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Supplementary Information for

Core-Shell Structure of Polydopamine-Coated Phosphorus-Carbon Nanotube Composite for High-Performance Sodium-Ion Batteries

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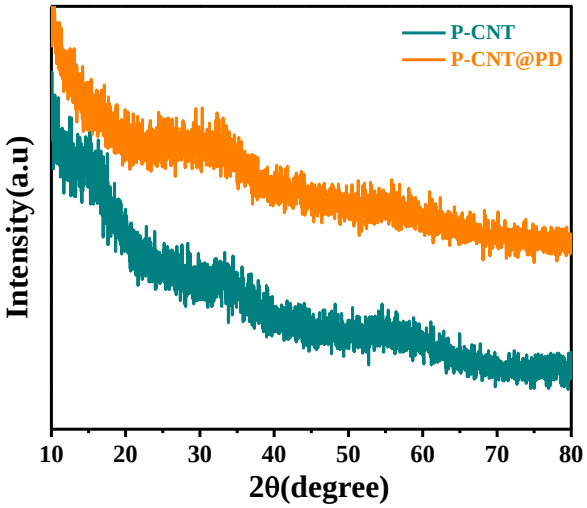


Figure S1. XRD patterns of P-CNT and P-CNT@PD composites.

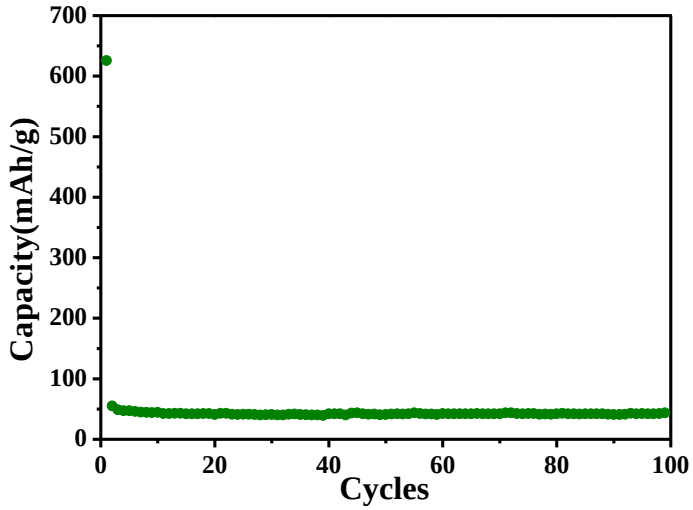


Figure S2. The specific capacity of carbon nanotube (CNT) cycling at a current density of 0.52 A/g between 0.001 and 2.0 V (vs. Na^+/Na).

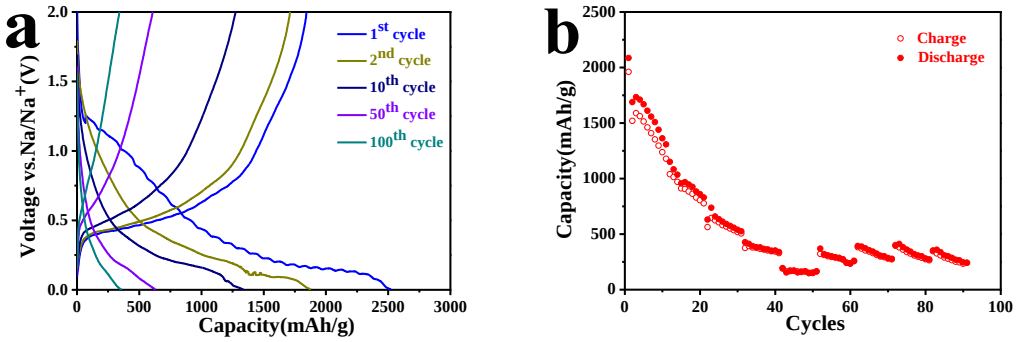
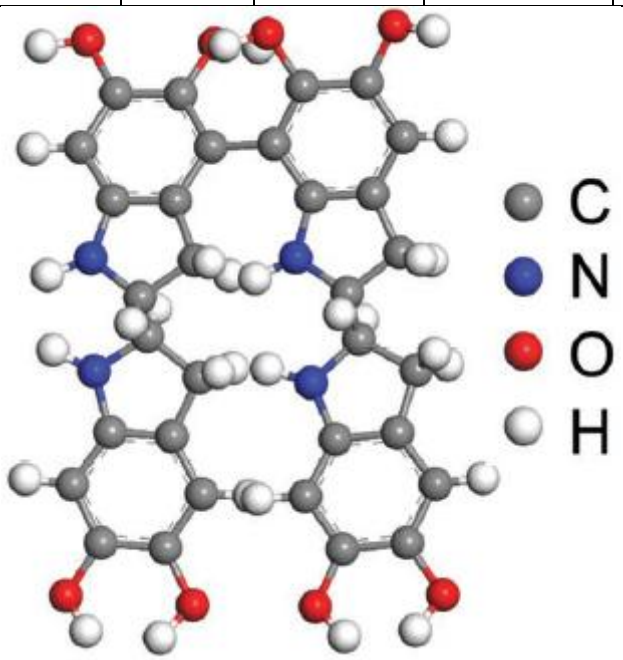


Figure S3. (a) Charge-discharge voltage profiles of P-CNT composite during cycling at a current density of 0.52 A/g between 0.001 and 2.0 V (vs. Na^+/Na). (b) Rate performance at various current densities from 0.26 A/g to 5.2 A/g of P-CNT composite between 0.001 and 2.0 V (vs. Na^+/Na).

Table S1. Elements in PD and atom number per PD molecular unit

Elements	N	O	H	C
Atom number per PD molecular unit	4	8	32	32



N content in PD as follows: 4*14/(4*14+16*8+32+32*12)=9.33%

N content in P-CNT@PD composite was 0.517% [(0.448%+0.546%)/2]

So the PD content in P-CNT@PD as follows: 0.517%/9.33%=5.54%

Table S2. Kinetic parameters of P-CNT and P-CNT@PD electrodes

	50	100	200
$R_{eleP\text{-}CNT}$	34.65	30.16	25.26
$R_{intP\text{-}CNT}$	246.2	297.6	406.6
$R_{eleP\text{-}CNT@PD}$	6.249	6.65	9.536
$R_{intP\text{-}CNT@PD}$	273	220	158.2