Supporting Information *for*

Dual templating route to three-dimensional ordered mesoporous carbon nanonetworks: tuning the mesopore type for electrochemical performance optimization

Kaixi Wang,[a] Jianan Zhang,[a] Wei Xia,[b]Ruqiang Zou,[b] Junhui Guo,[c] Zhongmin Gao,[c] Wenfu Yan,[c] Shaojun Guo,*[d] and Qun Xu*[a]*

Figures

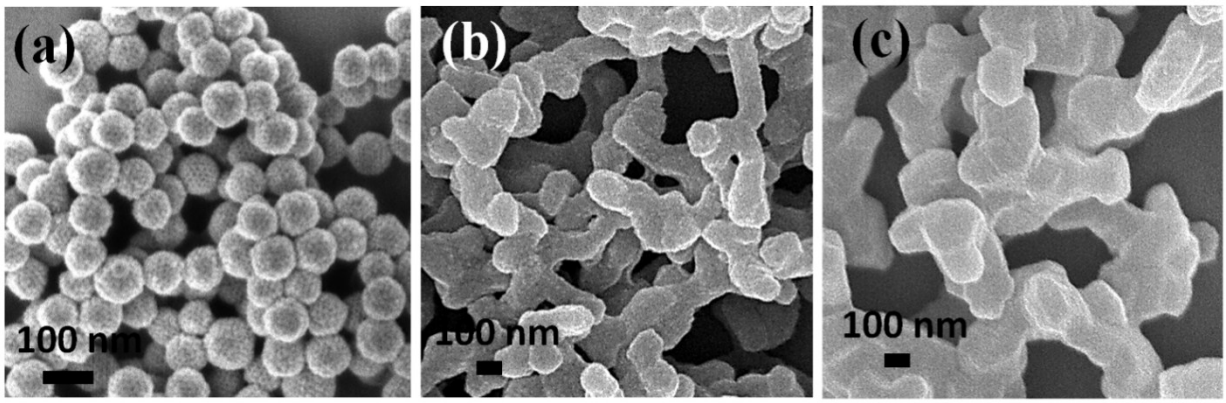

Figure S1. SEM images of (a) OMC-S, (b) OMCNW-c, and (c) OMCNW-h.

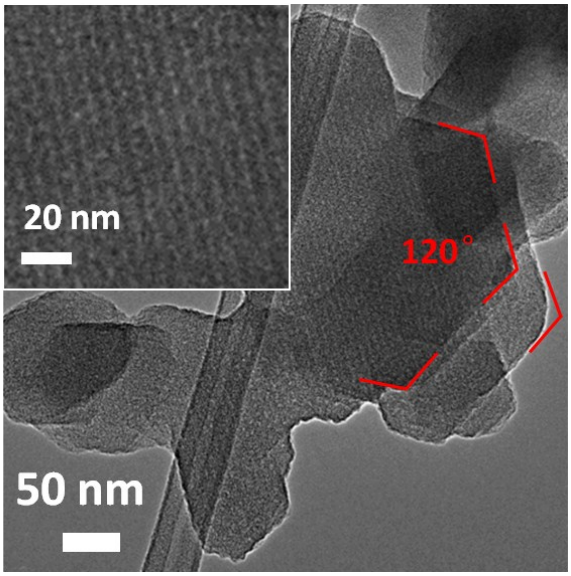

Figure S2. TEM and HRTEM images (*inset*) of OMCNW-h.

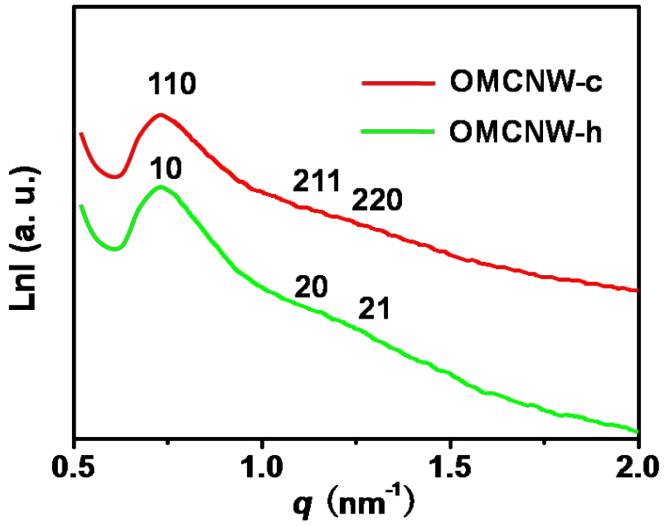

Figure S3. Powder SAXS patterns of OMCNW-c and OMCNW-h.

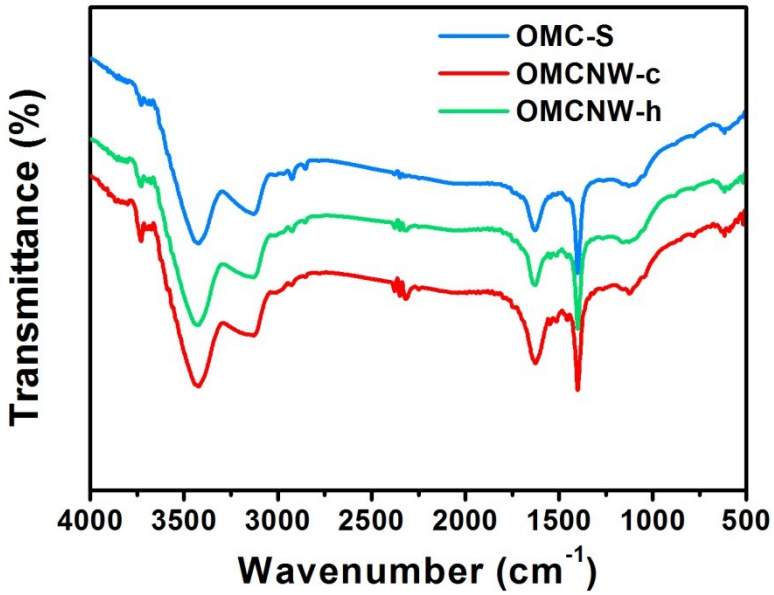

Figure S4. FTIR spectra of OMC-S, OMCNW-c and OMCNW-h.

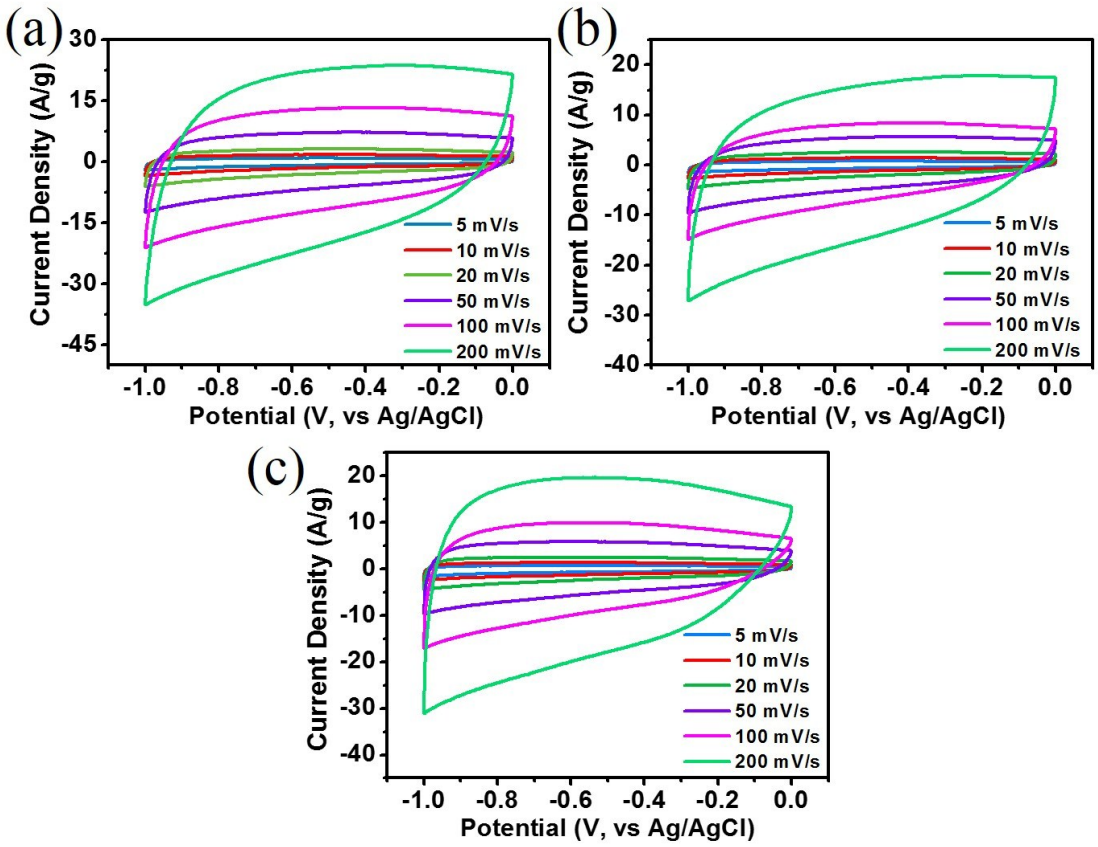

Figure S5. (a) Cyclic voltammograms of the as-prepared (a) OMCNW-c, (b) OMC-S, and (c) OMCNW-h electrodes at different scan rates.

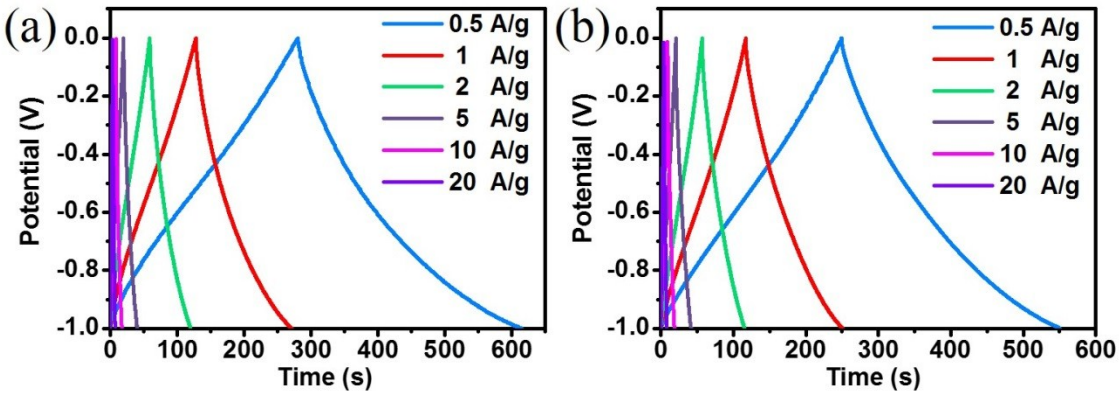

Figure S6. Galvanostatic charge/discharge curves of (a) OMC-S and (b) OMCNW-h at various current densities ranging from 0.5 to 20 A/g in 6.0 M KOH solution.

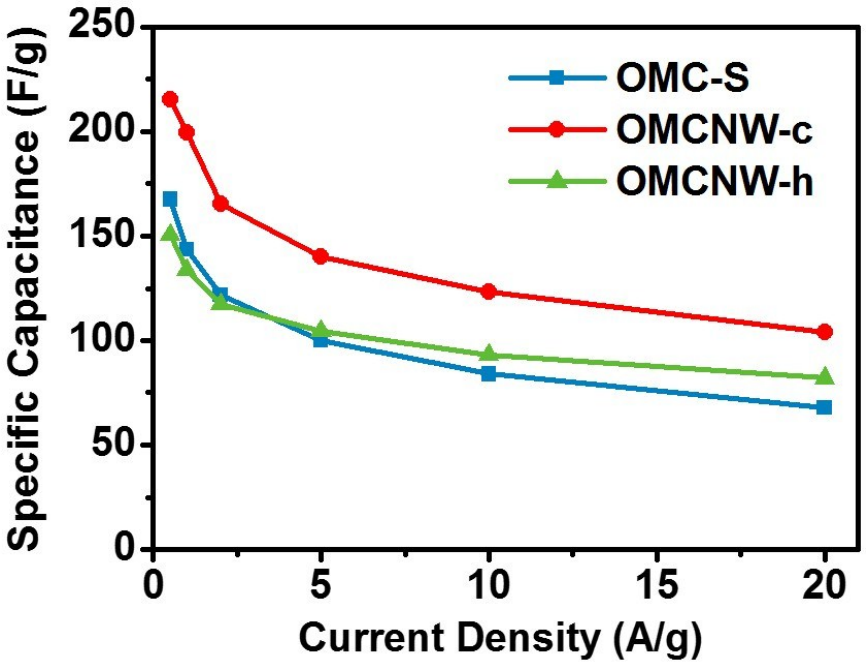

Figure S7. Specific capacitances of OMC-S, OMCNW-c, and OMCNW-h at different current densities.

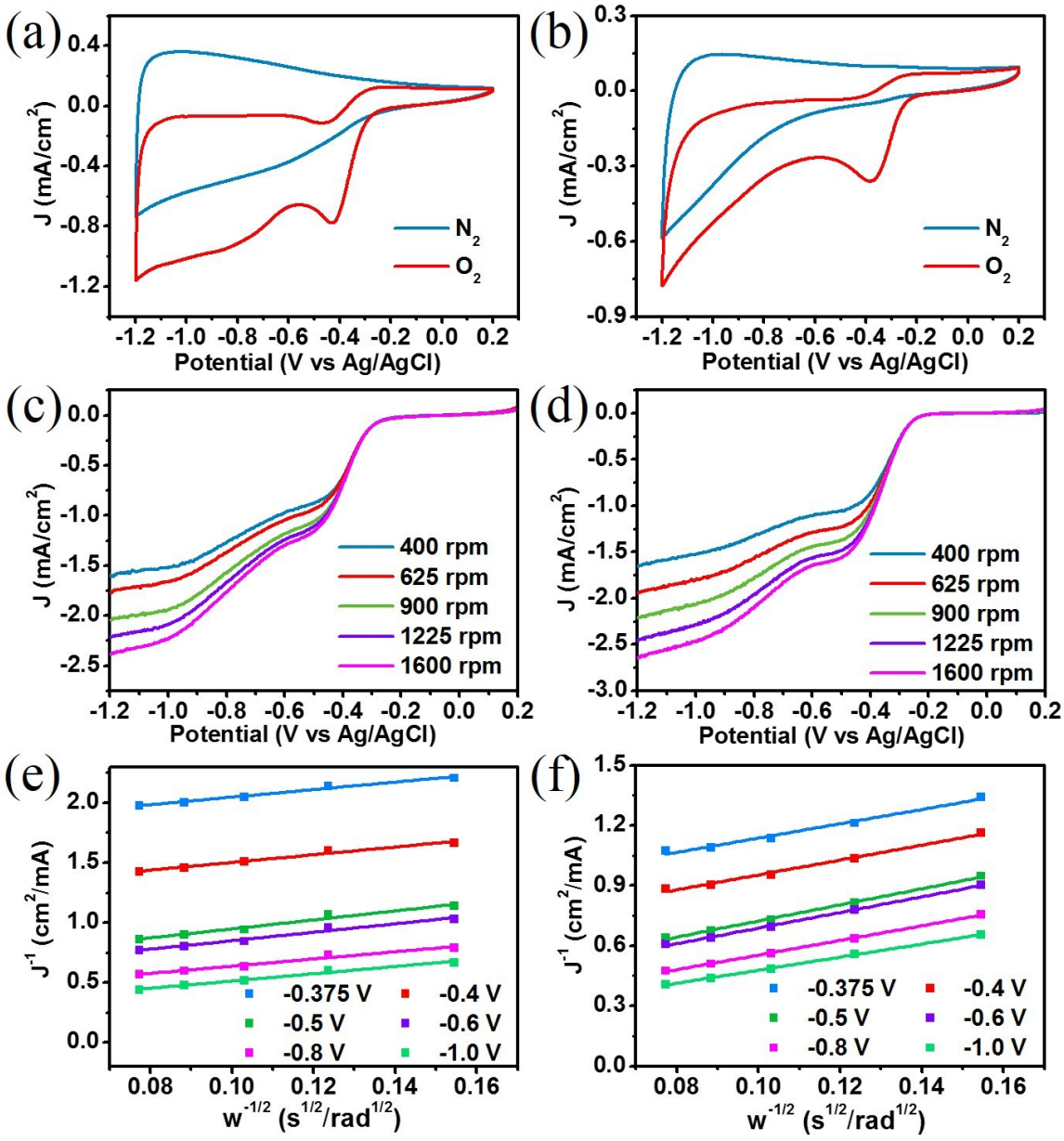

Figure S8. (a, b) CVs of (a) OMCNW-h and (b) OMC-S in N_2- and O_2-staturated 0.1 M KOH aqueous electrolyte solution. The scan rate is 50 mV/s. (c, d) LSV curves of (c) OMCNW-h and (d) OMC-S in an O_2-saturated 0.1 M KOH at a scan rate of 10 mV/s and different rotation rates. (e, f) Koutecky-Levich plots of (e) OMCNW-h and (f) OMC-S derived from LSV curves at different electrode potentials.

Table S1 Pore textural parameters of OMC-S, OMCNW-c, and OMCNW-h.

Sample	S_{BET}[a] ($m^2\ g^{-1}$)	$S_{microp.}$[b] ($m^2\ g^{-1}$)	V_T[c] ($cm^3\ g^{-1}$)	$V_{microp.}$[d] ($cm^3\ g^{-1}$)	$V_{microp.}/V_T$[e]	D_{ave}[f](nm)
OMC-S	569.1	396.8	0.46	0.18	0.39	2.85
OMCNW-c	574.9	381.9	0.38	0.18	0.47	2.61
OMCNW-h	465.2	360.4	0.31	0.17	0.55	2.68

[a] Specific surface area calculated by BET method.
[b] Microporous surface area derived from t-plot method.
[c] Total pore volume.
[d] The pore volume.
[e] The micropore percentage.
[f] The average pore size.

Table S2 Comparison of the capacities of OMCNW-c with the recently reported mesoporous carbon materials.

Sample	Electrolyte solution	Test condition	Capacitance (F/g)	Reference
OMCNW-c	6 M KOH	0.5 A/g	215.0	This work
Ordered mesoporous carbons FDU-15	6 M KOH	0.5 A/g	130.0	Carbon 2011, 49, 4580–4588
Ordered mesoporous carbon nanospheres	6 M KOH	1 mA/cm^2	173.0	Electrochem. Commun. 2013, 36, 66–70
Ordered mesoporous carbon	1 M H_2SO_4	0.1 A/g	219.0	J. Power Sources 2013, 241, 6–11
KOH activated FDU-15	6.0 M KOH	0.5 A/g	200.0	J. Mater. Chem. 2012, 22, 93–99
Ordered mesoporous carbon nanofiber arrays	2 M H_2SO_4	0.23 A/g	172.8	Chem. Commun. 2013, 49, 6406–6408
Fiber-like ordered mesoporous carbon	6 M KOH	0.25 A/g	197.0	J. Mater. Chem. A 2013, 1, 15447–15458
P, N dual doped mesoporous carbon	6 M KOH	5 mV/s	236.0	J. Power Sources 2014, 250, 257–265
P, N co-doped C	1 M H_2SO_4	5 mV/s	286.0	Electrochimica Acta 2015, 168, 414–422
hierarchical micro-mesoporous carbon	1 M H_2SO_4	5 mV/s	131.0	J. Mater. Chem. A, 2014, 2, 12023–12030
highly ordered mesoporous carbons	6.0 M KOH	0.5 A/g	157.0	Nanoscale, 2014, 6, 14657–14661