

Supporting Information

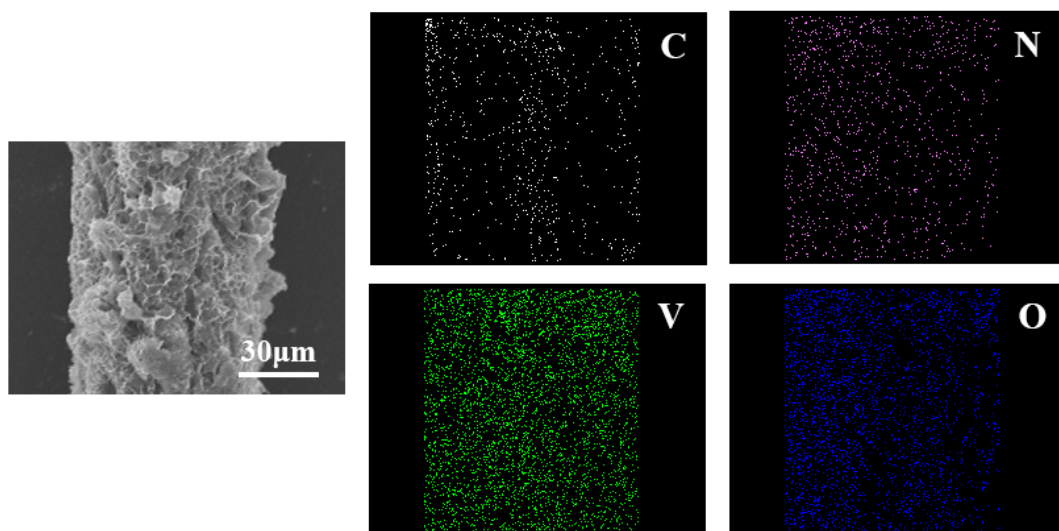


Figure S1: SEM images of $\text{NH}_4\text{V}_4\text{O}_{10}$ @CNT fiber and EDS mapping of C, N, V, O, respectively

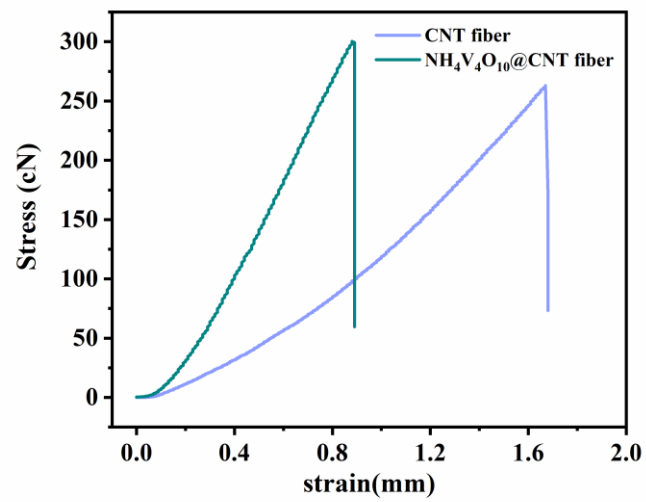


Figure S2: the stress-strain curve of CNT and $\text{NH}_4\text{V}_4\text{O}_{10}$ @CNT

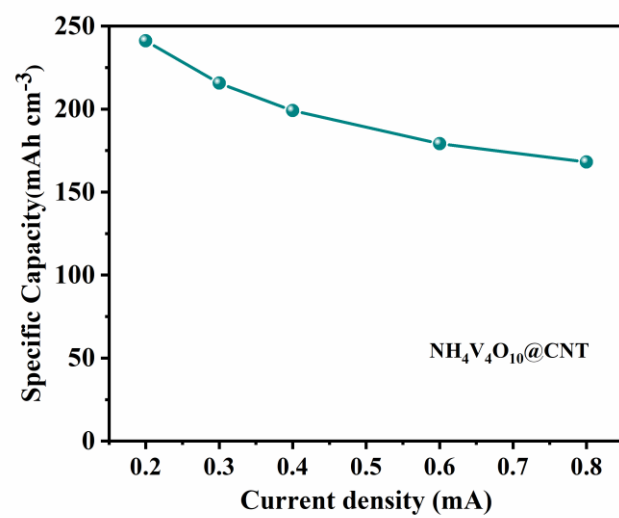


Figure S3: the specific capacity of $\text{NH}_4\text{V}_4\text{O}_{10}@\text{CNT}$ electrode at different current density

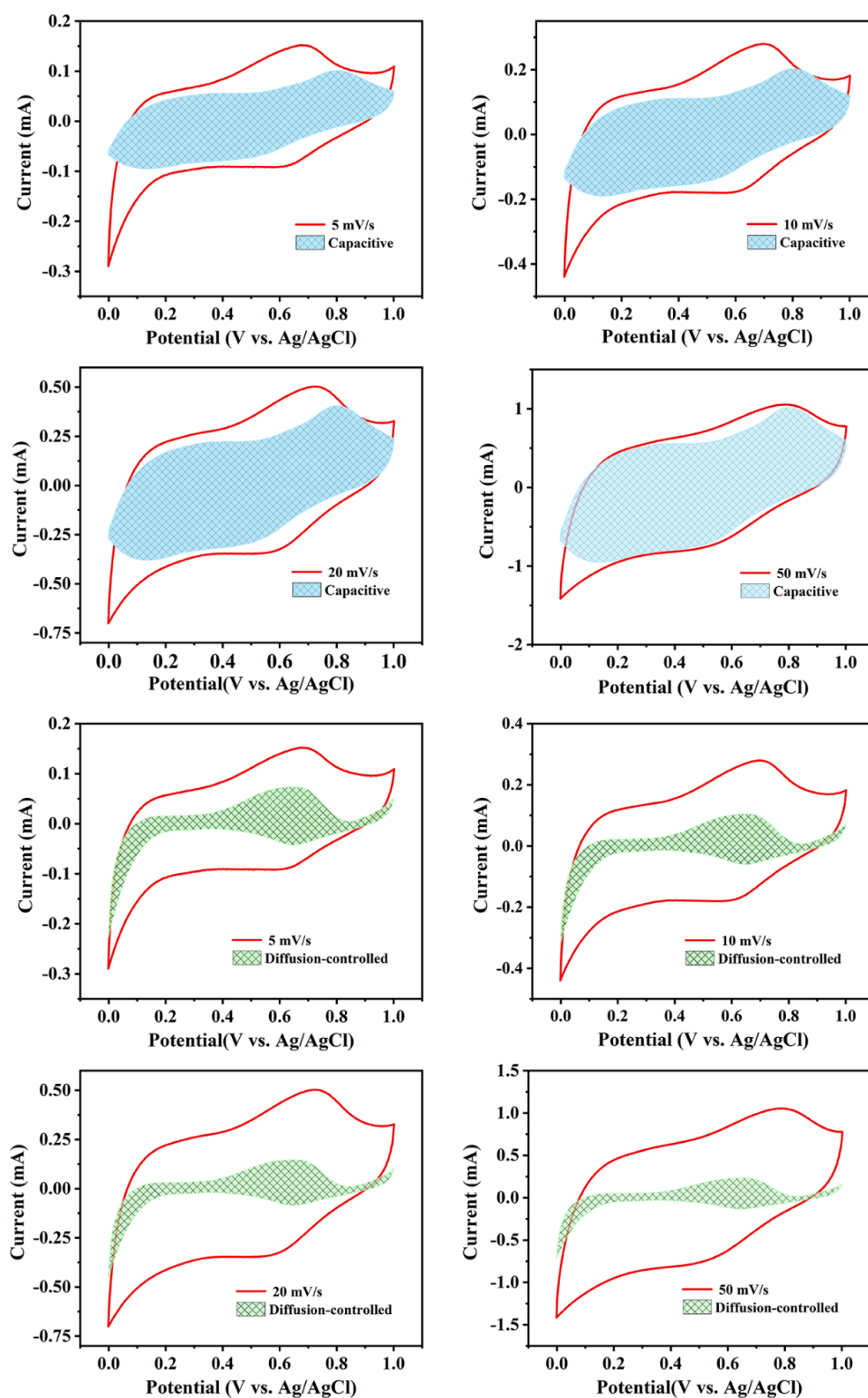


Figure S4: CV curves with the capacitive and pseudocapacitive fraction shown by the shaded area at different scan rate of $\text{NH}_4\text{V}_4\text{O}_{10}@\text{CNT}$ fiber battery

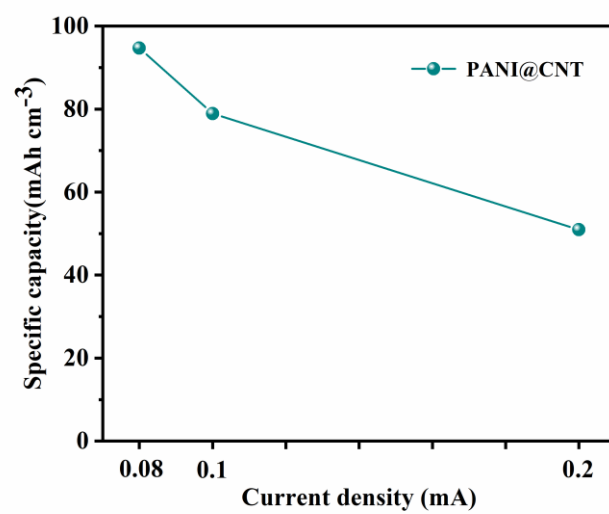


Figure S5: the specific capacity of PANI@CNT electrode at different current density

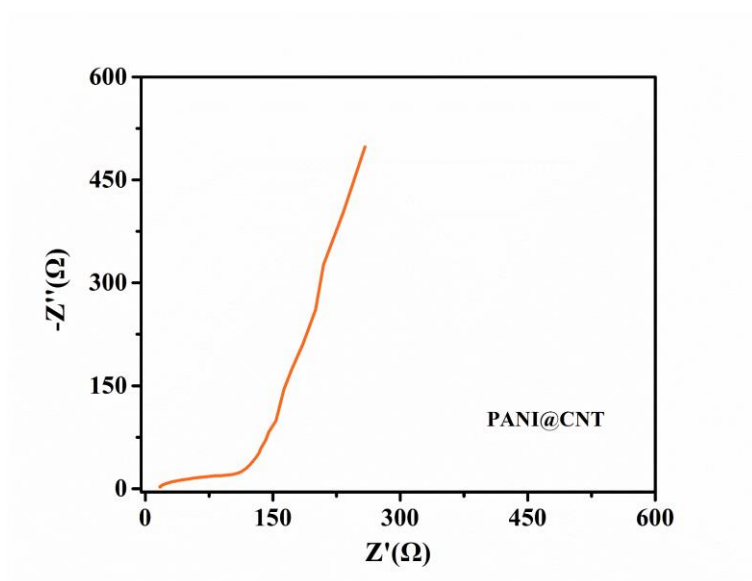


Figure S6: EIS of PANI@CNT fiber

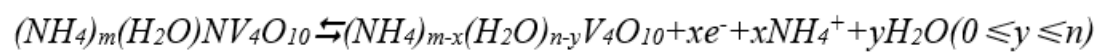


Figure S7: The overall reactions in the charge and discharge processes of the full cell

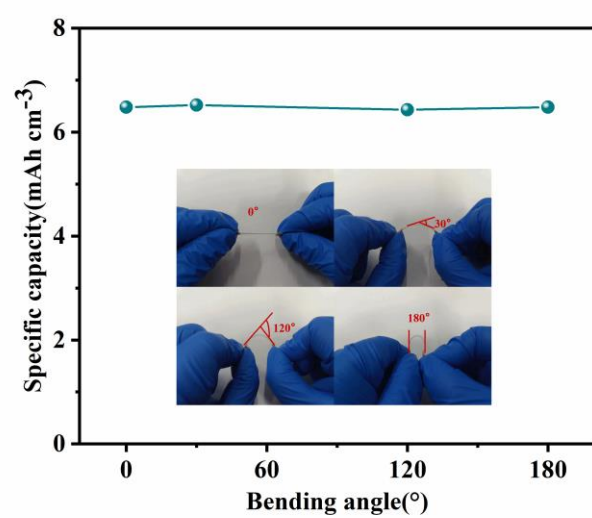


Figure S8: the specific capacity of the full cell under different bending states

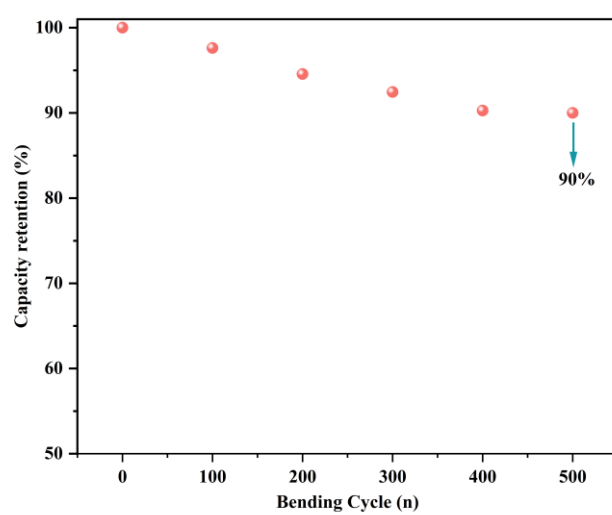


Figure S9: the capacity retention of the full cell under 500 bending cycles

Table S1: Compared to previous work on electrochemical performance of fiber batteries

Cathode /anode	Battery Types	Capacity	Capacity retention/cycles/ current density	Ref.
NH ₄ V ₄ O ₁₀ @CNT	Half cell	241.06 mAh cm ⁻³	N/A	Our
PANI	Full cell	6.86 mAh cm ⁻³	72.1%/1000/0.5 mA	work
Ni-NiO	Full cell	237.8 uAh cm ⁻³	96.6%/10000/3.7	[33]
Zn			A/g	
CC-ZnO@C@Zn	Full cell	3 mAh cm ⁻³	82%/1600/250 mA	[34]
CC-CCH@CMO			cm ⁻³	
Co ₃ O ₄ /N-rGO	Full cell	0.5 mAh cm ⁻³	NA	[35]
Zn				
Co/Co-N-C	Full cell	0.17 mAh cm ⁻³	NA	[36]
Zn				