

Supporting Information for

**Three-dimensional conductive porous organic polymers
based on tetrahedral polythiophene for high-performance
supercapacitors**

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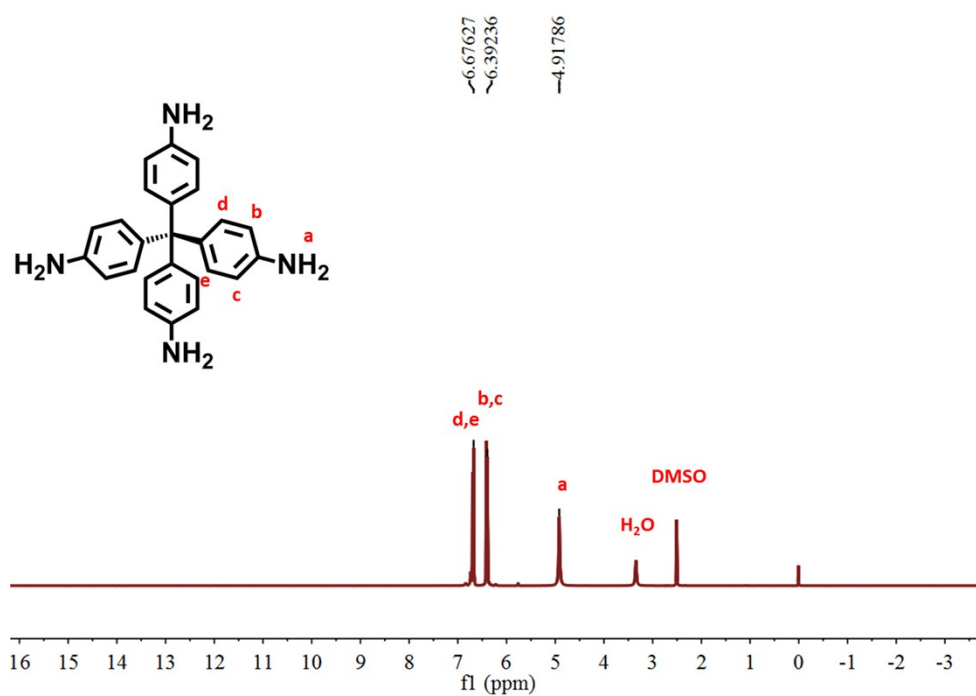


Fig. S1 ¹H-NMR spectra of TAPM.

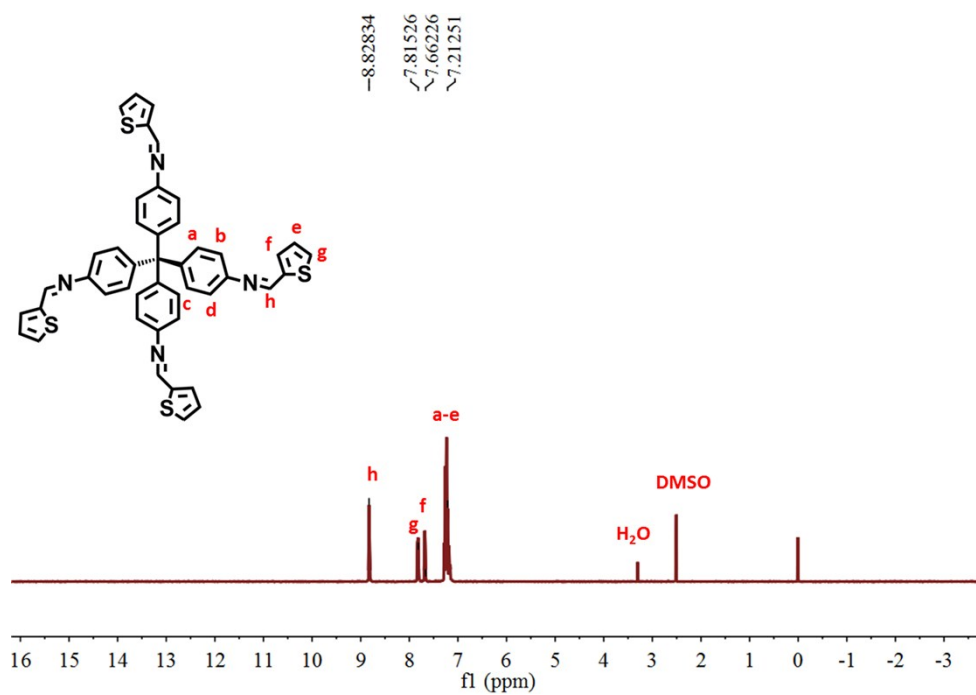


Fig. S2 ¹H-NMR spectra of MTH-1.

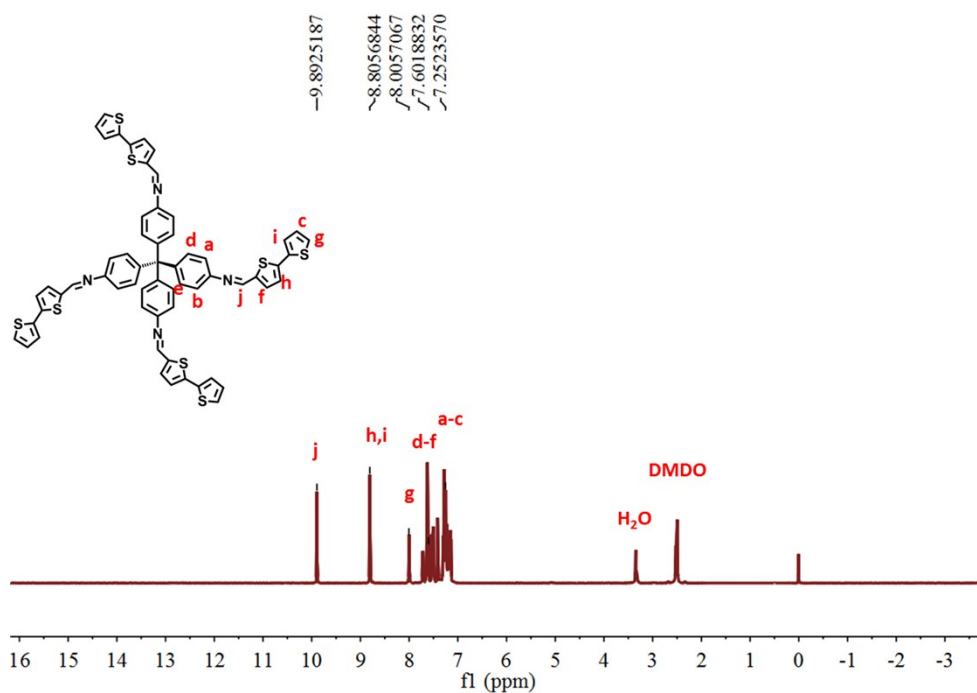


Fig. S3 ¹H-NMR spectra of MTH-2.

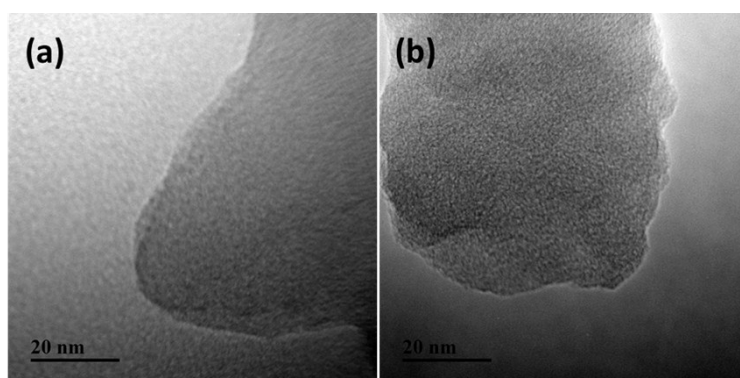


Fig. S4 Magnification TEM images of (a) POP-1 and (b) POP-2.

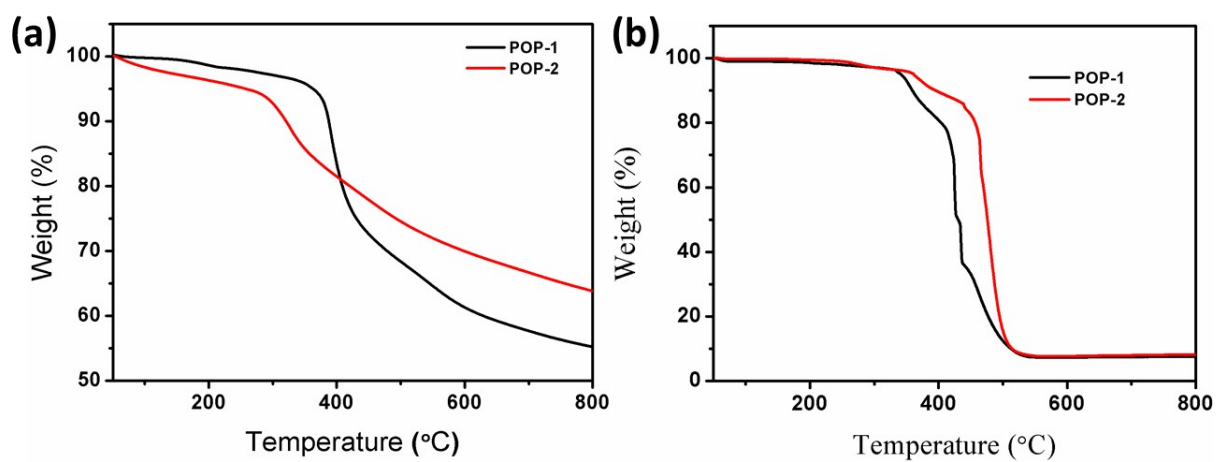


Fig. S5 TGA analysis of POP-1 and POP-2 (a) under N₂ atmosphere and (b) at room atmosphere.

X-ray crystallographic data

Table S1 Summary of crystallographic data for MTH-1.

	MTH-1
Formula	C ₄₅ H ₃₂ N ₄ S ₄
Fw	756.99
<i>T</i> (K)	173
λ (Å)	0.71073
Crystal system	monoclinic
Space group	<i>C2/c</i>
<i>a</i> (Å)	22.728(6)
<i>b</i> (Å)	7.4934(18)
<i>c</i> (Å)	21.408(6)
α (°)	90
β (°)	90.113(11)
γ (°)	90
<i>V</i> (Å ³)	3646.0(17)
<i>Z</i>	4
<i>D</i> _{calc} (g/cm ³)	1.379
μ (mm ⁻¹)	0.301
<i>F</i> (000)	1576
θ (°)	2.617, 24.490
	-26 ≤ <i>h</i> ≤ 26
Index ranges	-8 ≤ <i>k</i> ≤ 8
	-24 ≤ <i>l</i> ≤ 24
Reflections collected	11991
GOF (<i>F</i> ²)	1.168
<i>R</i> _{<i>I</i>} ^a , <i>wR</i> ₂ ^b (<i>I</i> > 2σ(<i>I</i>))	0.0811, 0.1947
<i>R</i> _{<i>I</i>} ^a , <i>wR</i> ₂ ^b (all data)	0.1432, 0.2266

$$R_I^a = \Sigma ||F_o| - |F_c|| / \Sigma F_o, \quad wR_2^b = [\Sigma w(F_o^2 - F_c^2)^2 / \Sigma w(F_o^2)]^{1/2}$$

Table S2. Selected bond lengths [Å] and angles [°] for MTH-1.

MTH-1			
C1-C2	1.5127(4)	C13-C1-C13(A)	104.82(1)
C1-C13	1.5187(4)	C2(A)-C1-C13(A)	111.95(1)
C1-C2(A)	1.5127(4)	C1-C2-C3	119.13(1)
C1-C13(A)	1.5187(4)	C14 -C15-C16	119.97(1)
C2-C3	1.3723(4)	C15 -C16-C17	118.20(1)
S1-C9	1.6950(5)	C16 -C17-C18	121.52(1)
S1-C12	1.6817(5)	C13-C18-C17	120.82(1)
S2-C20	1.6969(5)	C5-N2-C8	119.58(1)
S2-C23	1.6756(5)	C16-N2-C19	118.27(1)
N1-C5	1.3927(4)	C2-C1-C13	111.95(1)
N1-C8	1.2556(4)	C2-C1-C2(A)	104.48(1)
N2-C16	1.3911(4)	C2-C1-C13(A)	111.93(1)
N2-C19	1.2601(4)	C2(A)-C1-C13	111.93(1)

Symmetry transformations used to generate equivalent atoms: A = -x, y, 1/2-z