S11 (a) Effect of temperature on the detection of GSH (10 mM, pH = 7.2, 60 min). (b) Effect of pH on the detection of GSH (10 mM, T = 25 °C, 60 min).

Table S1 Sensing of GSH in FBS samples

Added (mM)	**Founded[a] (mM)**	**Recovery[b] (%)**
0.05	0.045 ± 0.006	90.6
0.1	0.118 ± 0.098	118.4

[a]Mean and standard deviation (SD) of the results (n = 3)

[b]Recovery (%) = $C_{\text{GSH founded}}$/ $C_{\text{GSH added}}$ * 100