Electronic Supplementary Material (ESI) for RSC Advances. This journal is © The Royal Society of Chemistry 2016

Supplementary Information

Facile Synthesis of Porous Carbon Spheres Embedded with Metal Nanoparticles and Their Applications

as Supercapacitor Electrodes

Yuanzhong Tan, Ka-wai Wong, Ka Ming Ng*

*Email: kekmng@ust.hk; Fax: 852-23580054; Tel: 852-23587238.

Department of Chemical and Biomolecular Engineering, The Hong Kong University of Science and

Technology, Hong Kong, China.



Fig. S1 XPS Spectra of (a) Fe-CCS, (b) Co-CCS and (c) Ni-CCS.



Fig. S2 EDS elemental mapping of (a) Fe-CCS, (b) Co-CCS and (c) Ni-CCS.

Sample name	Surface area (m ² g ⁻¹)	Mean pore diameter (nm)	Mode pore diameter (nm)	Total pore volume (cm ³ g ⁻¹)
Fe-PCS	295.3	22.54	3.882	0.240
Co-PCS	415.8	25.36	43.15	0.245
Ni-PCS	250.9	16.22	3.724	0.137

Table S1. Surface areas, mode pore diameters and total pore volumes of Fe-PCS, Co-PCS, and Ni-PCS.

Table S2. Atomic concentration of O and M in M-PCS before and after sputtering detected by XPS

	Fe-PCS		Co-PCS		Ni-PCS	
	Fe	0	Со	0	Ni	0
Befor sputtering (%)	8.46	12.60	10.85	12.93	4.29	3.84
After sputtering (%)	15.00	7.30	29.28	14.64	8.25	1.37



Fig S3. CV curves of Ni-PCS within -1.0-0 V and 0-0.5V tested in a three-electrode configuration with 6M KO

H as electrolyte.



Fig S4. Cycle performance of Fe-PCS, Co-PCS and Ni-PCS at 10 A g⁻¹ for 1000 cycles.