Supporting information

Synergistic Effect of 1D Bismuth Nanowires/2D Graphene Composites for High Performance Flexible Anodes in Sodium-ion Batteries

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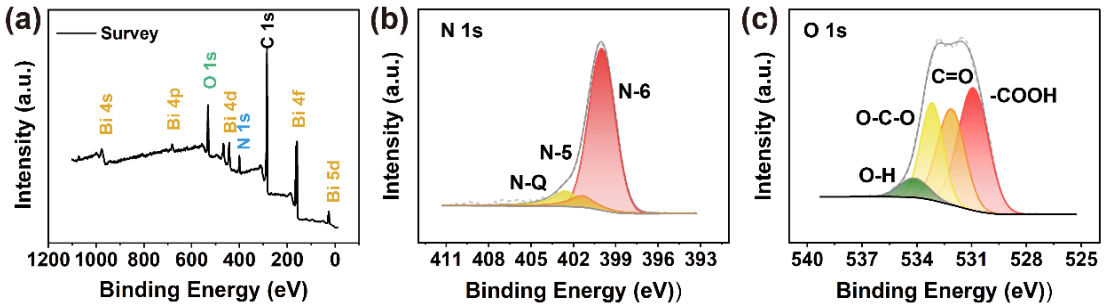

Fig. S1. XPS spectra (a), high resolution N 1s spectra (b) and high-resolution O 1s spectra of the BNW@G film.

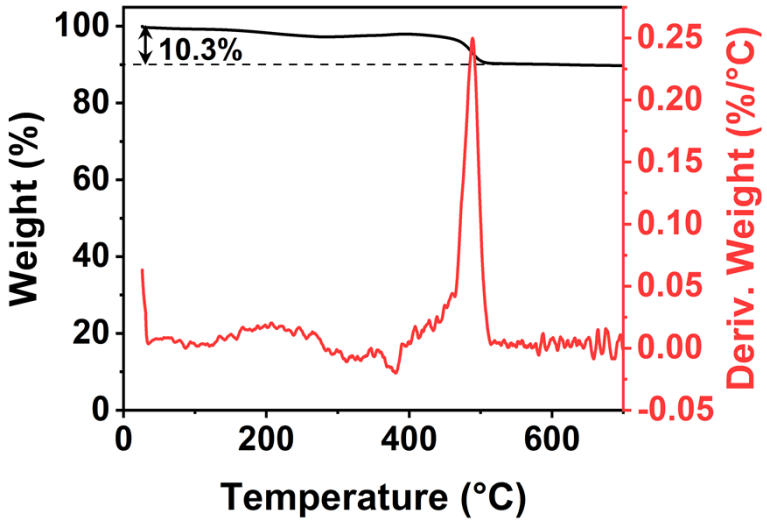

Fig. S2. TGA and DSC analysis of the BNW@G film.

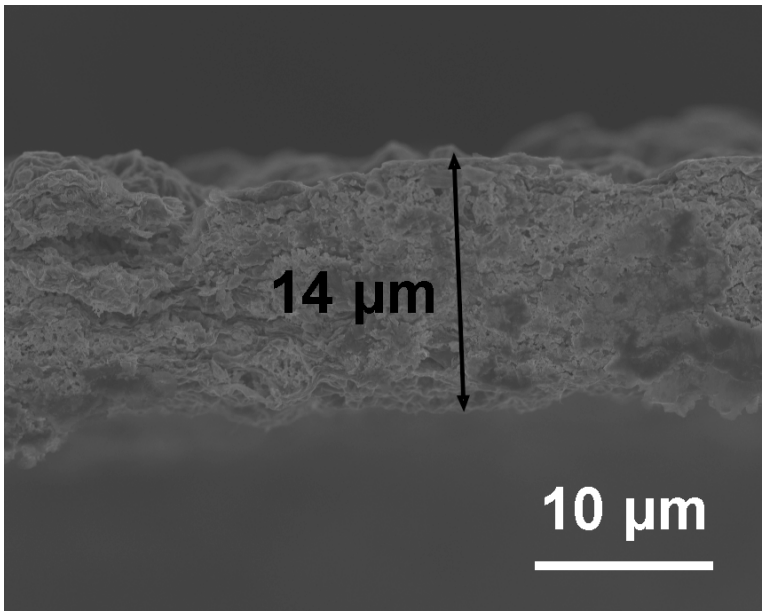

Fig. S3. SEM image of the cross section of the BNW@G film.

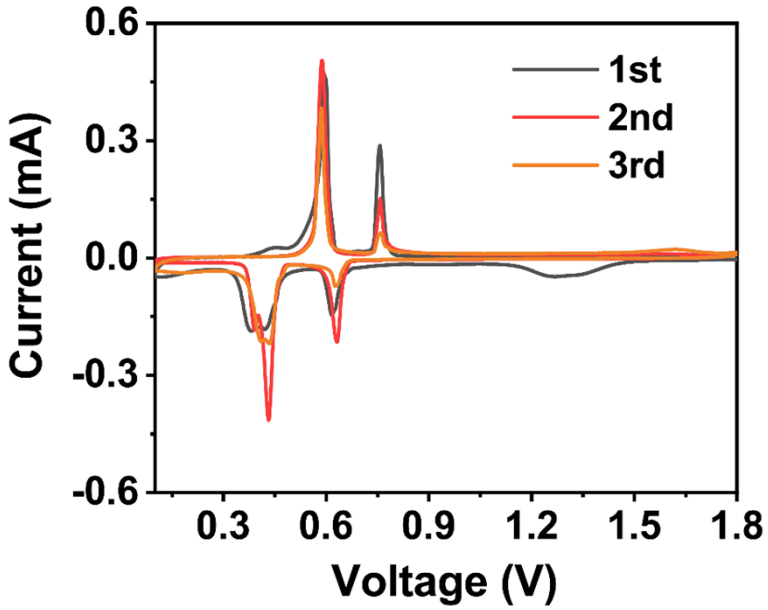

Fig. S4. The CV curves of the BNW electrode at 0.1 mV s^{-1}.

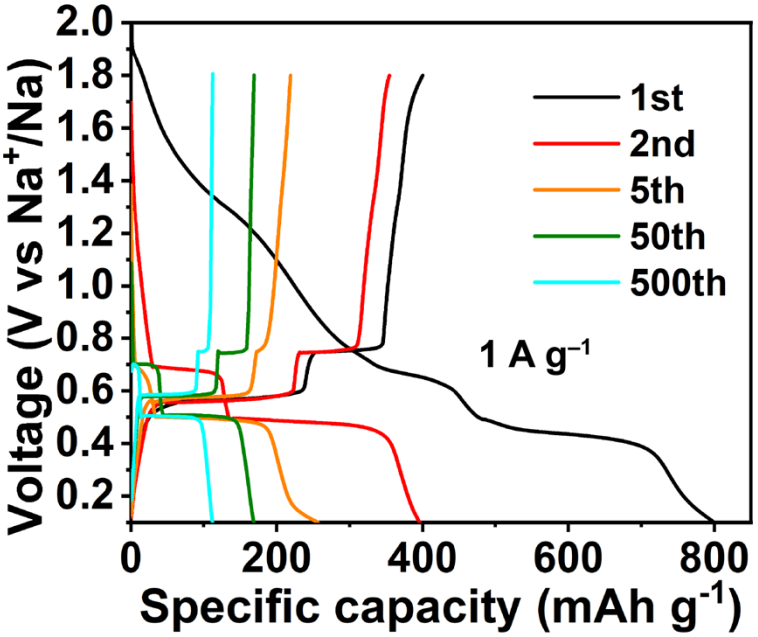

Fig. S5. The discharge/charge curves of the BNW electrode in NIBs at 1 A g^{-1}.

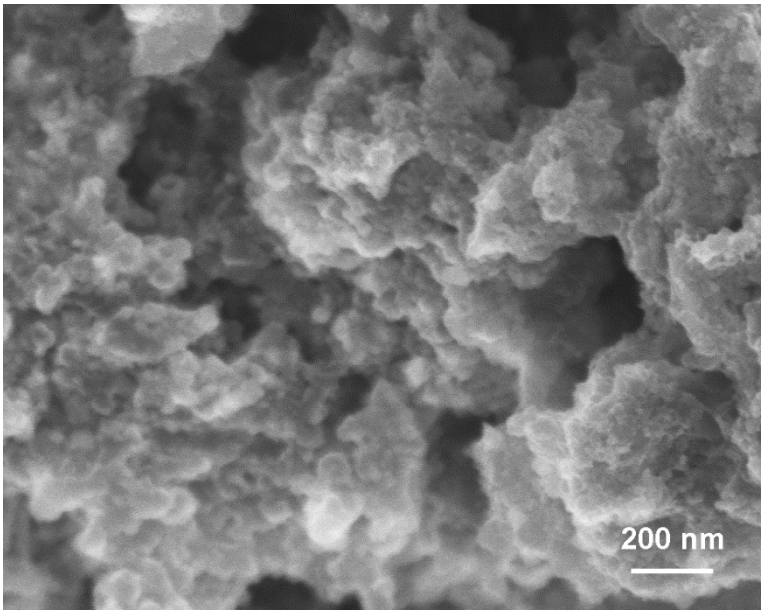

Fig. S6. SEM image of the BNW anode after 50 cycles at 0.1 A g^{-1}.

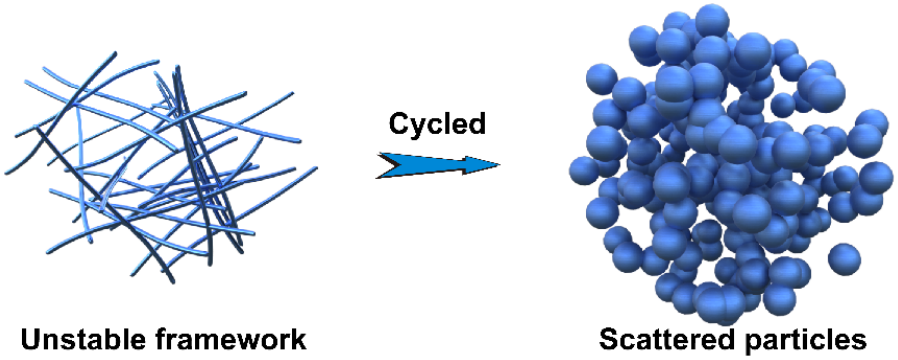

Fig. S7. Schematically illustration of the morphology evolution of the BNW electrode.

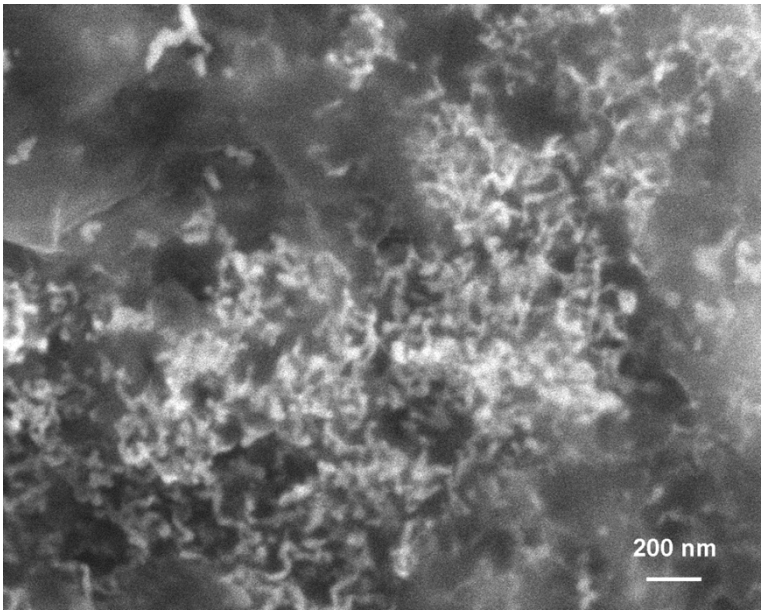

Fig. S8. SEM image of the BNW@G film after 50 cycles at 0.1 A g^{-1}.

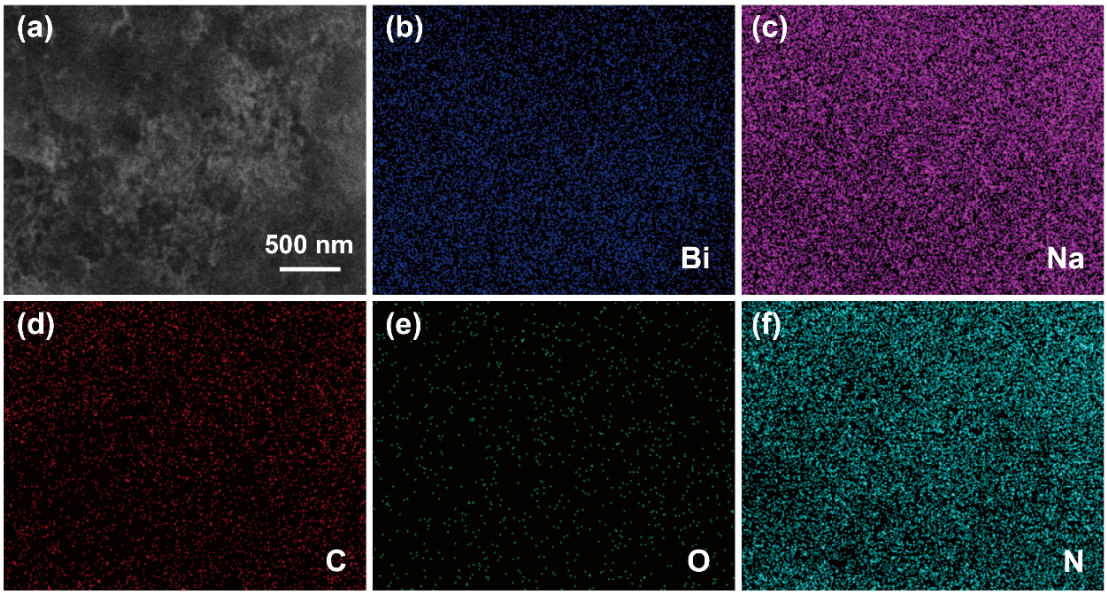

Fig. S9. High-magnification image (a) and the corresponding element mapping (Bi, Na, C, O and N) (b-f) of the BNW@G film after 50 cycles at 0.1 A g^{-1}.

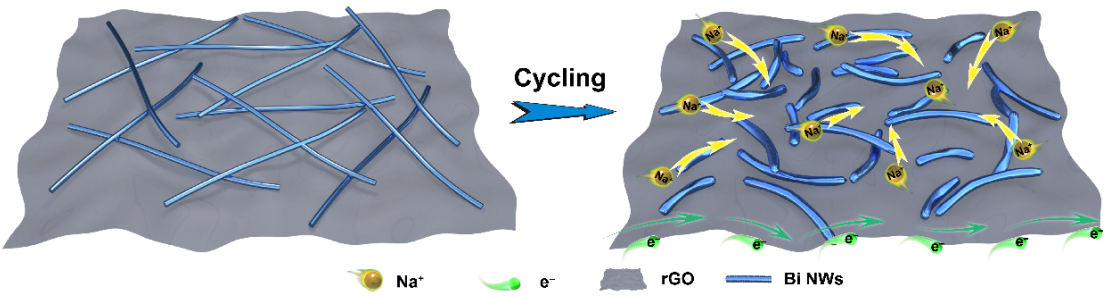

Fig. S10. Schematically illustration of the morphology evolution of the flexible BNW@G film electrode.

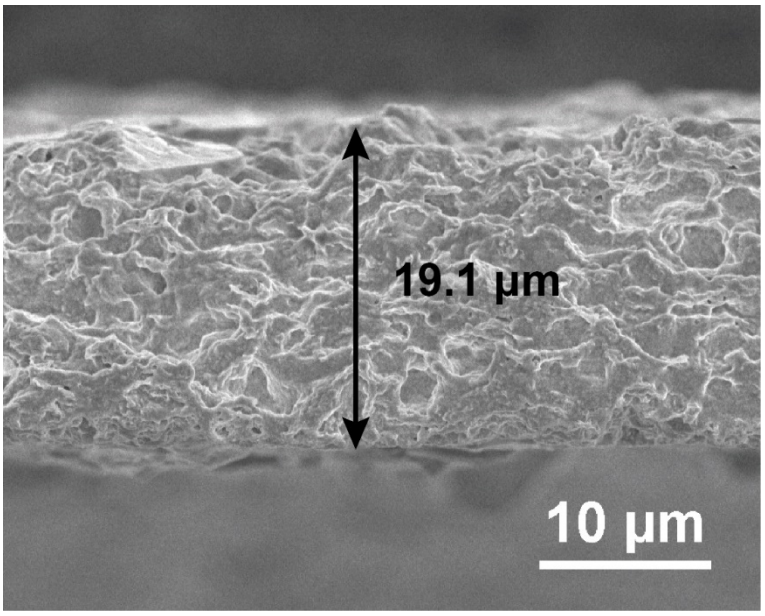

Fig. S11. SEM image of the cross section of the BNW@G film after 50 cycles at 0.1 A g^{-1}.

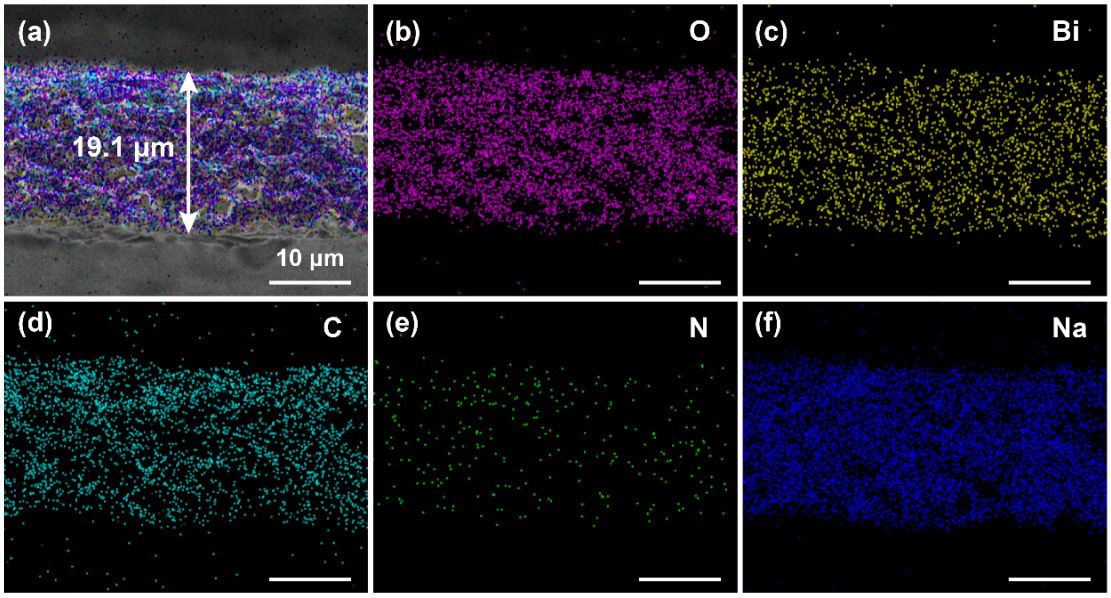

Fig. S12. High-magnification image (a) and the corresponding element mapping (Bi, Na, C, O and N) (b-f) of the cross section of the BNW@G film after 50 cycles at 0.1 A g^{-1}.

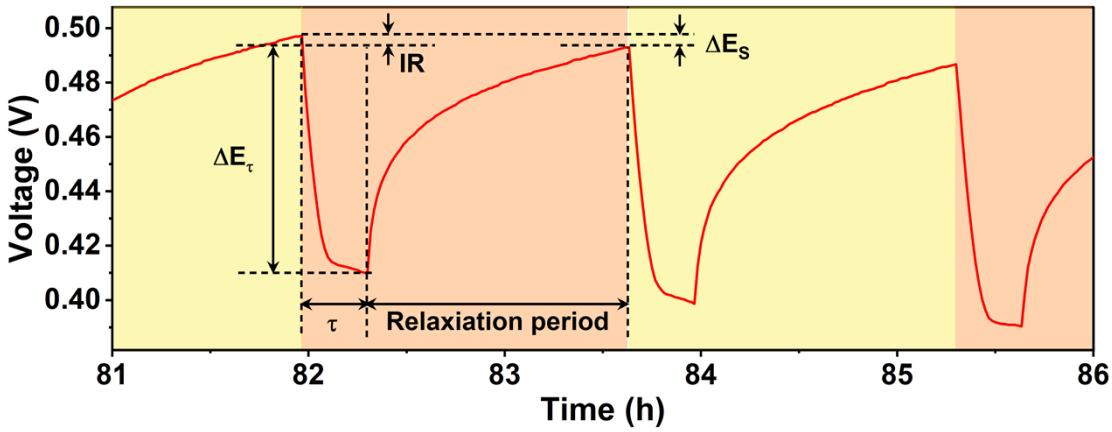

Fig. S13. Calculation of the diffusion coefficient. Schematic of the calculation of the diffusion coefficient using the GITT technique.

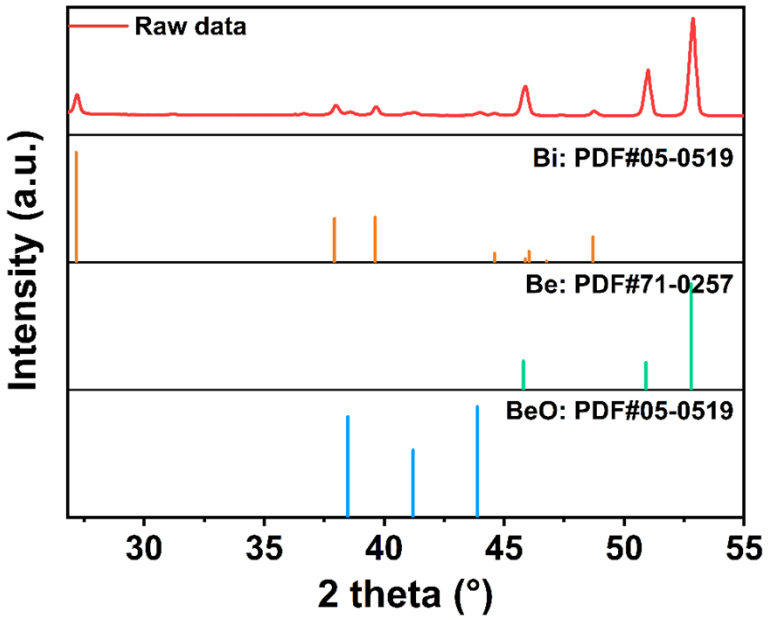

Fig. S14. XRD pattern of the BNW@G electrode in the in-situ XRD test devices.

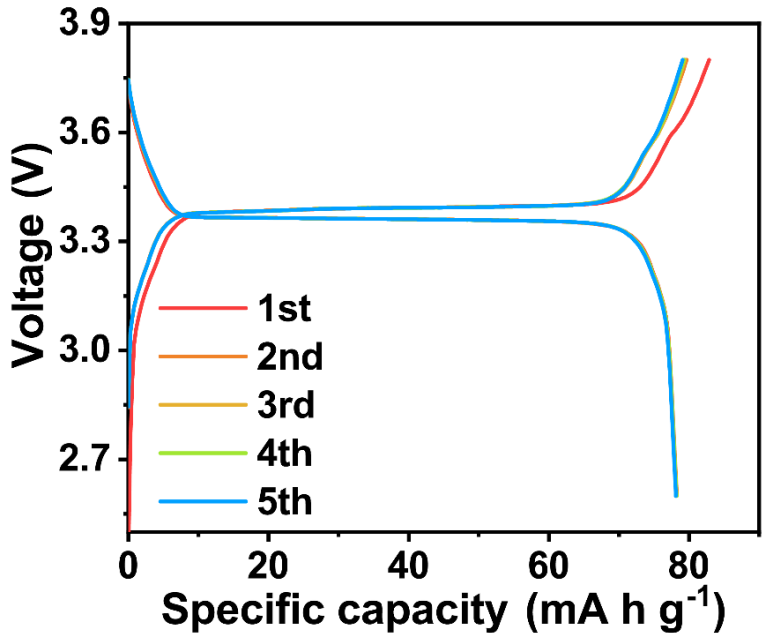

Fig. S15. The discharge/charge curves of the NVP@G electrode under activation in NIBs at 0.1 A g^{-1}.