

Supporting Information

CoSe₂ nanoparticles anchored on dual 1D carbon nanotubes/N-doped carbon nanofibers as high-performance anodes for sodium-ion storage

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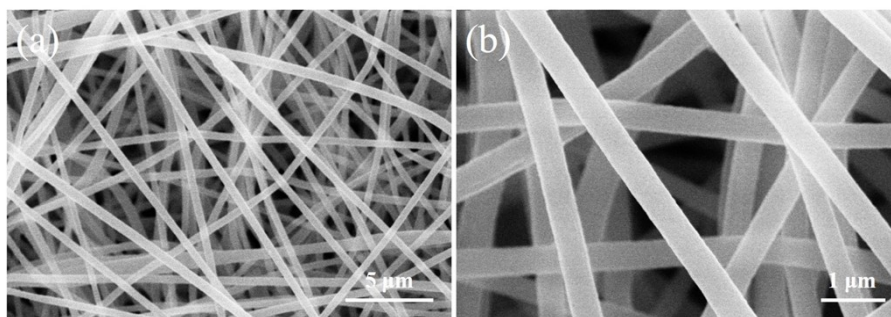


Fig. S1 SEM images of the raw fibers at different sizes.

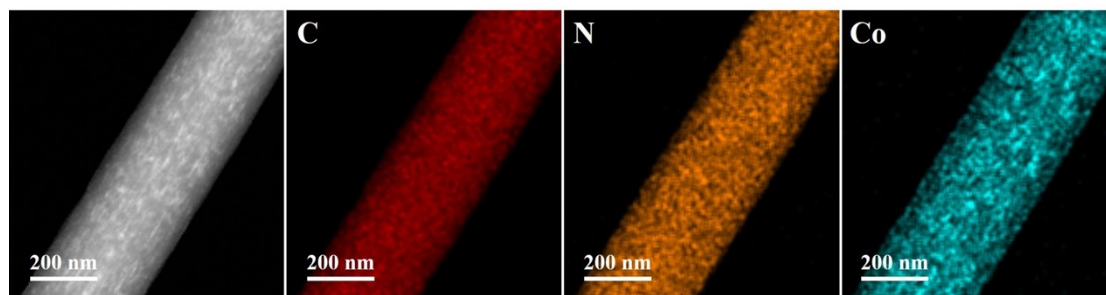


Fig. S2 EDS elemental (C, N and Co) mapping of Co-NFs.

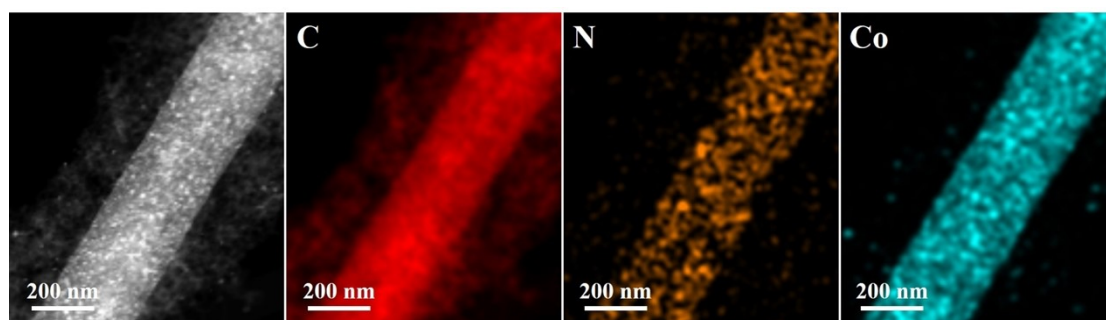


Fig. S3 EDS elemental (C, N and Co) mapping of Co@CNTs/N-CNFs.

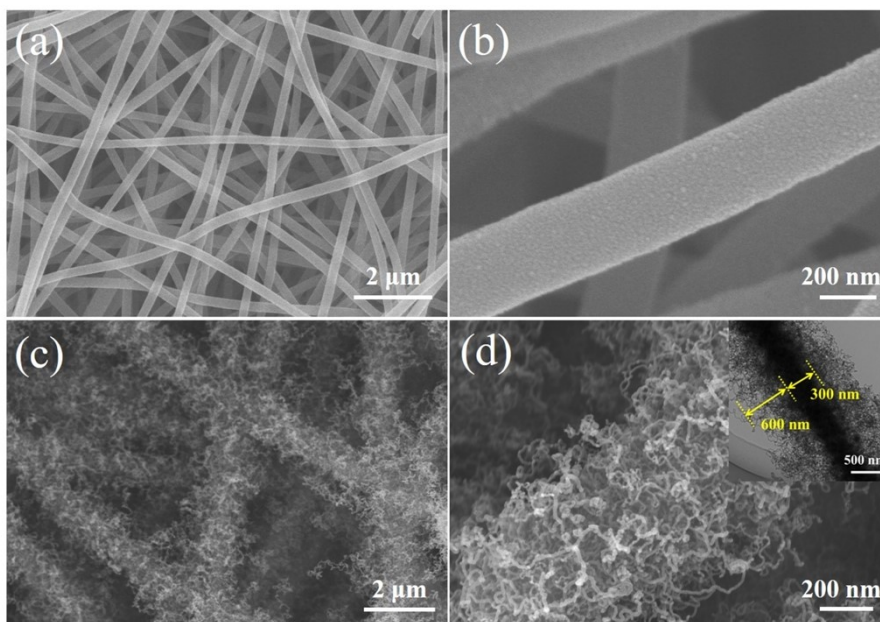


Fig. S4 (a, b) SEM images of Co@CNTs/N-CNFs-600, (c, d) SEM image (inset is the TEM) of Co@CNTs/N-CNFs-800.

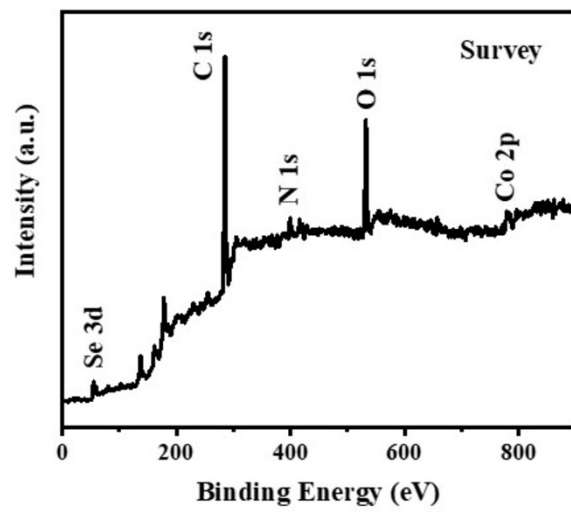


Fig. S5 Survey XPS spectra of CoSe₂@CNTs/N-CNFs.

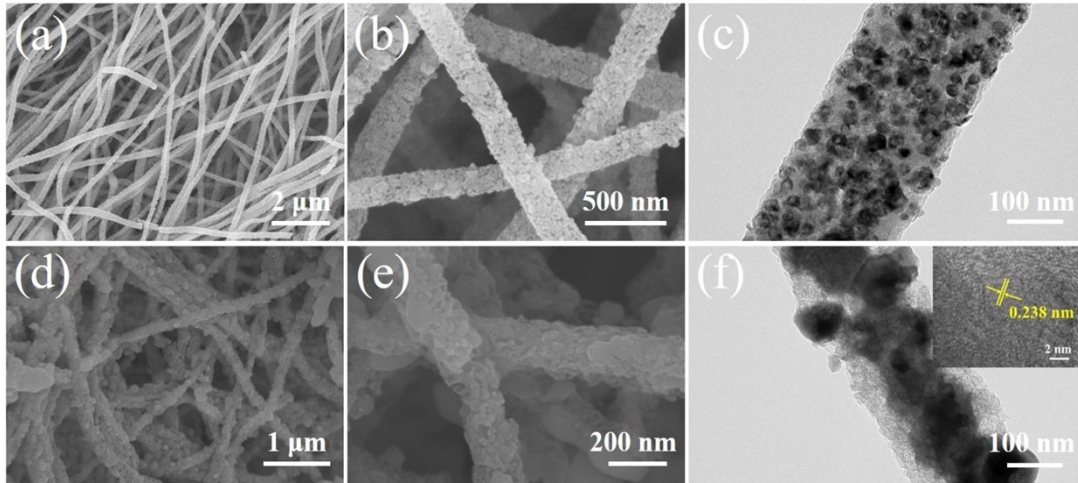


Fig. S6 (a, b) SEM images, (c) TEM image of Co@N-CNFs, (d, e) SEM images and (f) TEM image (inset is the HRTEM image of CoSe₂ particle in N-CNF) of CoSe₂@N-CNFs.

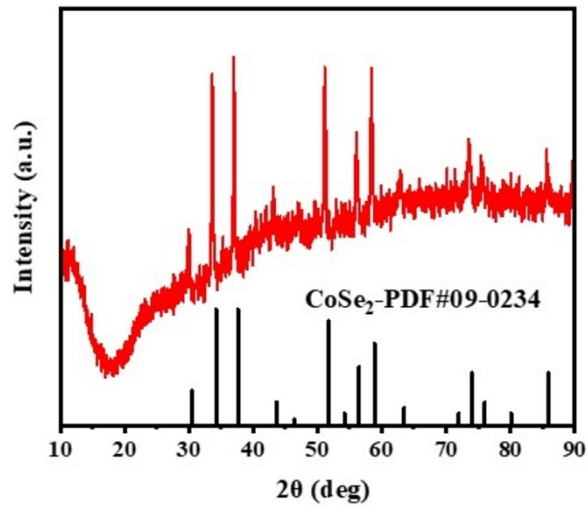


Fig. S7 XRD pattern of CoSe₂@CNFs.

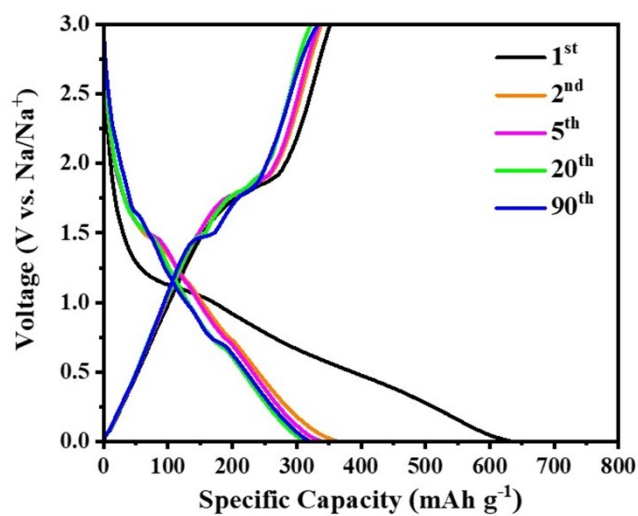


Fig. S8 Galvanostatic charge-discharge profiles of $\text{CoSe}_2@N\text{-CNFs}$ of different cycles at 0.1A g^{-1} .

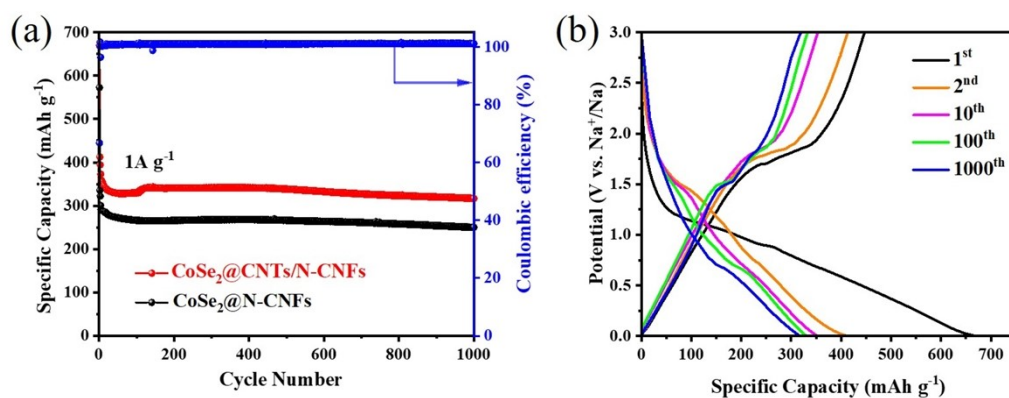


Fig. S9 (a) Cycling properties at 1A g^{-1} , (b) galvanostatic charge-discharge profiles of $\text{CoSe}_2@CNTs/N\text{-CNFs}$ of different cycles at 1A g^{-1} .

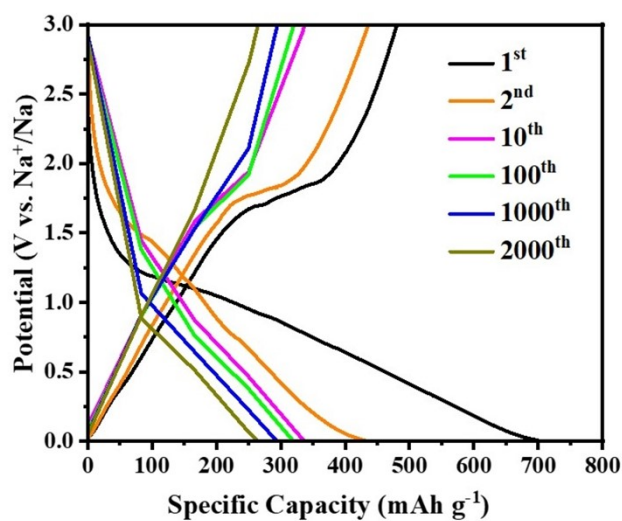


Fig. S10 Galvanostatic charge-discharge profiles of $\text{CoSe}_2@CNTs/N\text{-CNFs}$ of different cycles at 5A g^{-1} .

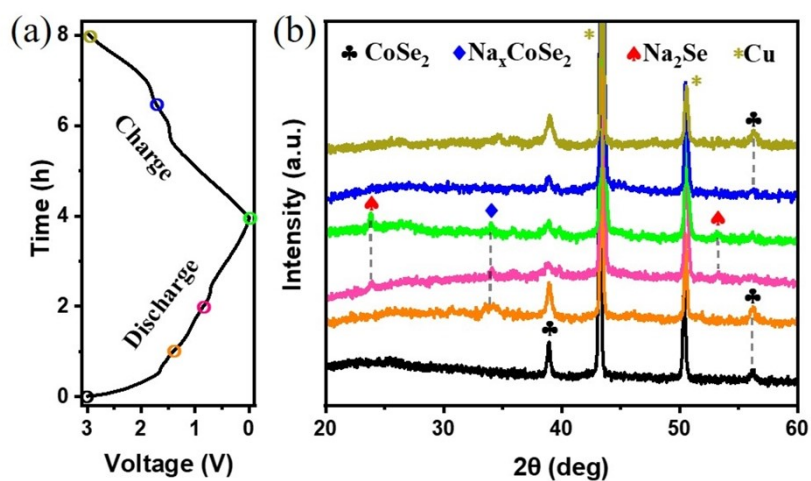


Fig. S11 (a) Charge and discharge curve after activation at 0.1 A g^{-1} , (b) ex situ XRD patterns of CoSe₂@CNTs/N-CNFs for SIB.

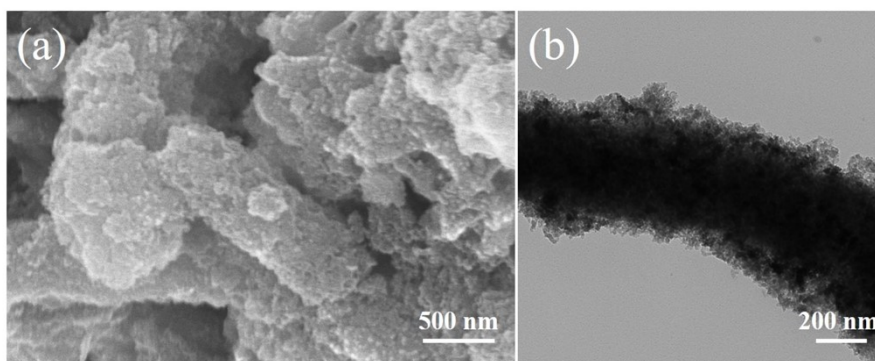


Fig. S12 SEM and TEM images of CoSe₂@CNTs/N-CNFs after 1000 sodiation/desodiation cycles.