Electronic Supplementary Information

Water compatible Pd nanoparticles catalysts supported on microporous polymers: their controllable microstructure and extremely low Pd-leaching behaviour

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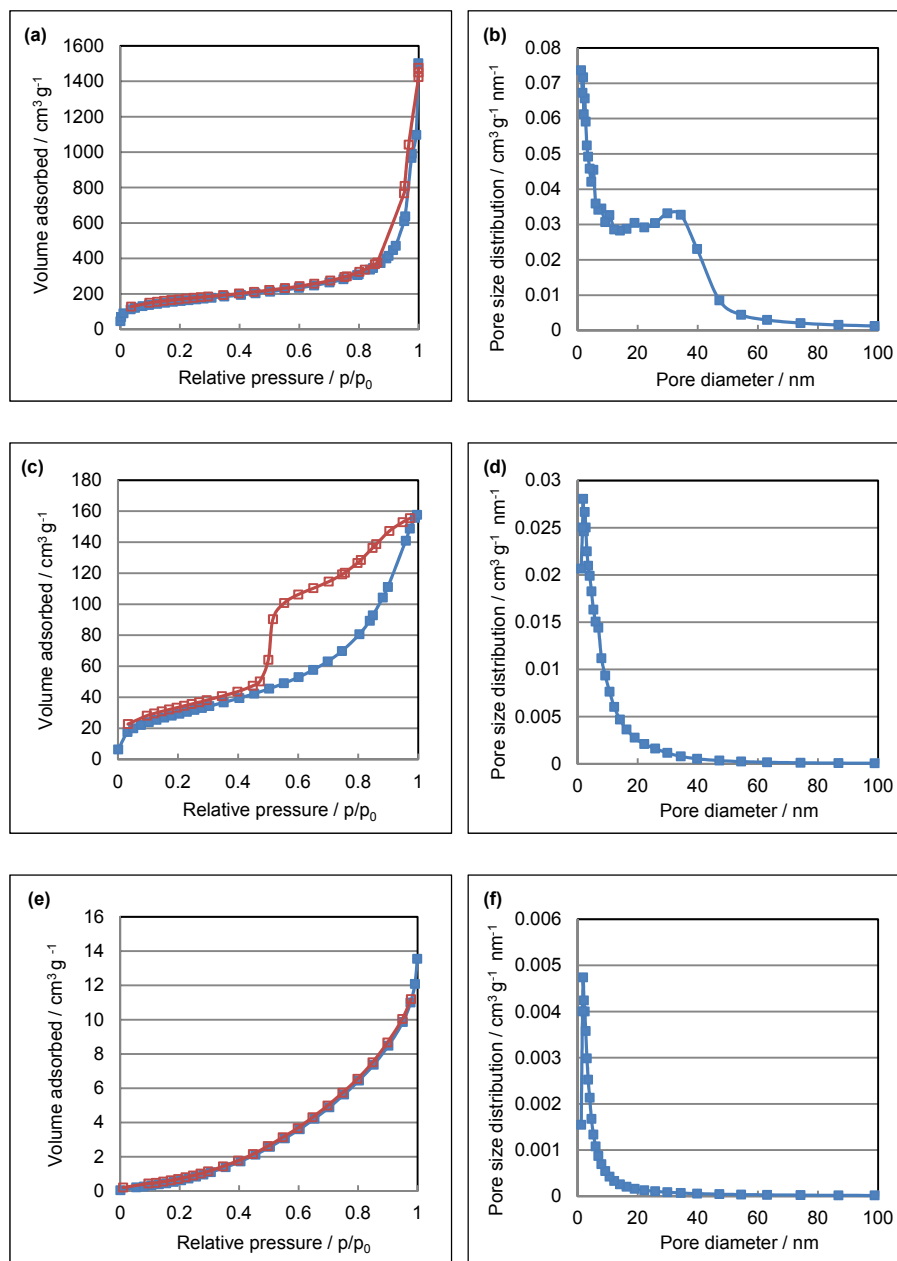
Number of figures: 5

Number of tables: 1

Fig. S1 N_2 adsorption (filled blue squares)–desorption (open red squares) isotherms and pore size distribution characteristics from BJH analysis of the desorption data. (a and b) **D-EG**. (c and d) **D-BG**. (e and f) **D-HX**.
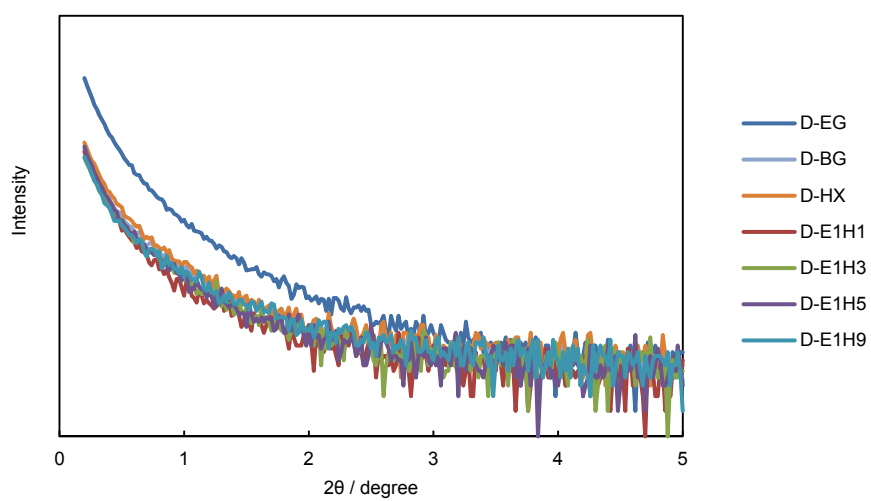
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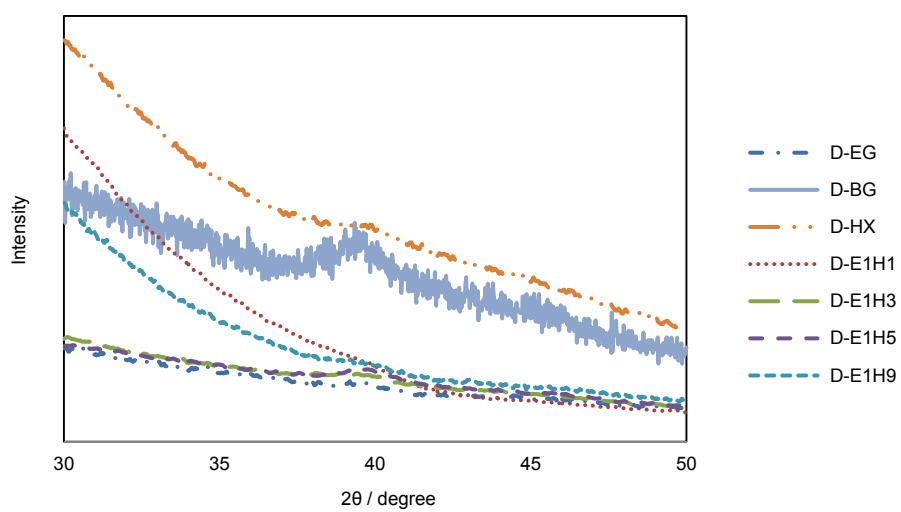**Fig. S2** Small-angle X-ray scattering (SAXS) patterns of the polymers.

Fig. S3 Wide-angle X-ray scattering (WAXS) patterns of the polymers.
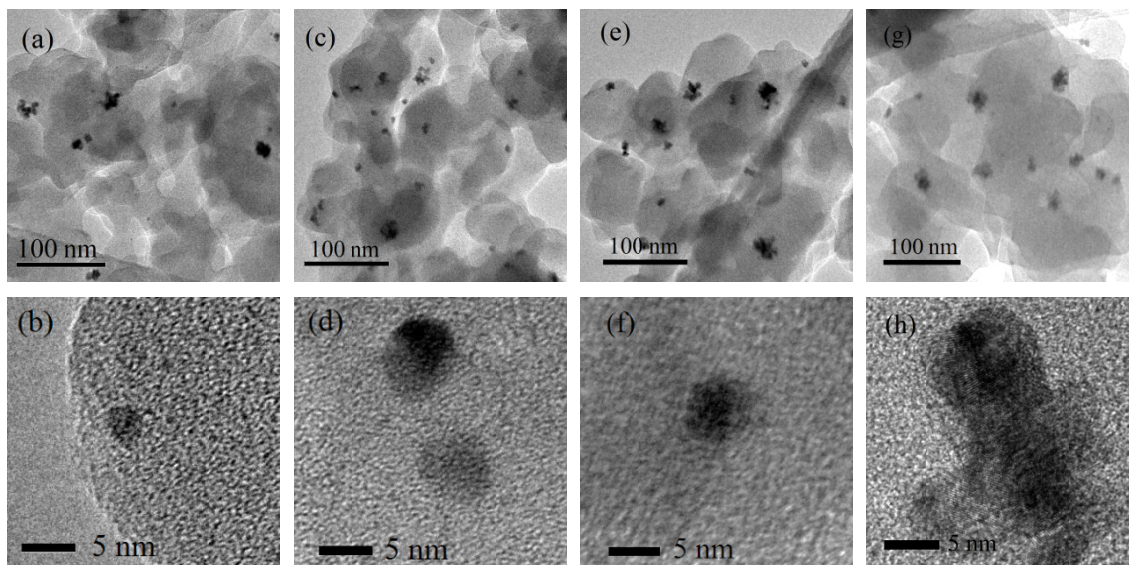
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Fig. S4 TEM images of created PdNPs in the polymers: (a and b) **D-E1H1**; (c and d) **D-E1H3**; (e and f) **D-E1H5**; (g and h) **D-E1H9**. The polymers were applied onto micro grids with carbon membrane and imaged using 200 kV accelerating voltage.
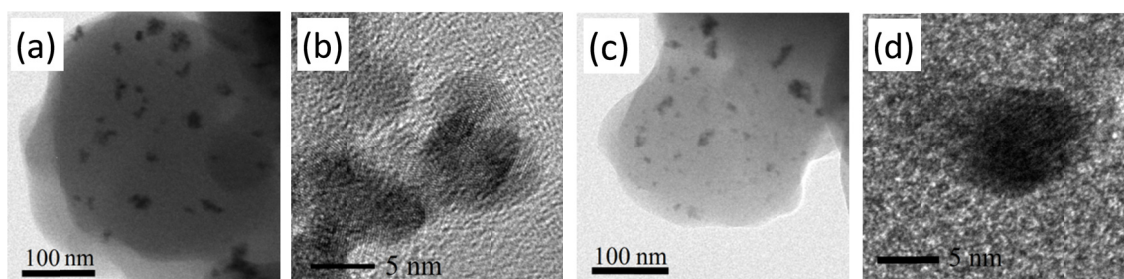

Fig. S5 TEM images of PdNPs in the polymers that were used for catalytic reactions once. (a and b) **D-HX**; (c and d) **D-E1H9**.

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Table S1. Porosity data of the polymers which belong to mixed monomers system.

Polymer	BET specific surface area (m^2g^{-1})	BJH pore volume (cm^3g^{-1})	BJH average pore width (nm)
D-E3H1	384	1.00	13.8
D-E1H1	208	0.43	9.80
D-E1H3	75.0	0.23	11.0
D-E1H4	13.9	0.07	10.8
D-E1H5	1.81	0.02	8.08
D-E1H7	2.22	0.03	8.72
D-E1H9	0.87	0.02	7.35
D-E1H19	0.98	0.02	7.67