Supporting Information

Fine-regulating ultramicropore of porous carbon via a self-sacrificial template route for high-performance supercapacitors

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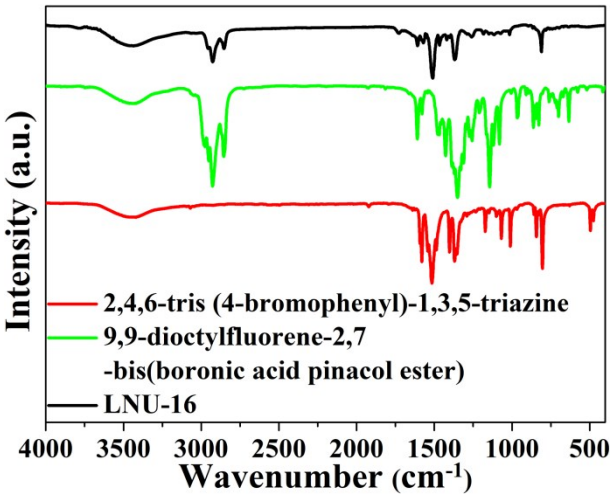

Fig. S1 FTIR spectra for LNU-16 and its monomers.

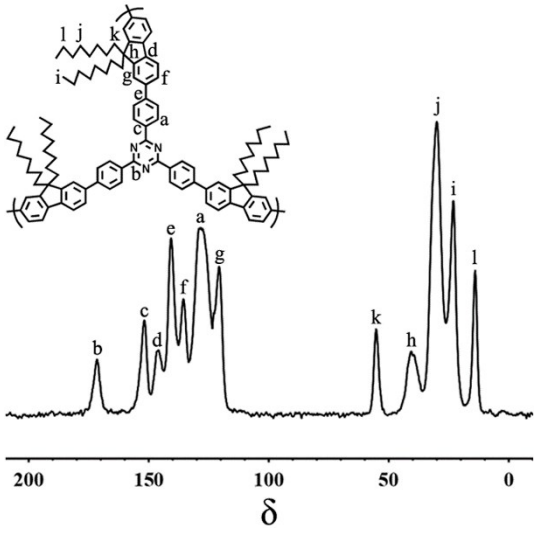

Fig. S2 Solid-state ^{13}C CP/ MAS NMR spectrum for LNU-16.

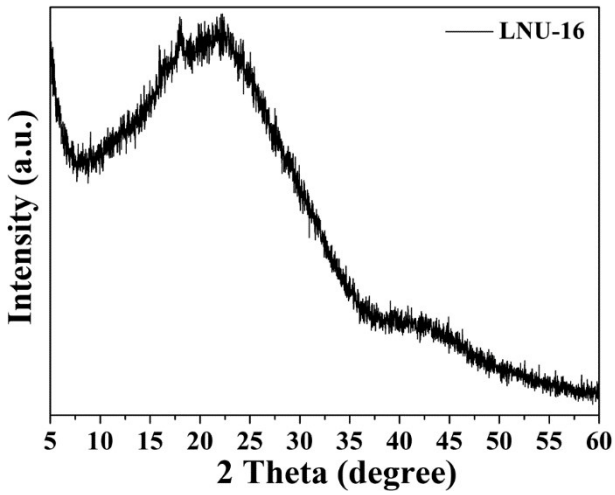

Fig. S3 X-ray diffraction pattern for LNU-16.

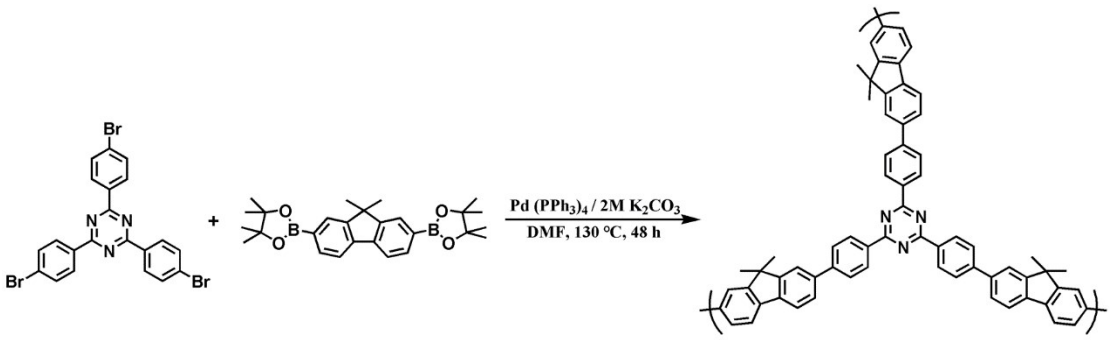

Fig. S4 Schematic synthesis route for LNU-17.

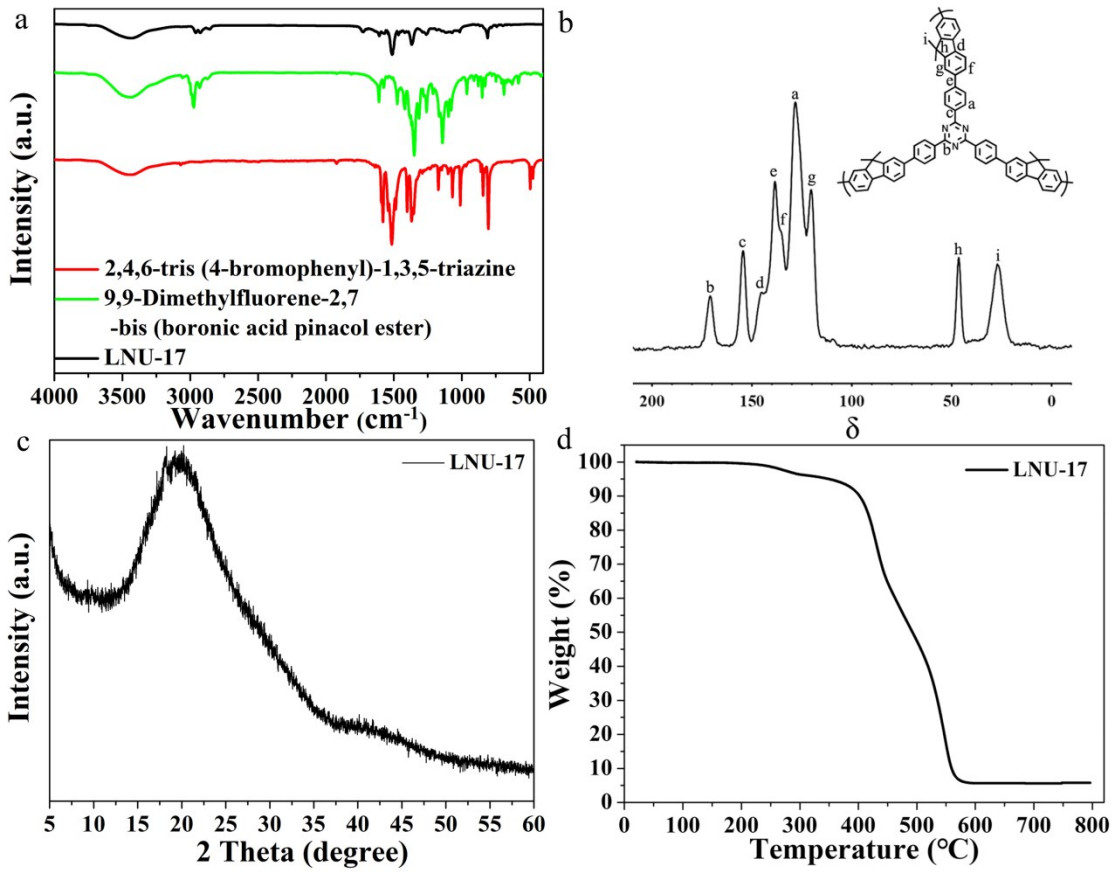

Fig. S5 (a) FTIR spectra for LNU-17 and its monomers; (b) Solid-state ^{13}C CP/ MAS NMR spectrum for LNU-17; (c) PXRD pattern for LNU-17; (d) TGA curve in air condition for LNU-17.

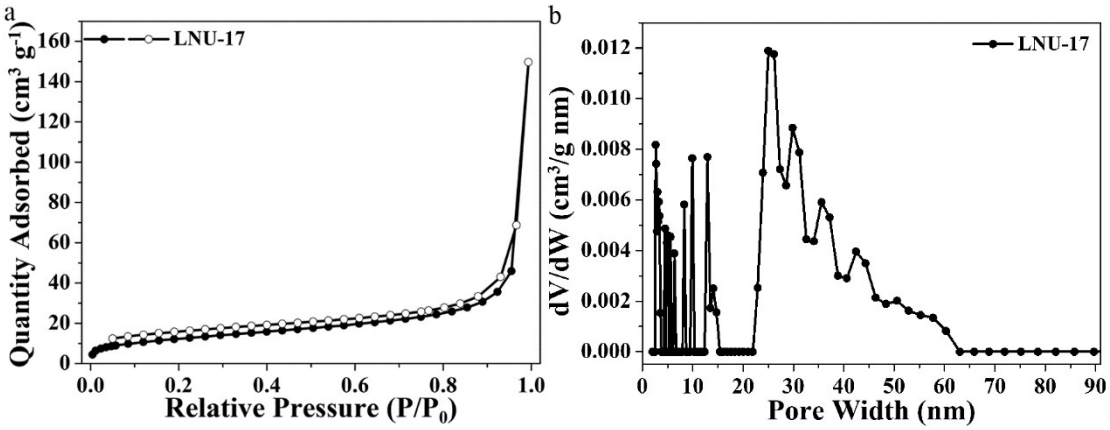

Fig. S6 N_2 adsorption (filled symbols)-desorption (empty symbols) isotherms (a) and the pore size distribution curve by the NL-DFT method (b) for LNU-17.

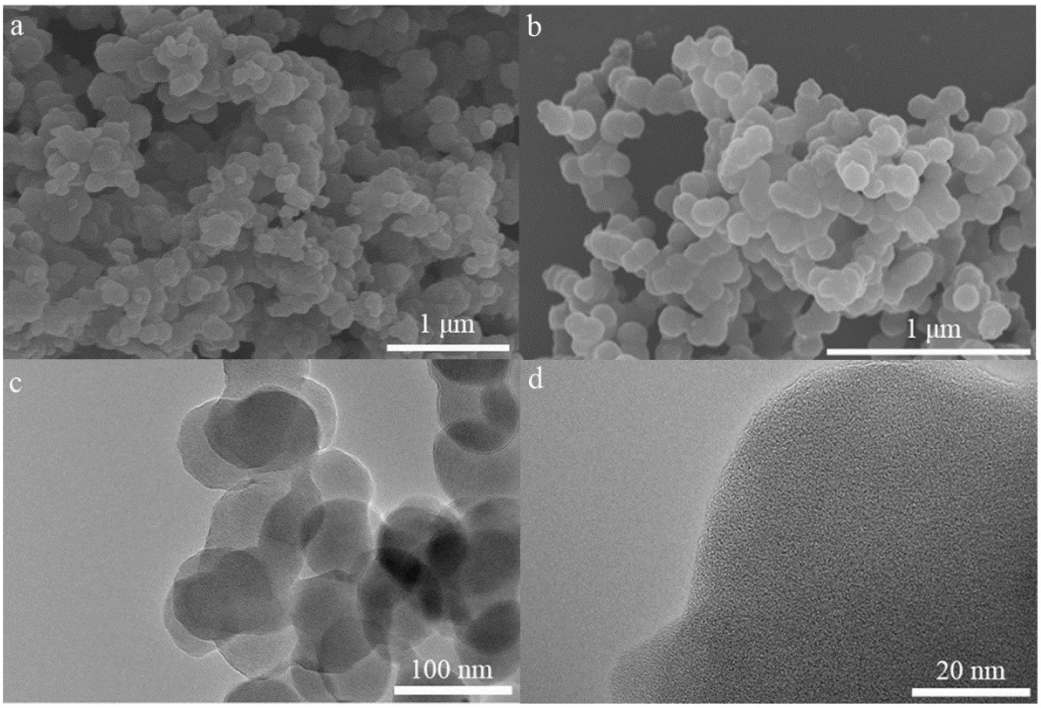

Fig. S7 SEM (a, b) and TEM (c, d) images for LNU-17.

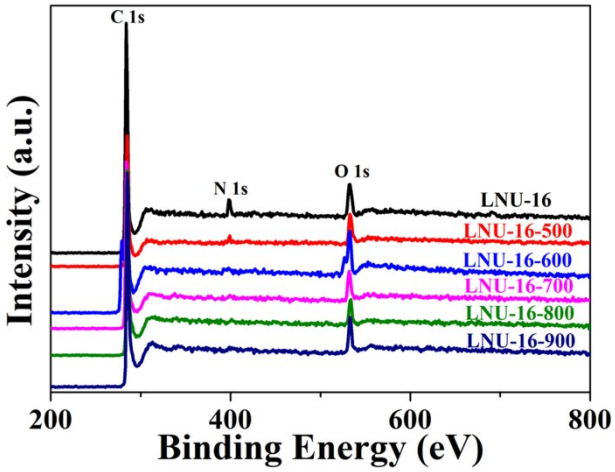

Fig. S8 XPS spectra for LNU-16 and C-LNU-16s.

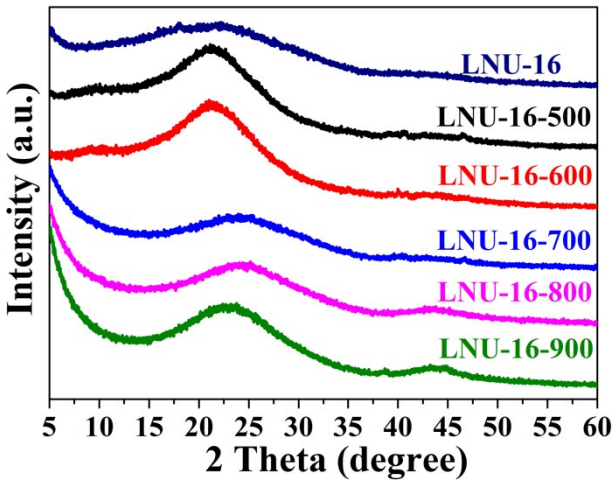

Fig. S9 PXRD patterns for LNU-16 and C-LNU-16s.

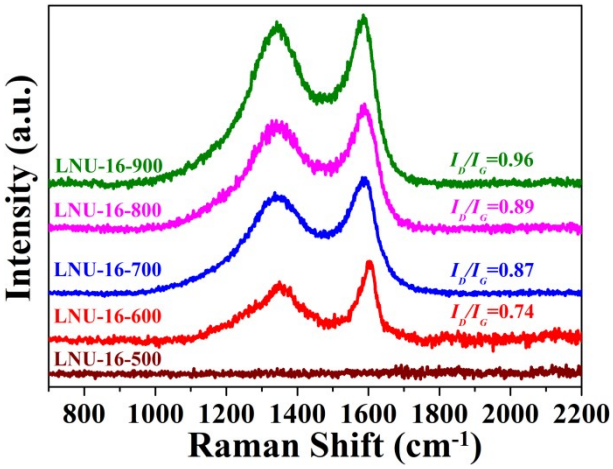

Fig. S10 Raman spectra for C-LNU-16s.

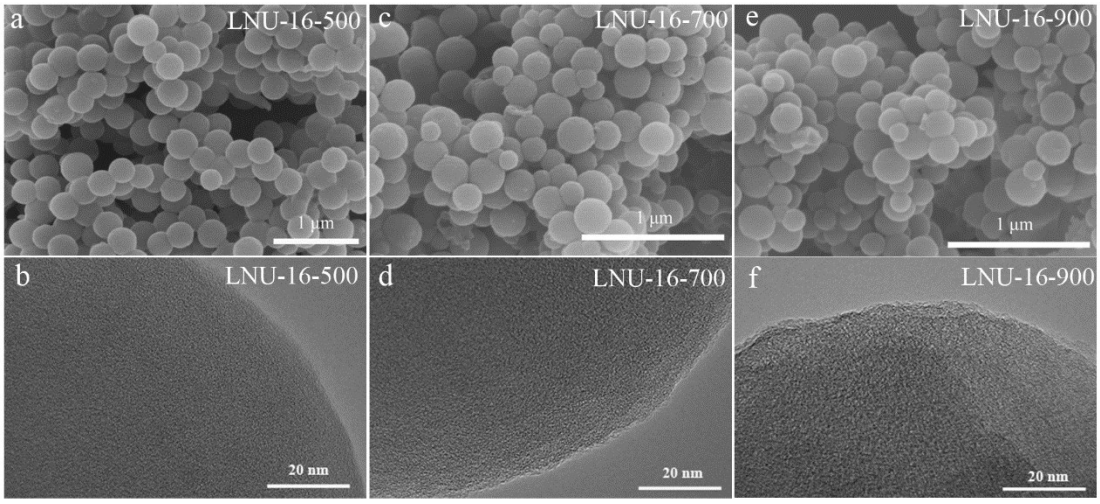

Fig. S11 SEM (a) and TEM (b) images for LNU-16-500; SEM (c) and TEM (d) images for LNU-16-700; SEM (e) and TEM (f) images for LNU-16-900.

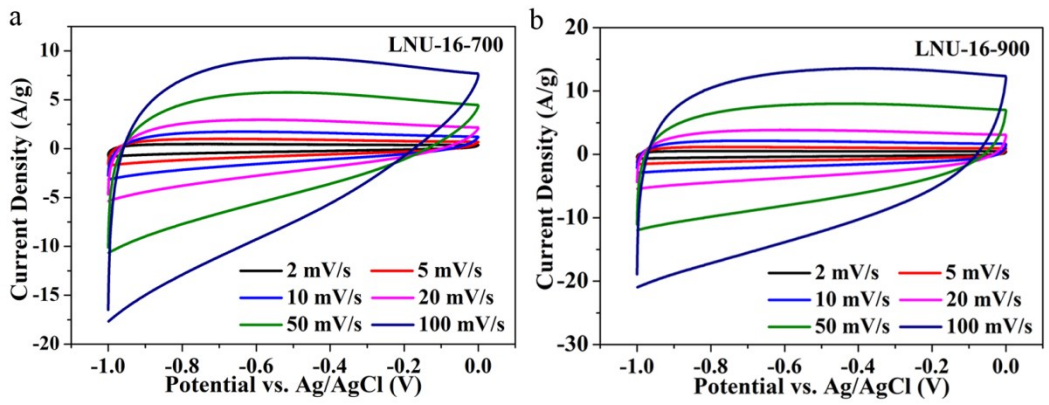

Fig. S12 CV curves for LNU-16-700 (a) and LNU-16-900 (b) at different scan rates.

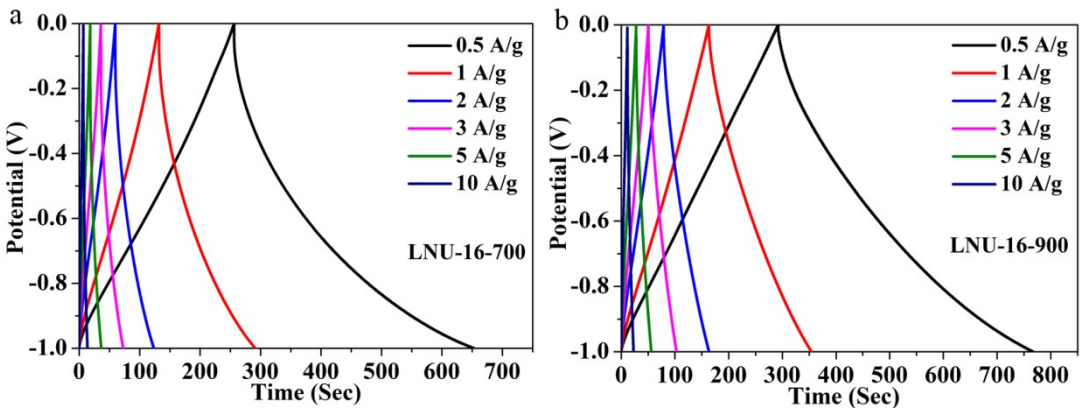

Fig. S13 GCD curves for LNU-16-700 (a) and LNU-16-900 (b) at different current densities.

Table S1. Elemental analysis of LNU-16 and C-LNU-16s

Samples	N (%)	C (%)	H (%)
LNU-16	3.34	83.67	4.49
LNU-16-500	4.42	85.80	3.08
LNU-16-600	4.46	84.70	4.58
LNU-16-700	3.47	80.06	3.53
LNU-16-800	2.91	82.38	0.66
LNU-16-900	2.95	80.68	3.77

Table S2. Summary of methods for constructing of microporosity and ultramicro-porosity

Method	Sample	S_{BET} ($m^2\ g^{-1}$)	V_{Total} ($cm^{-3}\ g^{-1}$)	V_{Micro} ($cm^{-3}\ g^{-1}$)	S_{Micro} ($m^2\ g^{-1}$)	$P_{Micropore}$ (nm)	*Capacitance* (F/g)
Self-sacrificial template	LNU-16-800	515.86	0.34	0.204	456.25	0.56, 0.72	294 (at 0.5 A/g) 242 (at 1 A/g)
Carbonization of PAF-1	N_2-PAF-1	880	0.44	0.30	-	0.60	146 (at 1 A/g)
	CO_2-PAF-1	1513	0.80	0.46	-	0.64	159 (at 1 A/g)
	Na-PAF-1	1916	1.36	0.39	-	0.93, 2-4	190 (at 1 A/g)
	K-PAF-1	2926	1.45	1.14	-	0.79, 1.30	280 (at 1 A/g)
Template-assisted strategy	UMCs	773	0.47	0.39	-	0.55-0.57	-
	0.95% CoNi/UMCs	613	0.41	0.32	-	0.57	268 (at 0.25 A/g)
Carbonization of nanoparticles or microspheres	UCNs	842	0.74	0.25	549	0.54, 0.60	206 (at 1 A/g)
	UCMs	579	0.29	0.23	505	0.50, 1.50	45 (at 1 A/g)
Self-temple strategy	HPCFs	1650	1.26	-	-	1.8	206 (at 1 A/g)
	HPCF-0	131	-	-	-	-	-
Carbonization of covalent benzoxazine framework	N-DMC	1469	-	-	988.89	1.43	185 (at 1 A/g)
Carbonization of N-doped microporous carbon spheres	$N\text{-}MCS_{700}$	1478	0.76	-	1412	0.57, 0.86, 1.26	292 (at 1 A/g)

Table S3. Comparison of specific capacitance data of previous reported carbon materials

Sample		Capacitance (F/g)	Current density (A/g)	Electrolyte	Ref.
Carbon spheres	PCS-8	227	1	6 M KOH	[1]
	PCS	240	1	6 M KOH	[2]
	MCSs-0.4	310	0.5	6 M KOH	[3]
Carbon nanotubes	PC-CNTs	250	0.1	6 M KOH	[4]
	Si/CNFs	175	1	6 M KOH	[5]
N-doped porous carbons	AC-900	278	1	6 M KOH	[6]
	NPHCMs-65-800	200	0.5	6 M KOH	[7]
Hierarchical porous carbon	HPC	204	0.5	6 M KOH	[8]
COF-based materials	ACOF1	234	1	6 M KOH	[9]
	DAB-TFP COF	98	0.5	1 M H_2SO_4	[10]
	TaPa-Py COF	209	0.5	1 M H_2SO_4	[10]
CMP-based materials	TAT-CMP-2	183	1	1 M Na_2SO_4	[11]
	N3-CMP	260	0.1	3 M KOH	[12]
MOF-based materials	PC-Zn	138	0.5	6 M KOH	[13]
	$Cu_{1.96}S$/C-650	200	0.5	1 M H_2SO_4	[14]

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