

Supplementary Information

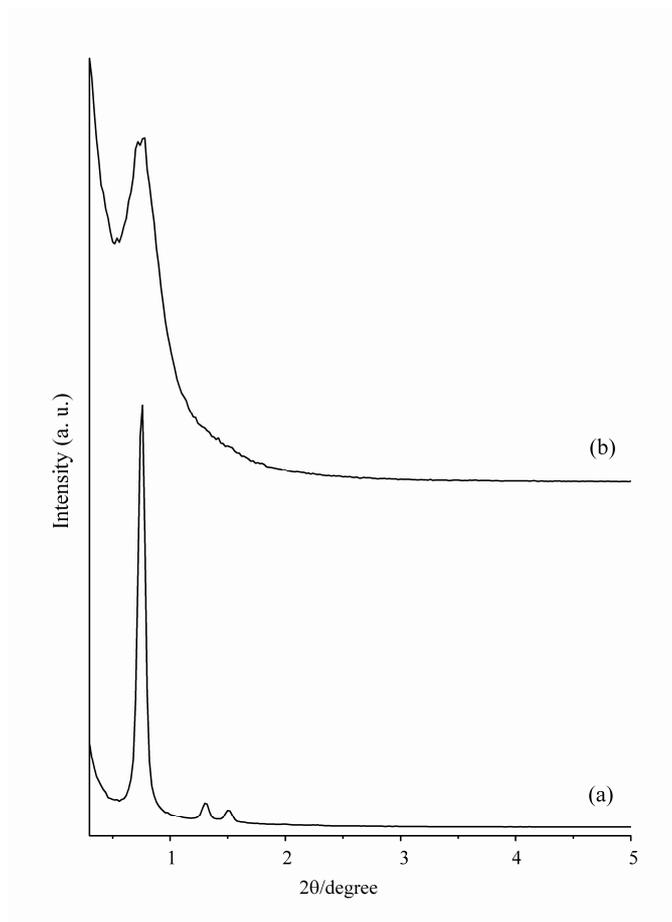


Fig. S1 XRD patterns of (a) COOH-Bz-30 and (b) COOH-Bz-40 prepared in the absence of KCl.

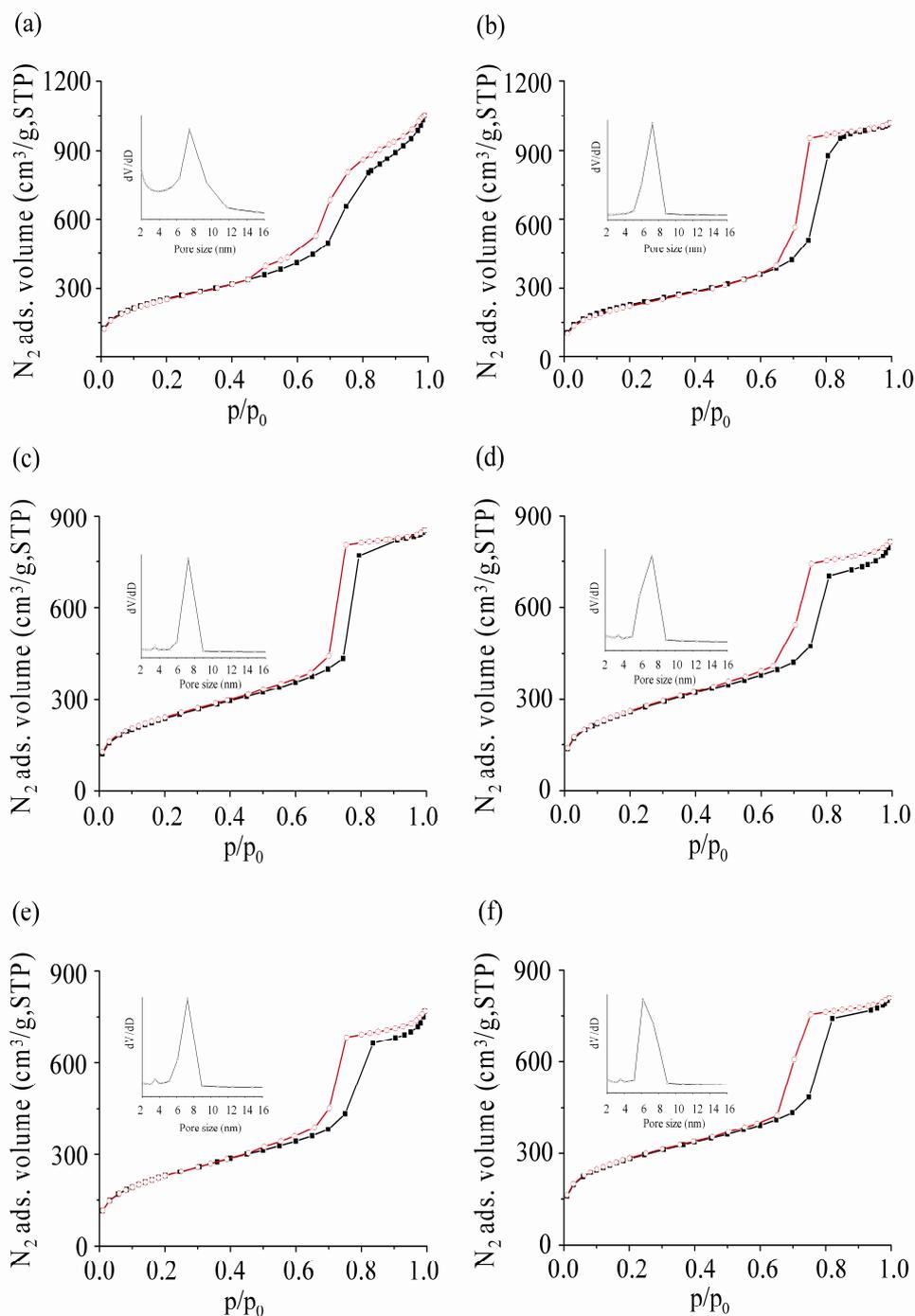
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5 **Fig. S2** N_2 adsorption-desorption isotherms of template-extracted COOH-Bz-x, where x = (a) 0, (b) 20, (c) 30, (d) 40, (e) 50, and (f) 60. The close and open circles represent the adsorption and desorption isotherms, respectively. The BJH pore size distribution curves were shown as insets, which were obtained by the analysis of the desorption branches of the isotherms.

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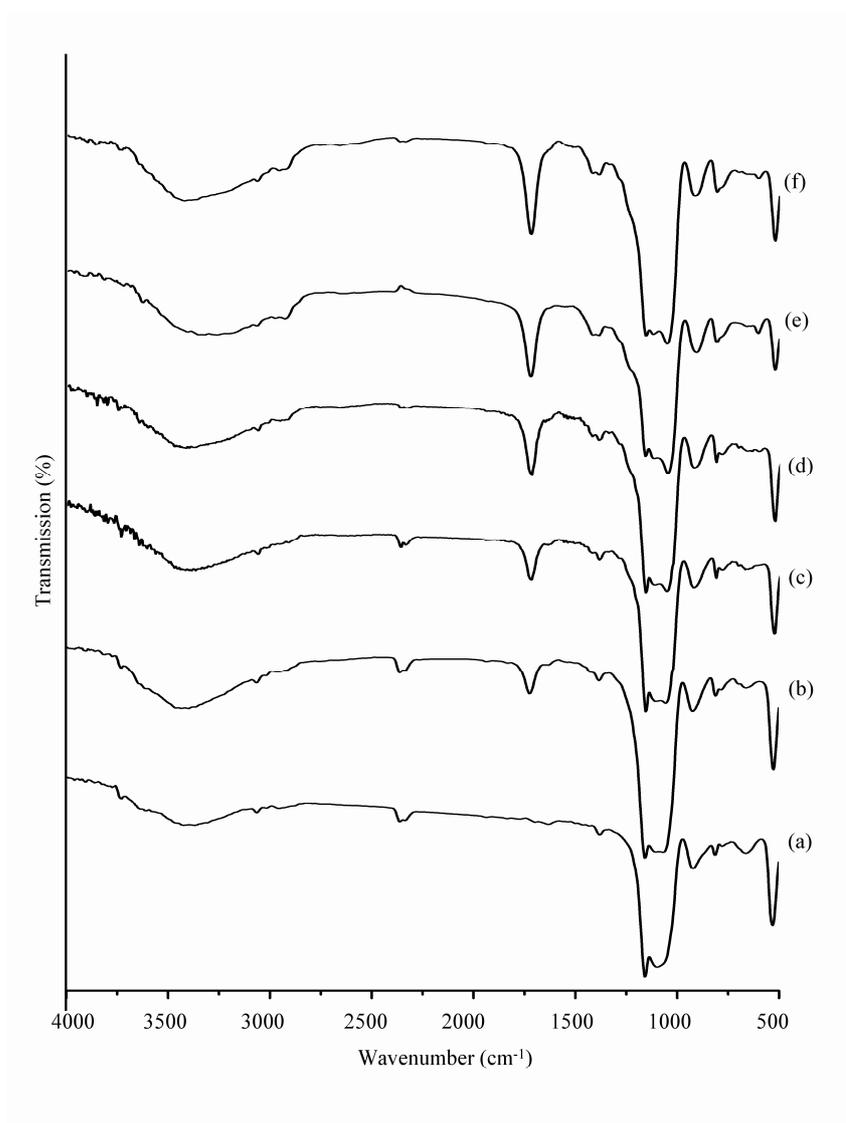


Fig. S3 IR spectra of template-extracted COOH-Bz-x, where x = (a) 0, (b) 20, (c) 30, (d) 40, (e) 50, and (f) 60.

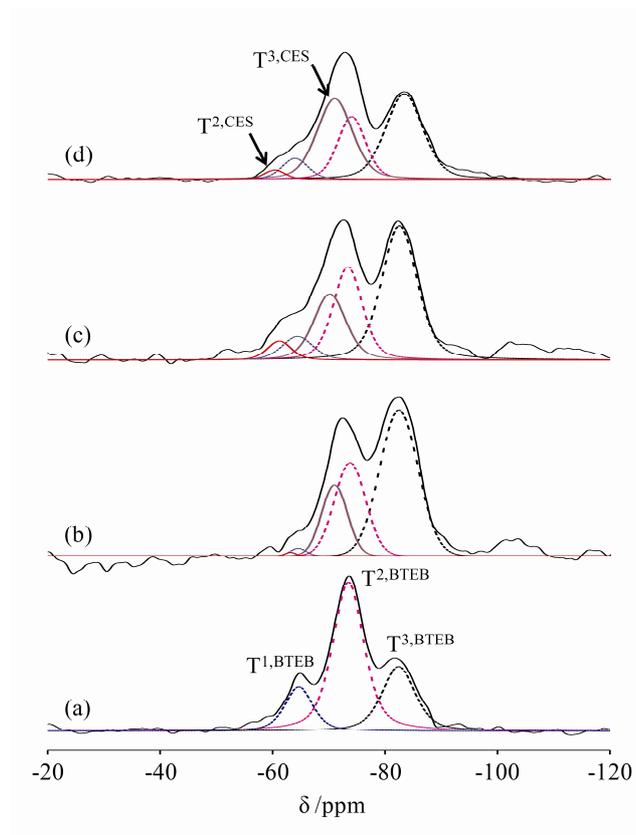


Fig. S4 ^{29}Si MAS NMR spectra of COOH-Bz-x samples, where $x =$ (a) 0, (b) 20, (c) 40, and (d) 60. The coloured lines represent the components used for the spectral deconvolution. The spectra were acquired by using an 45° excitation pulse and a recycle delay of 300 s at a spinning speed of 5 kHz. Dashed lines (in black, pink, and blue) are for T^m sites ($\text{R-Si}(\text{OSi})_m(\text{OH})_{3-m}$, where R represents a phenylene group) of BTEB (denoted as $T^{m,\text{BTEB}}$) and solid components (in purple and red) are for T^n sites ($\text{R-Si}(\text{OSi})_n(\text{OH})_{3-n}$, where R represents an alkyl group) of CES (denoted as $T^{n,\text{CES}}$).

Table S1. ^{29}Si NMR deconvolution results of the template-extracted COOH-Bz-x samples

x	$T^{1,\text{BTEB}}$ (-64 ppm)	$T^{2,\text{BTEB}}$ (-74 ppm)	$T^{3,\text{BTEB}}$ (-83 ppm)	$T^{2,\text{CES}}$ (-60 ppm)	$T^{3,\text{CES}}$ (-71 ppm)	$T^{n,\text{CES}}/(T^{n,\text{CES}}+0.5T^{m,\text{BTEB}})$ (%) ^a
0	15.3	58.0	26.7	0	0	0
20	1.1	27.7	55.5	0.3	15.4	27.1
40	6.8	25.1	44.1	4.3	19.7	38.7
60	6.2	19.4	36.6	2.2	35.6	54.9

a. Since each BTEB contains two silicon atoms, the intensities of $T^{m,\text{BTEB}}$ have to be multiplied by 0.5 in order to get the real amount of BTEB. The uncertainty of the deconvolution results is around $\pm 10\%$.