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Supplementary Materials

$Na_{0.76}V_6O_{15}$@Boron Carbonitride Nanotube Composites as Cathodes for High-Performance Lithium-Ion Capacitors

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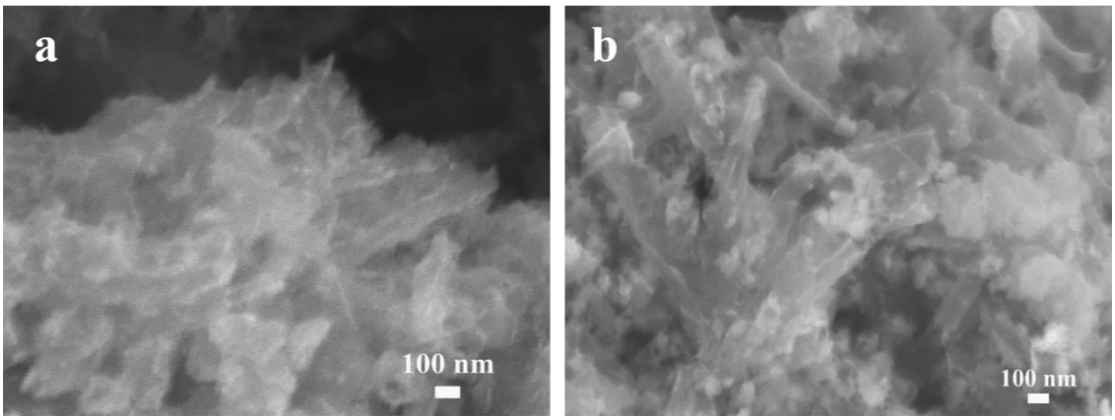

Figure S1. (a) SEM image of the NaVO@BCN−3; (b) SEM image of the NaVO@BCN−2.

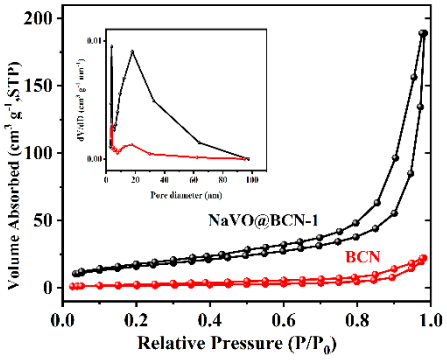

Figure S2. Nitrogen adsorption/desorption isotherms of the NaVO@BCN-1 and BCN; inset: the pore size distributions.

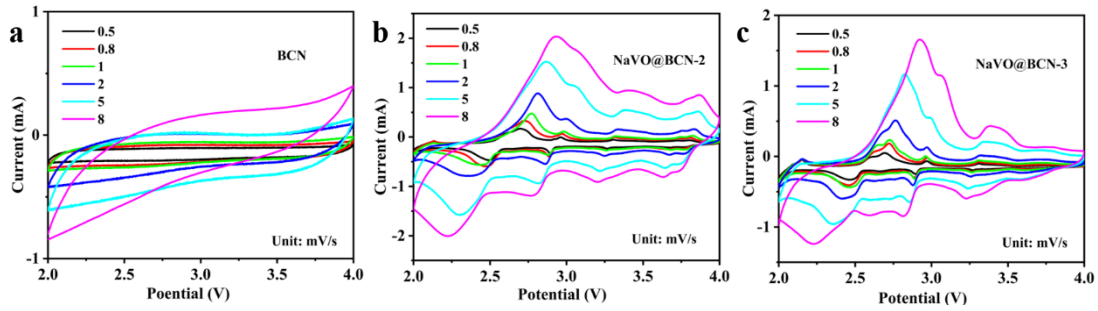

Figure S3. CV curves of the BCN nanotubes and NaVO@BCN: (a) BCN nanotubes; (b) NaVO@BCN−2; (c) NaVO@BCN−3.

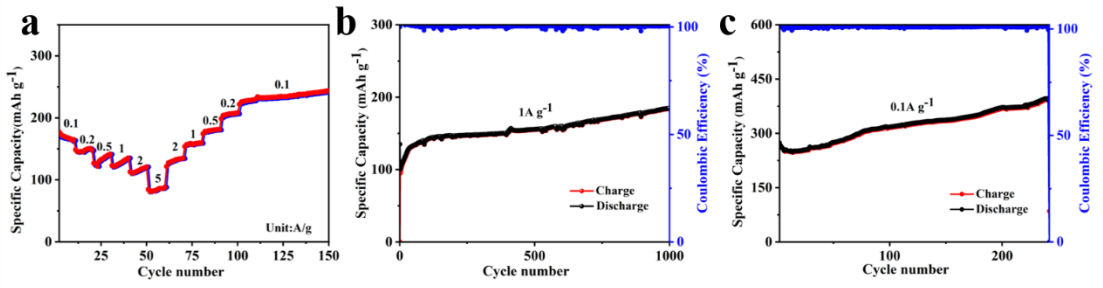

Figure S4. Rate and cycling performance of HC; (a) rate performance at various current densities; (b) cycling performance at 1 A g^{-1} within 1000 cycles; (c) cycling performance at 0.1 A g-1 within 240 cycles.

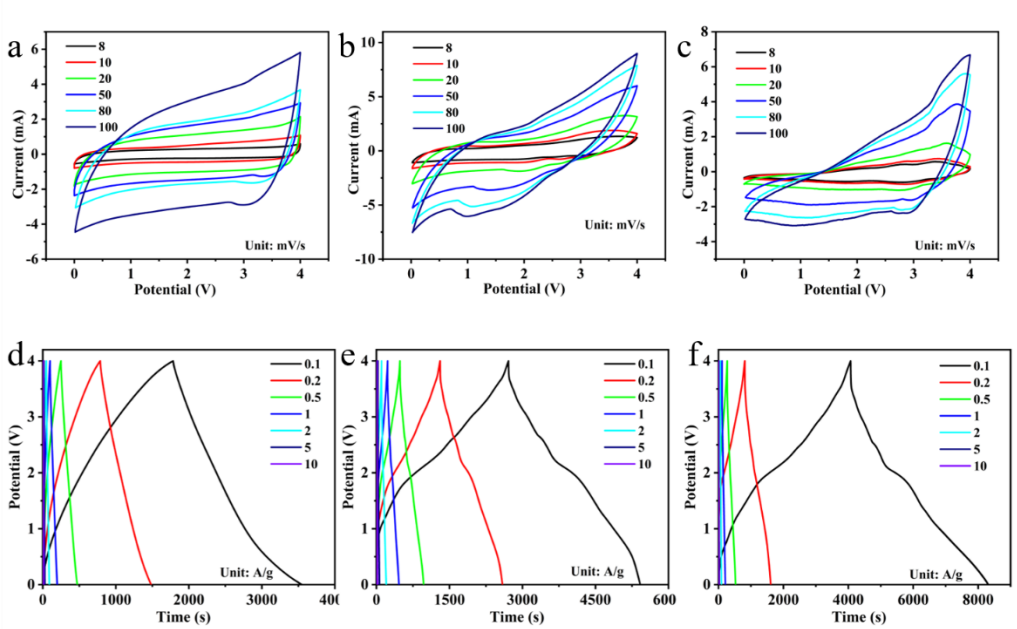

Figure S5. Electrochemical performances of the LICs. CV curves at different scan rates: (a) BCN nanotubes; (b) NaVO@BCN−2; (c) NaVO@BCN−3. GCD curves at various current densities: (d) BCN nanotubes; (e) NaVO@BCN−2; (f) NaVO@BCN−3.

Table S1. Electrochemical performance of different cathode electrodes and the relevant LICs.

LICs	Max energy density (Wh kg^{-1})	Power density (W kg^{-1})	Voltage (V)	Ref.
BCNNTs//$LiNbO_3$@GA	148	200	0-4	[42]
AC//V_2O_5@CNT	40	210	0-2.7	[46]
NS-DPC //$Ti_3C_2T_x$@Fe_2O_3	216	400	0-4	[47]
LMO-MSs@GNSs//AC	38.8	12.6	0-2.3	[48]
$Li_3V_2(PO_4)_3$/C//AC	53.2	70	0-2.7	[49]
NaVO@BCN//HC	238.7	200	0-4	This work