

Supporting Information

*Qingtang Zhang, Songwang Ge, Xiaomei Wang, Hanxue Sun, Zhaoqi Zhu, Weidong Liang and An Li**

School of Petrochemical Engineering, Lanzhou University of Technology

CMP were synthesized from 1,3,5-triethynylbenzene using Pd(II)/Cu(I)-catalyzed homocoupling polymerization. CMP were calcined at 400 °C for 2 h, then kept at 700 °C for 4 h to obtain the porous hard carbon (PHC). The morphology of PHC was examined by field-emission scanning electron microscope (FSEM). It was shown in Fig. S1. PHC-1 has a relatively small and homogeneous particle size of ca. 30-70 nm.

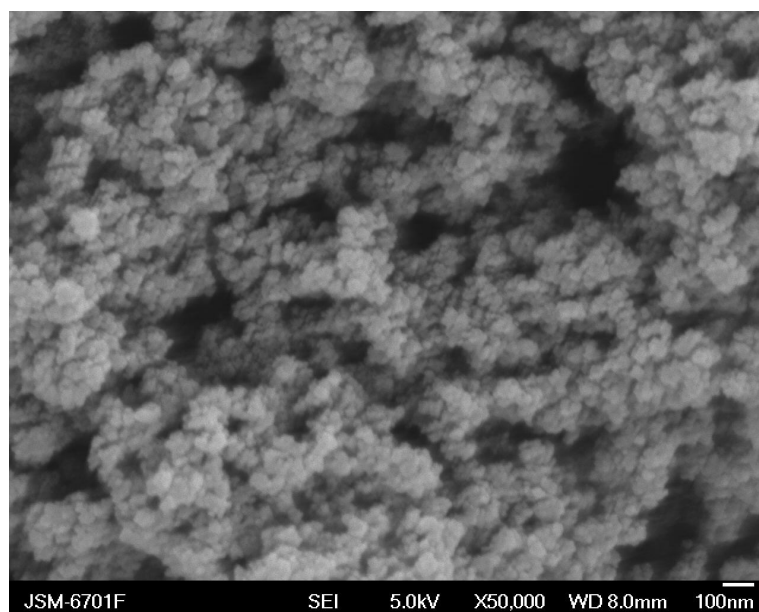


Fig. S1 SEM image of PHC.

The porous properties of the PHC were evaluated by nitrogen adsorption analyses at 77 K. It display a representative type IV isotherm as illustrated in Fig. S2a. The pore volume was estimated from the amount of nitrogen adsorbed at a relative pressure of $P/P_0 = 0.99$ and that of PHC is $0.77 \text{ cm}^3 \text{ g}^{-1}$. The PHC prepared under our experimental conditions exhibit a BET surface area of $575.0 \text{ m}^2 \text{ g}^{-1}$. PHC has a micro pore area of $189.4 \text{ m}^2 \text{ g}^{-1}$ and a external surface area of $385.6 \text{ m}^2 \text{ g}^{-1}$. PHC has a wider pore size distribution and larger pore area of pore size about 3 nm, 9 nm and 50

nm as illustrated in Fig. S2b.

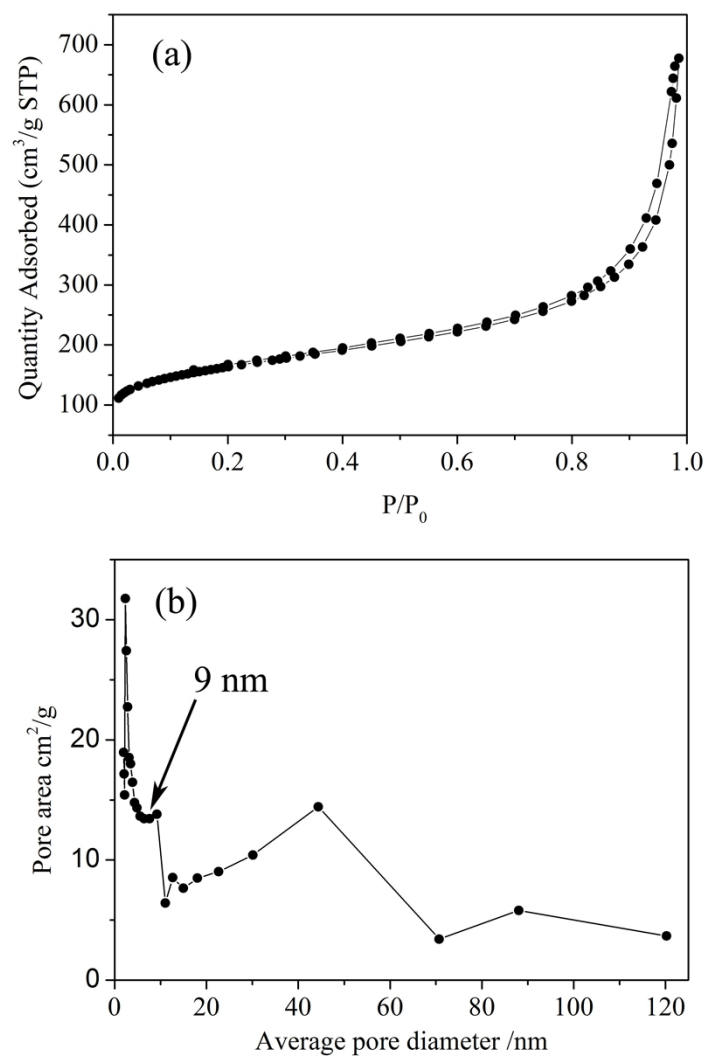


Fig. S2 nitrogen adsorption-desorption isotherms of PHC. (STP: standard temperature and pressure). b) pore size distribution of PHC.