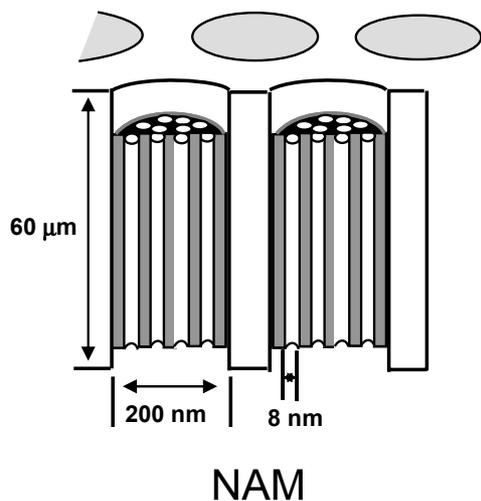


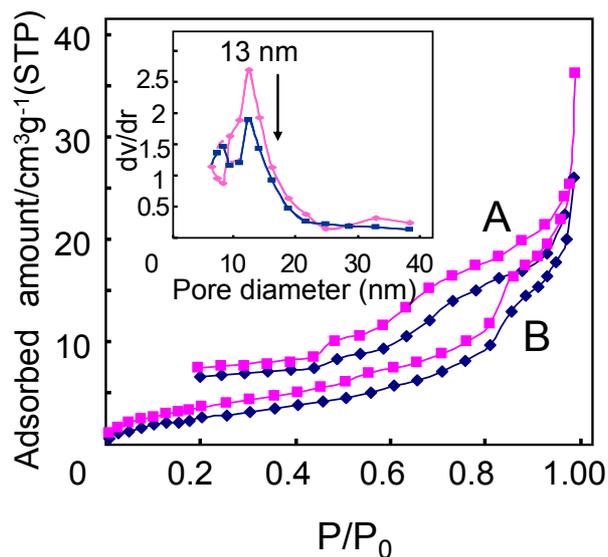
## Electronic supplementary information (ESI)

# Assembly of an Artificial Biomembrane by Encapsulation of an Enzyme, formaldehyde dehydrogenase, into the Nanoporous-Walled Silica Nanotube-Inorganic Composite Membrane

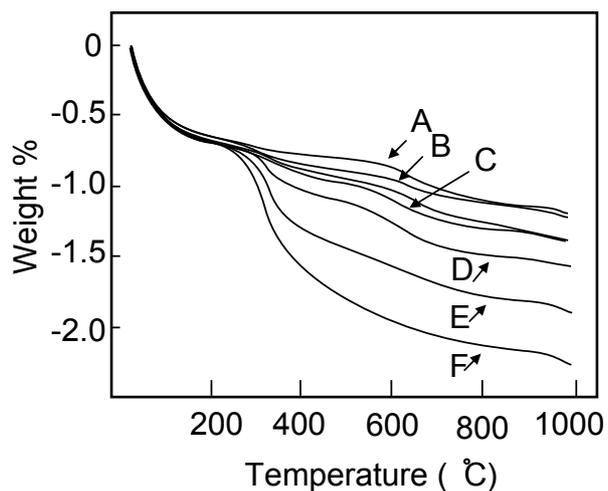
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**Figure 1S.** A schematic image of NAM. NAM was previously reported in detail, but the image was included in ESI for readers to easily understand the difference between F127-MST and NAM.



**Figure 2S.** Nitrogen adsorption/desorption isotherms of FDH-adsorbed F127-MST. Curves A and B indicate before and after the adsorption of FDH (0.6 mg) to the pores of F127-MST (100 mg), respectively. Inset shows pore size distributions plot calculated by adsorption branch through BJH method



**Figure 3S.** TG-DTA curves for FDH adsorbed F127-MST. The amounts of FDH adsorbed to F127-MST (100 mg) for A, B, C, D, E and F are 0.09, 0.17, 0.23, 0.31, 0.71 and 0.9 mg, respectively.