

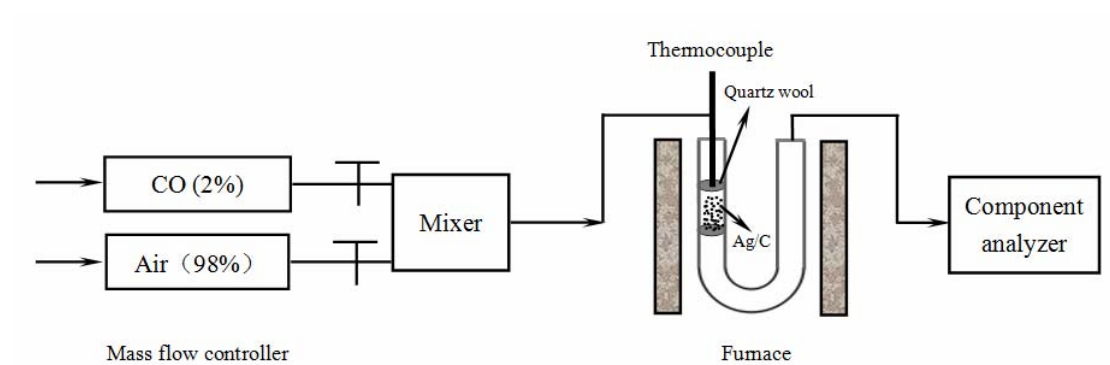
## **Supporting Information**

### **Microporous Ag/Carbon Hollow Spheres with High Catalytic Activity Based on Bio-Inspiration Polydopamine Reaction Platform**

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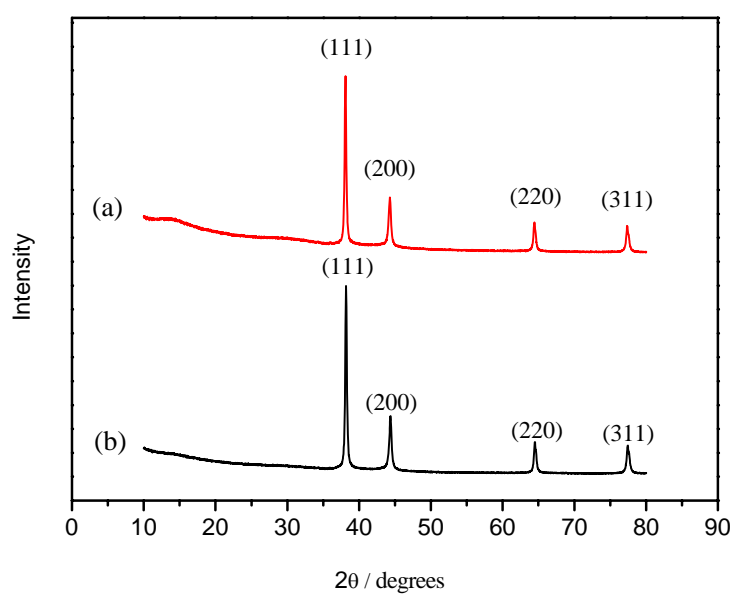
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**Figure S1**



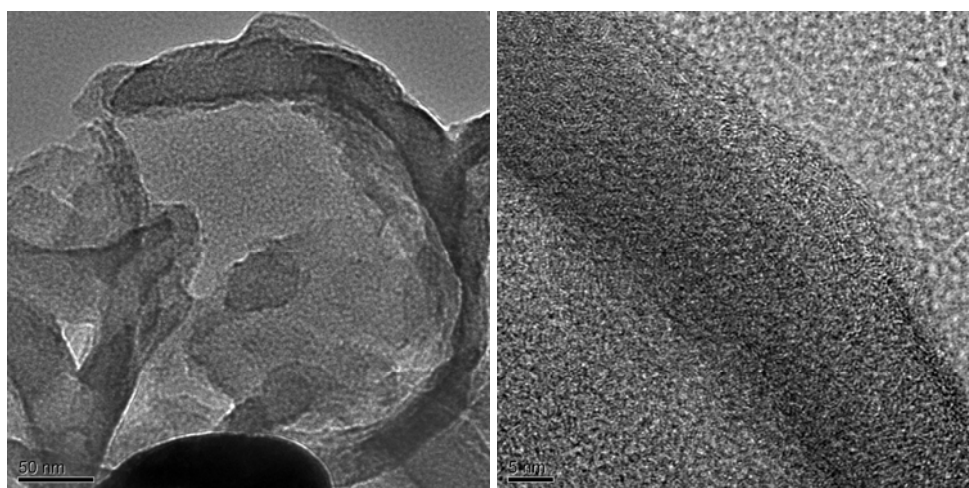
**Fig. S1.** Schematic diagram of the apparatus used for the the measurement of catalytic performance of the hollow Ag/Carbon towards CO oxidation (C. Zhou, Y. Zhang, L. Hu, H. Yin and W.Wang, *Chem. Eng. Technol.*, 2015, **38**, 291).

**Figure S2**



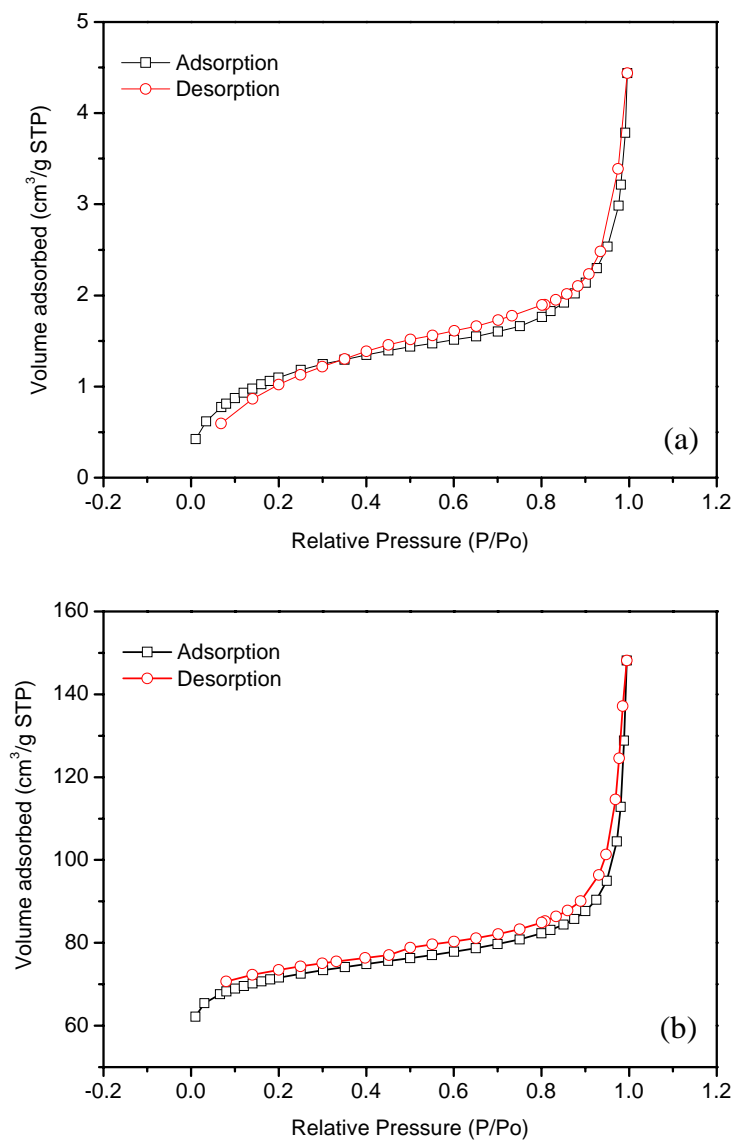
**Fig. S2.** XRD patterns of the Ag/PDA-PMMA spheres (a), and hollow Ag/Carbon spheres (b).

**Figure S3**



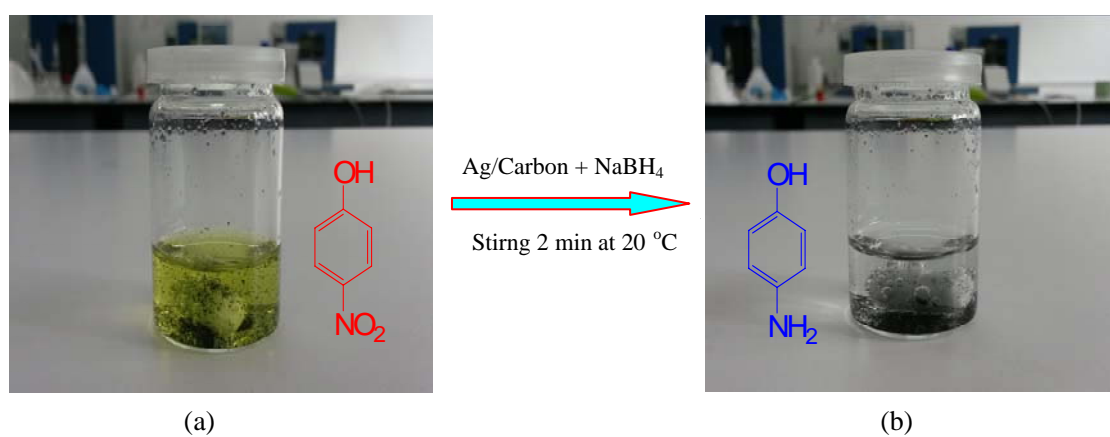
**Fig. S3.** TEM images of the hollow Ag/Carbon spheres.

**Figure S4**



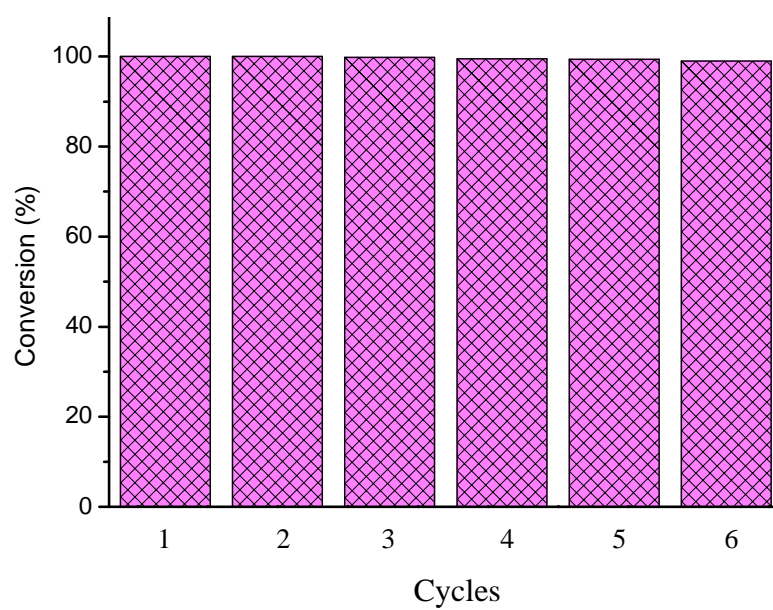
**Fig. S4.** N<sub>2</sub> adsorption/desorption (77 K) isotherms of the Ag/PDA-PMMA spheres (a), and hollow Ag/Carbon microporous spheres (b).

**Figure S5**



**Fig. S5.** Reaction scheme of the conversion of 4-nitrophenol to 4-aminophenol and corresponding colour change after reaction by using hollow Ag/Carbon spheres as catalyst.

**Figure S6**



**Fig. S6.** Conversion of 4-nitrophenol in 2 min versus the number of catalyst recycles.