

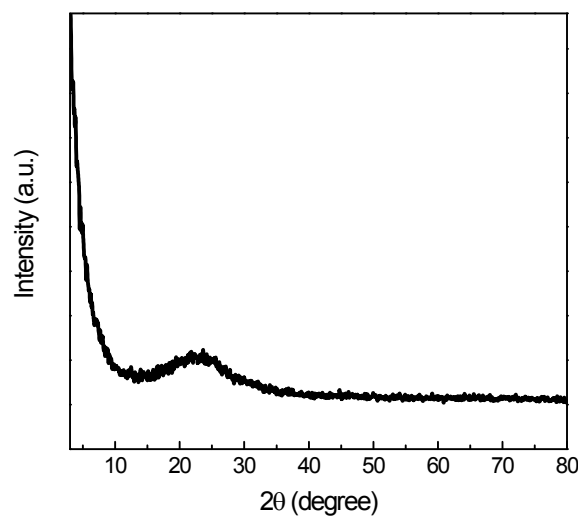
## Supporting Information:

# **Hollow Manganese Phosphonate Microspheres with Hierarchical Porosity for Efficient Adsorption and Separation**

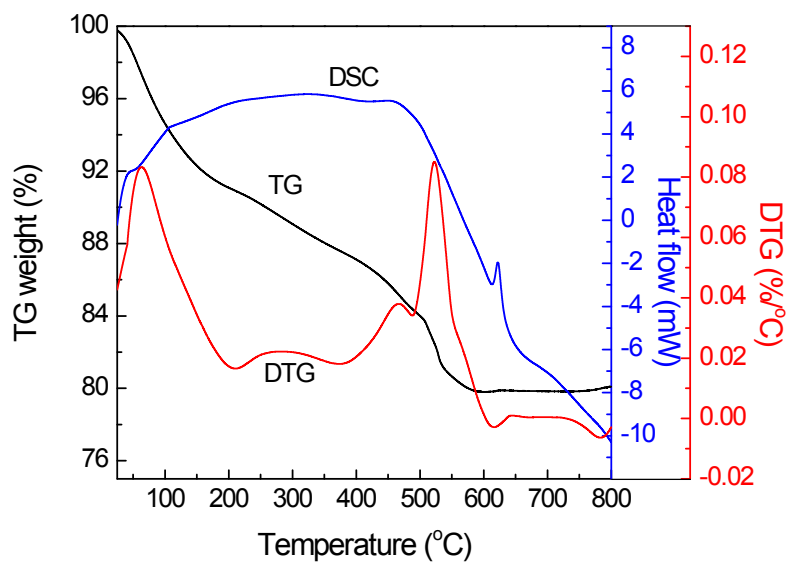
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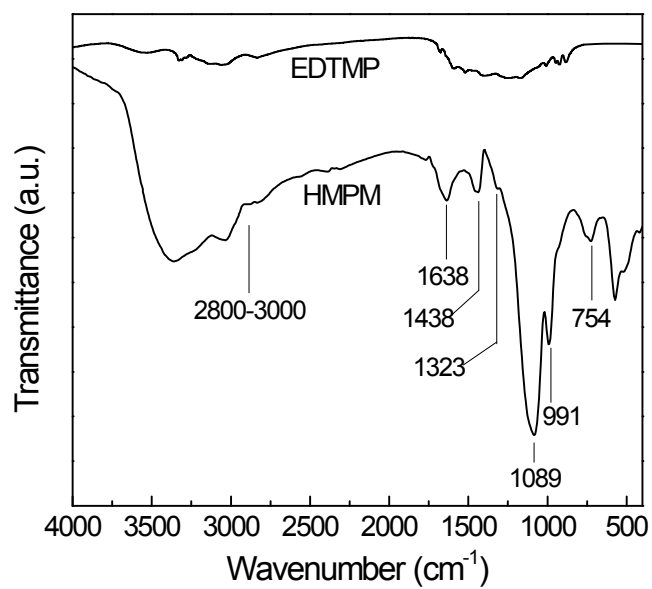
<sup>b</sup> *School of Chemical Engineering and Technology, Hebei University of Technology, Tianjin 300130, China.*



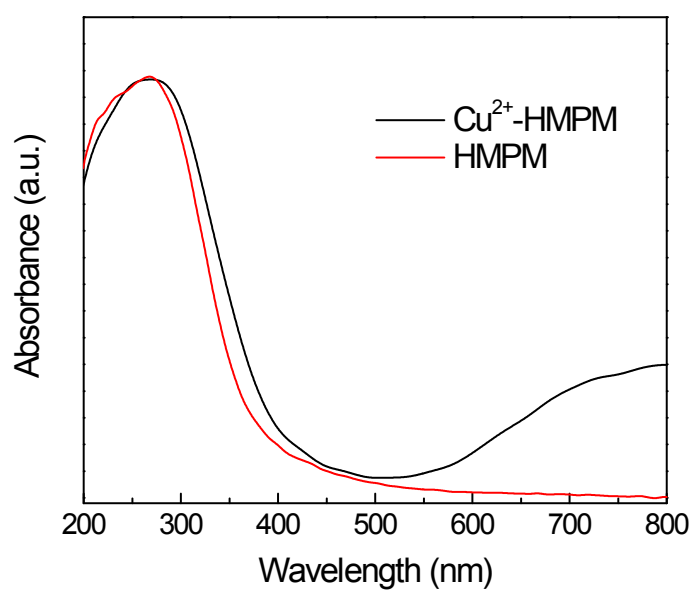
**Fig. S1** XRD pattern of the manganese phosphonate hybrid.



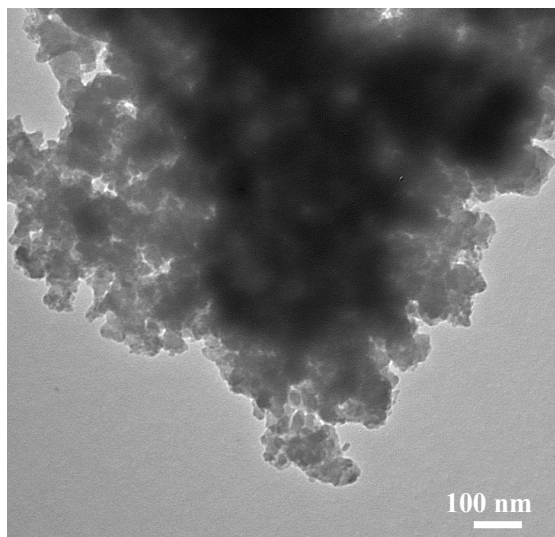
**Fig. S2** TG-DSC curves of the manganese phosphonate hybrid.



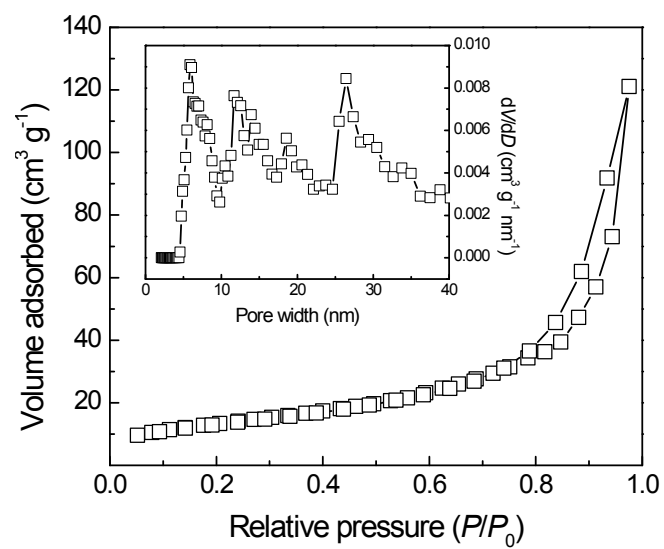
**Fig. S3** FT-IR spectrum of the manganese phosphonate material.



**Fig. S4** UV-vis diffuse-reflectance spectra of HMPM before and after Cu<sup>2+</sup> ion dispersing.



**Fig. S5** TEM image of the HMPM material after ball-milling treatment.



**Fig. S6**  $\text{N}_2$  adsorption-desorption isotherm of HMPM after ball-milling treatment, and the corresponding pore size distribution curve (*inset*).