Electronic Supplementary Material (ESI) for Dalton Transactions.

Electronic Supporting Information

Electron transport shuttle mechanism via Fe-N-C bond derived from conjugated microporous polymer for supercapacitor

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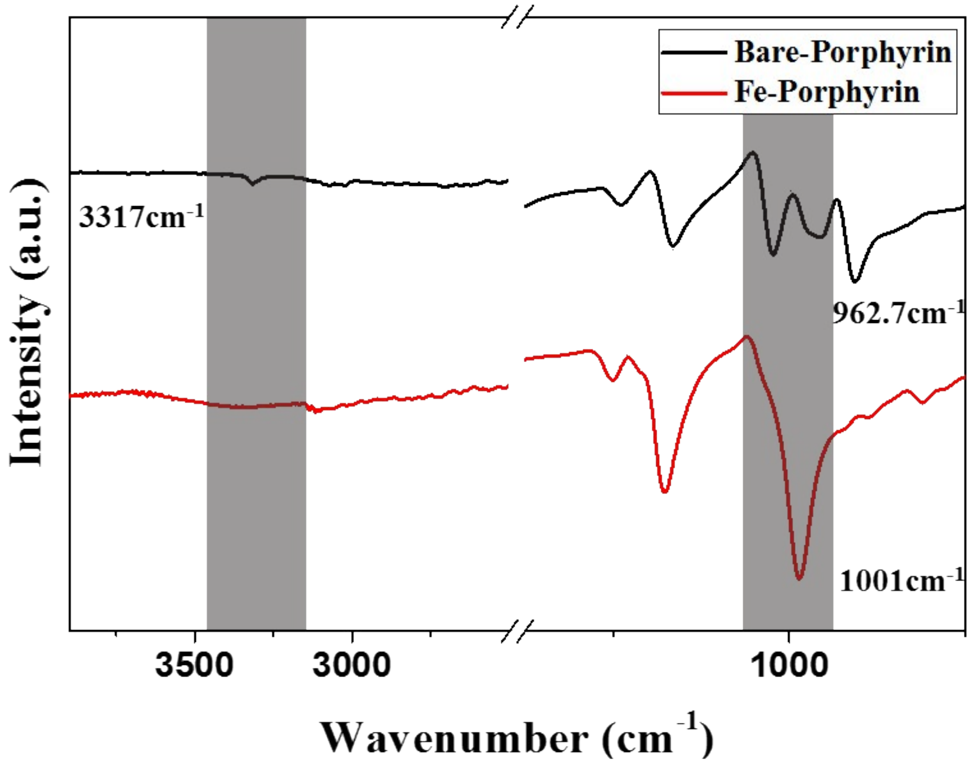

Fig. S1 FTIR spectra of the porphyrin monomers.

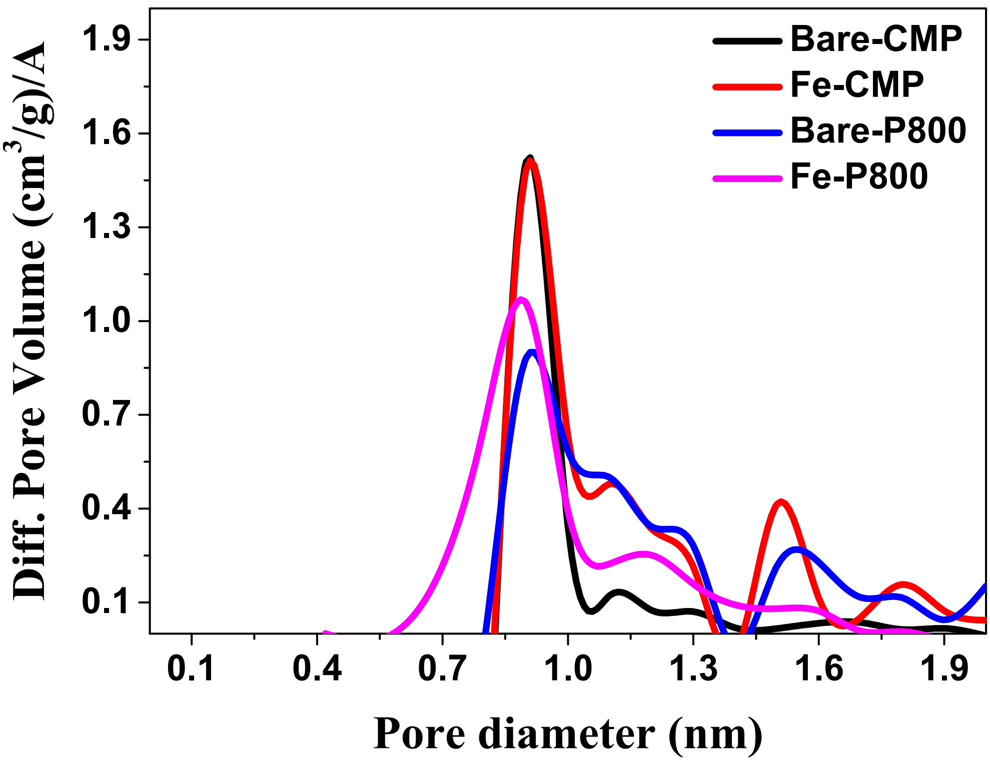

Fig. S2 Pore size distribution of electrode materials

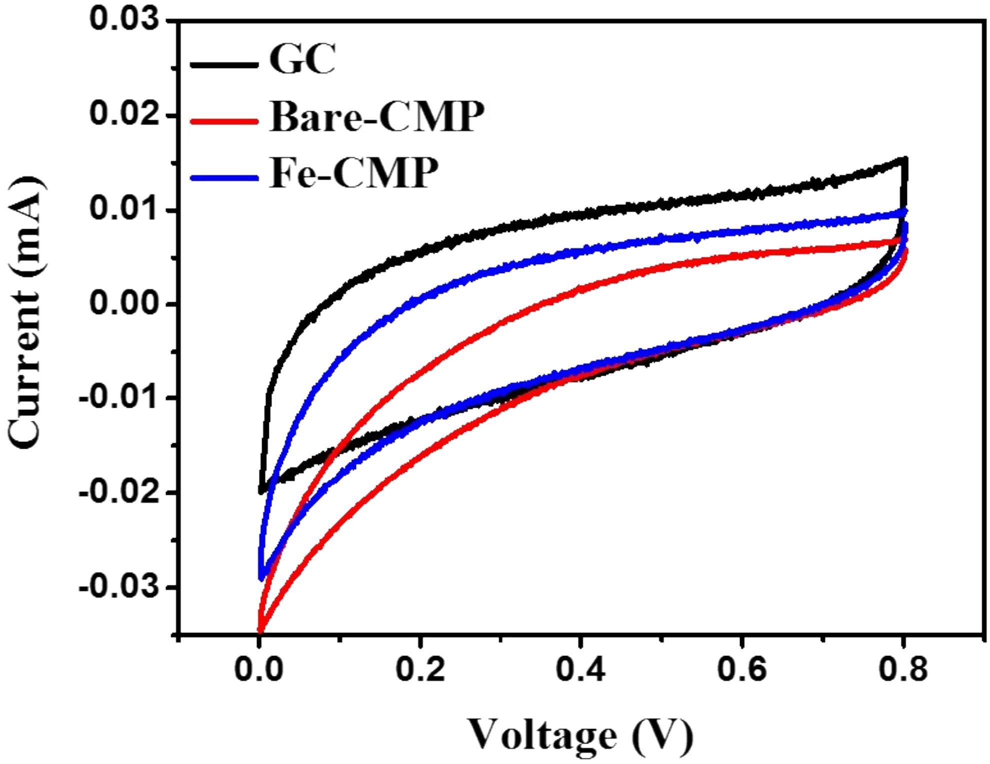

Fig. S3 CV graph of the CMPs at high scan rate (100 mV/s) in 1 M H_2SO_4.

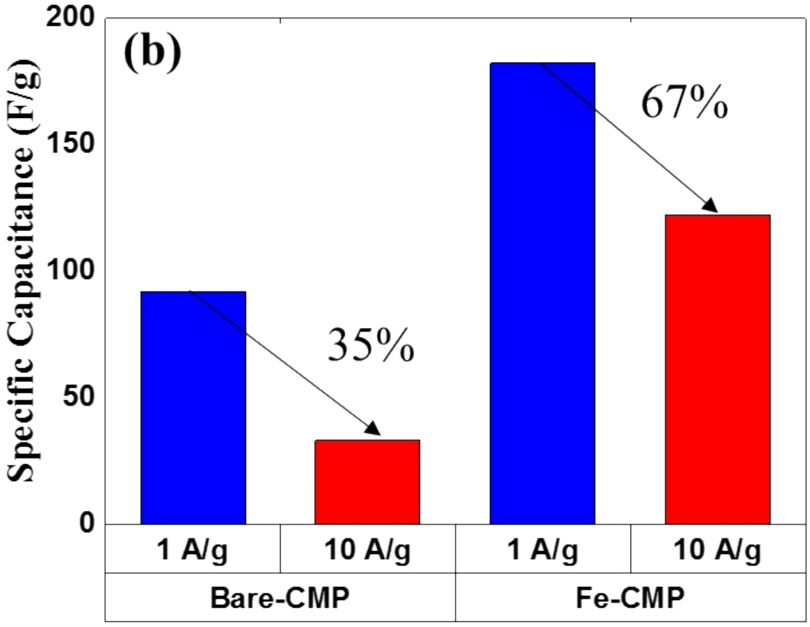

Fig. S4 Calculated specific capacitance of P800 based on the discharge curves at different current densities.

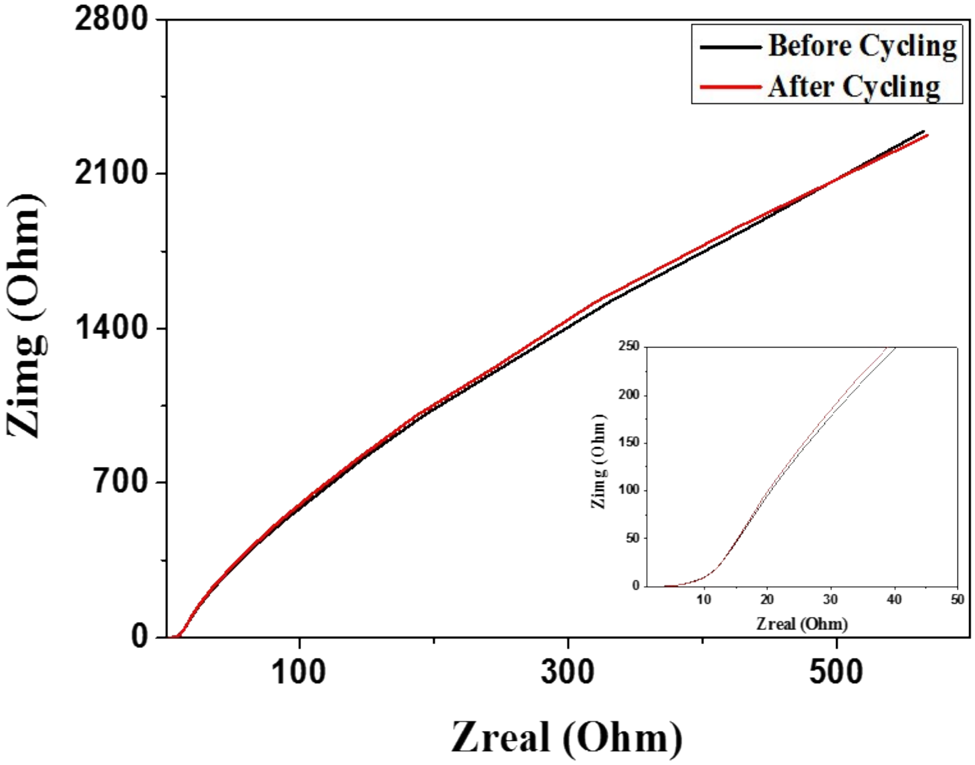

Fig. S5 Nyquist plot of Fe-P800 electrode before and after 5000 cycles at high energy density (10 A/g).

	Material	Surface area (m^2/g)	Specific capacitance (F/g)	Cycling test (Capacity retention)	Reference
1	Triazatruxene-based CMP (-1.0V – 0.0V)	106	183 F/g @ 1A/g	95%(10000 cycle) at 10 A/g	[1]
2	PAF-Carbon (0.0V – 1.0V)	418	173 F/g @ 0.5A/g	100% (9000 cycle) at 5 A/g	[2]
3	$Ni_3(HITP)_2$ (0.0V – 1.0V)	630	102 F/g @ 0.1A/g	90% (10000 cycle) at 2A/g	[3]
4	CNT/N-doped carbon (0.0V – 0.6V)	200	100 F/g @ 0.5 A/g	N/A	[4]
5	Nitrogen-doped porous CNF (-1.0V – 0.0V)	562	202 F/g @ 1A/g	97% (3000 cycles) at 1A/g	[5]
6	Nanofibrous Graphene-Templated CMP (-1.0V – 0.0V)	1234	179 F/g @ 0.2A/g	N/A	[6]
7	rGO film (0.0V – 1.0V)	N/A	118 F/g @ 1A/g	>99% (1000 cycles) at 1A/g	[7]
8	Graphene Oxide (0.0V – 1.0V)	617	189 F/g @ 0.1A/g	93% (5000 cycles) at 0.4A/g	[8]
9	$Fe-N_x$/Carbon	450	182 @ 1A/g	100% (5000 cycle) at 10 A/g	Present work

Table-S1. Comparison of current work from previous reported literatures

Table-S2 Atomic composition obtained from XPS spectra

Material	C1s	O1s	N1s	Fe 2p1	Fe 2p3
Bare-P800	79.7	18.3	2.04	-	-
Fe-P800	83.0	13.9	1.93	0.6	0.59

Reference

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