

## Supplementary information

### Synthesis of palladium acetylide-based tubular microporous polymer monolith *via* a self-template approach: a potential precursor of supported palladium nanoparticles for heterogeneous catalysis

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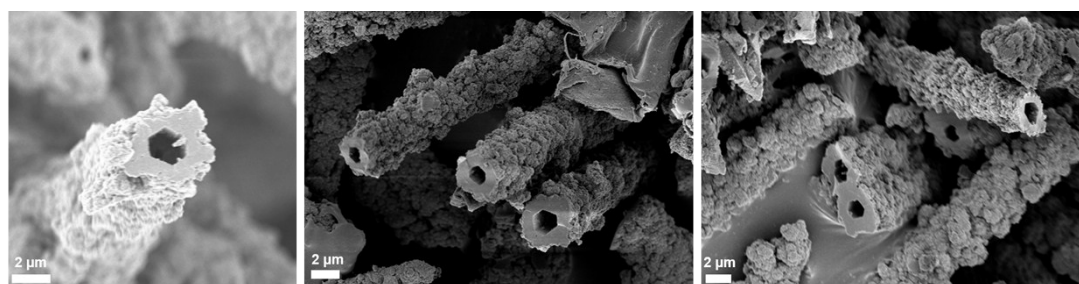
**Table S1.** Porosity data of the Pd-CMP and Pd-CMP<sub>300</sub>.

	$S_{\text{BET}}^{\text{a}}$ ( $\text{m}^2 \text{g}^{-1}$ )	$V_{\text{total}}^{\text{b}}$ ( $\text{cm}^3 \text{g}^{-1}$ )	$V_{\text{micro}}^{\text{c}}$ ( $\text{cm}^3 \text{g}^{-1}$ )	$V_{\text{micro}}/V_{\text{total}}$
<b>Pd-CMP</b>	1236	1.04	0.44	0.42
<b>Pd-CMP<sub>300</sub></b>	757	0.35	0.29	0.83

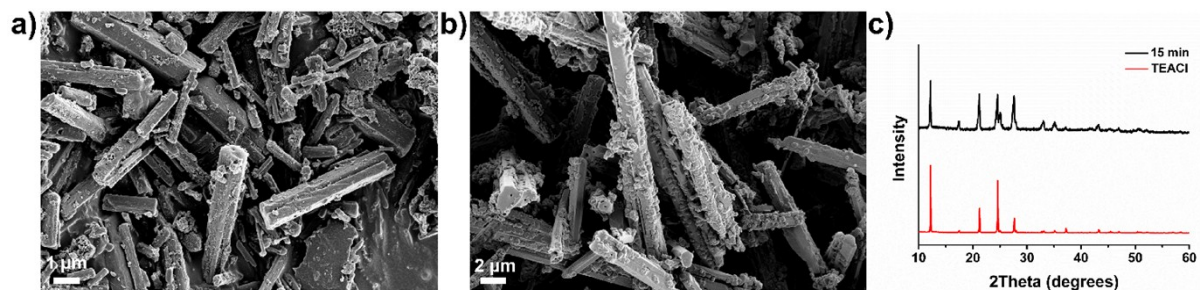
<sup>a</sup>BET surface areas were calculated from nitrogen adsorption-desorption isotherms. <sup>b</sup>Pore volume at  $p/p_0 = 0.99$ . <sup>c</sup>Pore volume at  $p/p_0 = 0.1$ .



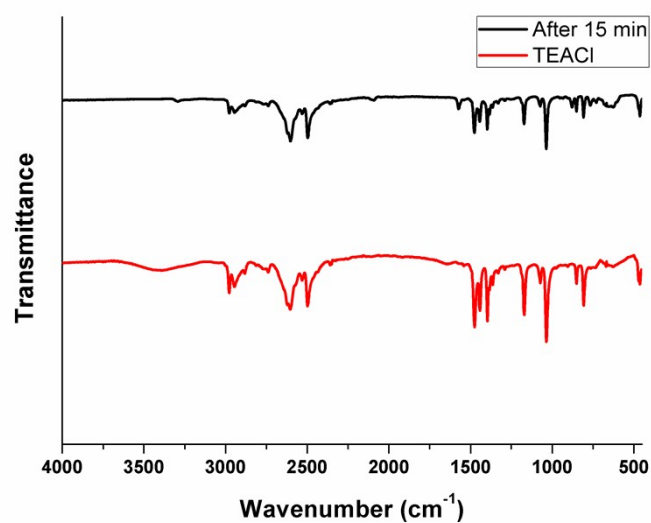
**Fig. S1** Photo images of the reaction mixtures at the beginning and after 30 min.



**Fig. S2** The SEM images of Pd-CMP with hexagonal open ends.



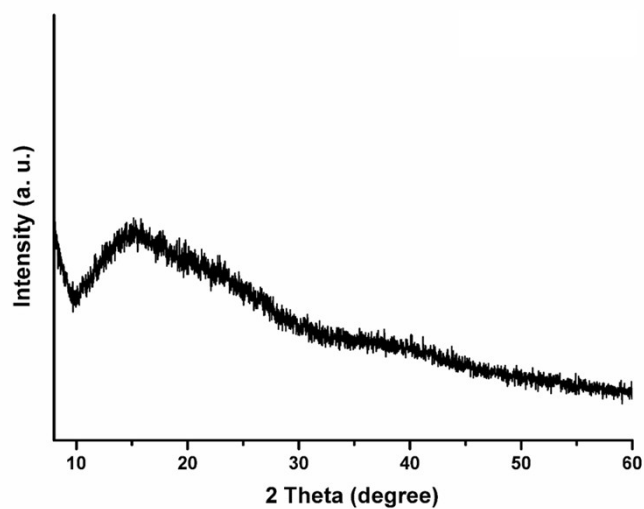
**Fig. S3** SEM images of the filtered products after a reaction time of (a) 5 min and (b) 15 min. (c) XRD patterns of the product after a reaction time of 15 min and the commercial TEACl.



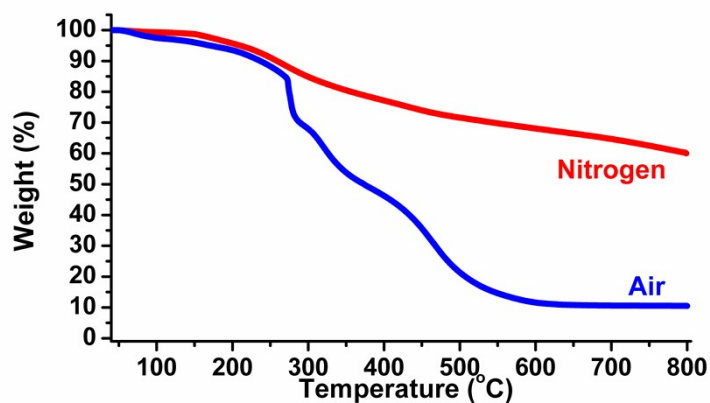
**Fig. S4** FT-IR spectra of the sample isolated after a reaction time of 15 min and commercial TEACl.



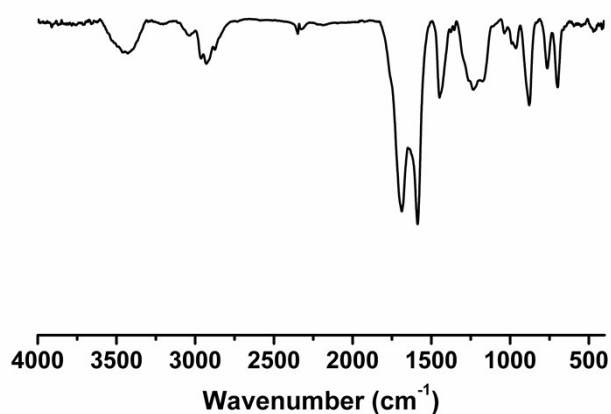
**Fig. S5** SEM images of the polymer isolated after a reaction time of 90 min and washed with methanol.



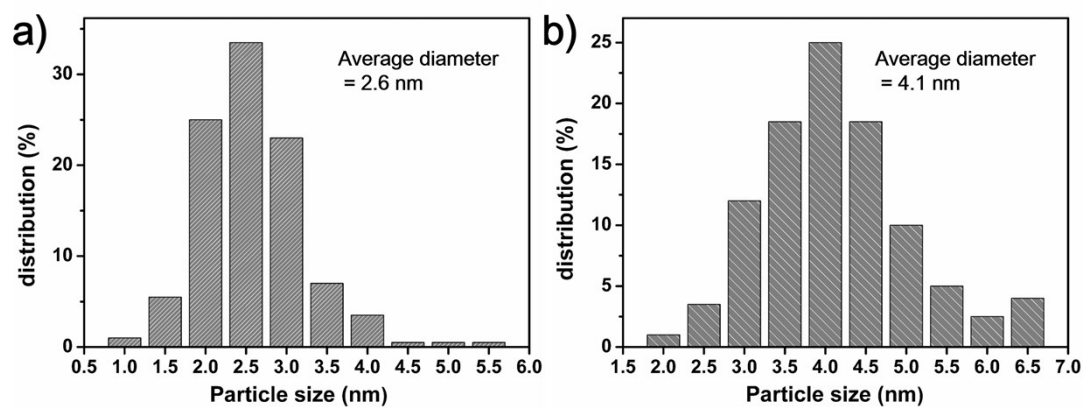
**Fig. S6** XRD pattern of Pd-CMP.



**Fig. S7** TGA curves of Pd-CMP measured under a nitrogen and an air atmosphere with a heating rate of  $10\text{ }^{\circ}\text{C min}^{-1}$ .



**Fig. S8** FT-IR spectrum of Pd-CMP<sub>300</sub>.



**Fig. S9** Size distribution histograms of Pd nanoparticles in (a) Pd-CMP<sub>300</sub> and (b) Pd-CMP<sub>500</sub>

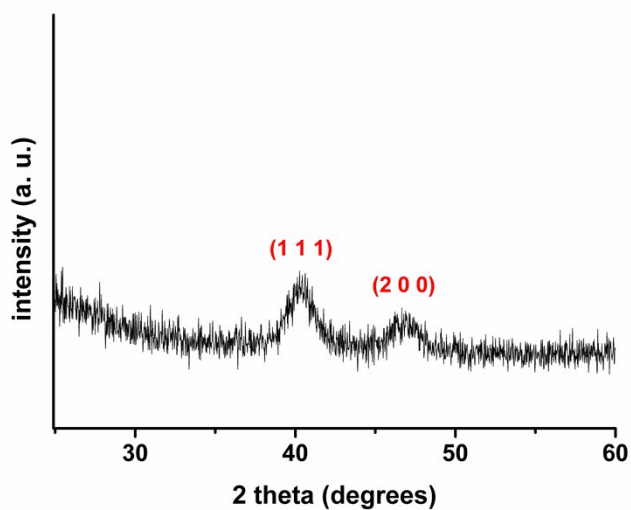


Fig. S10 Powder XRD pattern of Pd-CMP<sub>300</sub>.

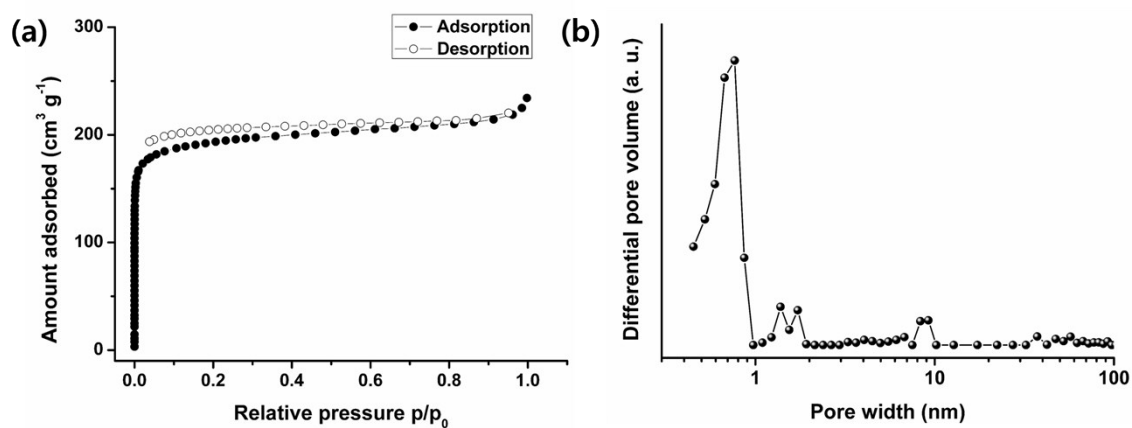


Fig. S11 N<sub>2</sub> adsorption-desorption isotherms at 77 K and (b) NLDFT pore size distribution of Pd-CMP<sub>300</sub>.

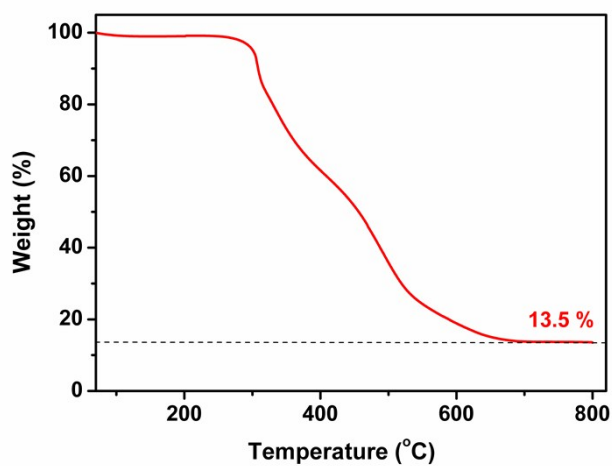
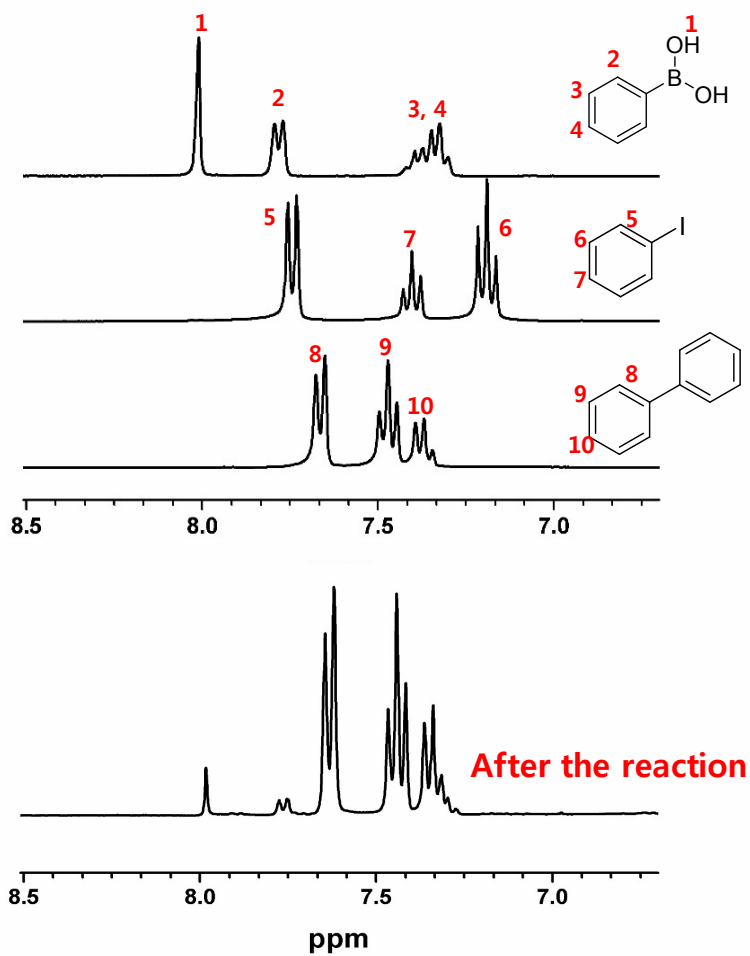
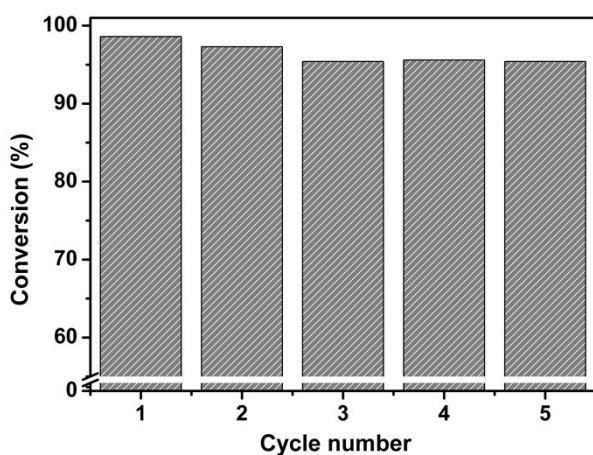


Fig. S12 TGA curve of Pd-CMP<sub>300</sub> measured under an air atmosphere with a heating rate of 10 °C min<sup>-1</sup>.



**Fig. S13** <sup>1</sup>H NMR spectra of phenylboronic acid, iodobenzene, biphenyl and the reaction mixture in DMSO-d<sub>6</sub>.



**Fig. S14** Reusability of Pd-CMP<sub>300</sub> in the Suzuki-Miyaura coupling reaction between iodobenzene and phenylboronic acid.