

Electronic Supplementary Information

Exfoliated NbSe₂ Nanosheet@Polypyrrole Hybrid Nanocomposites as a High Performance Anode of Lithium-Ion Batteries

Byung-Ho Kang^{a,+}, Seulgi Shin^{b,+}, Kunwoo Nam^a, Joonwon Bae^c, Jong-Min Oh^b, Sang-Mo Koo^b, Hiesang Sohn^d, Sung-Hoon Park^{*a}, and Weon Ho Shin^{*b}

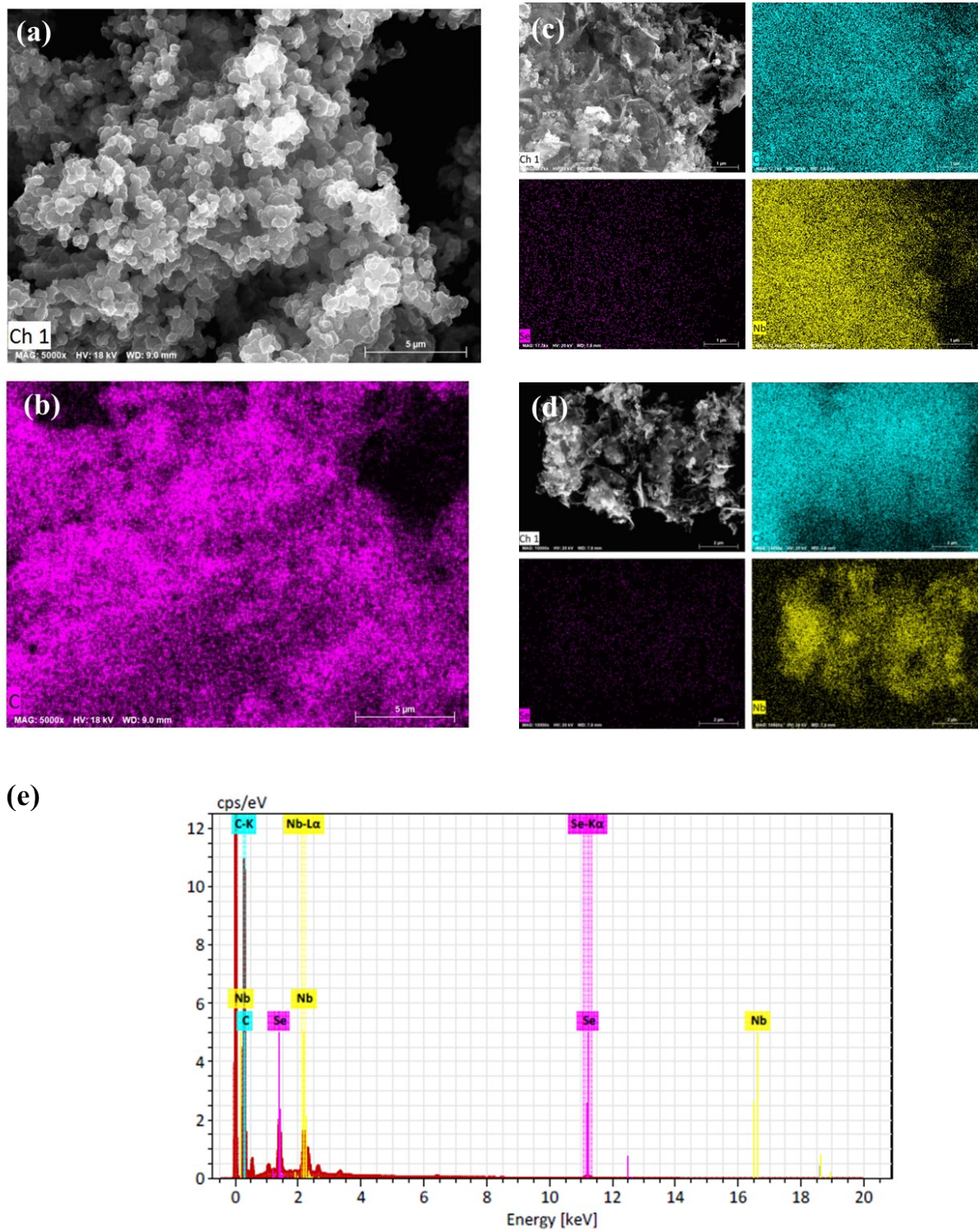


Figure S1. Morphology analysis of PPy and NbSe₂@PPy nanocomposite. (a) and (b) SEM and EDS mapping images of PPy. (c) and (d) EDS mapping image of NbSe₂@PPy-1 and NbSe₂@PPy-2. (e) Energy dispersive spectrum of NbSe₂@PPy-1 composite.

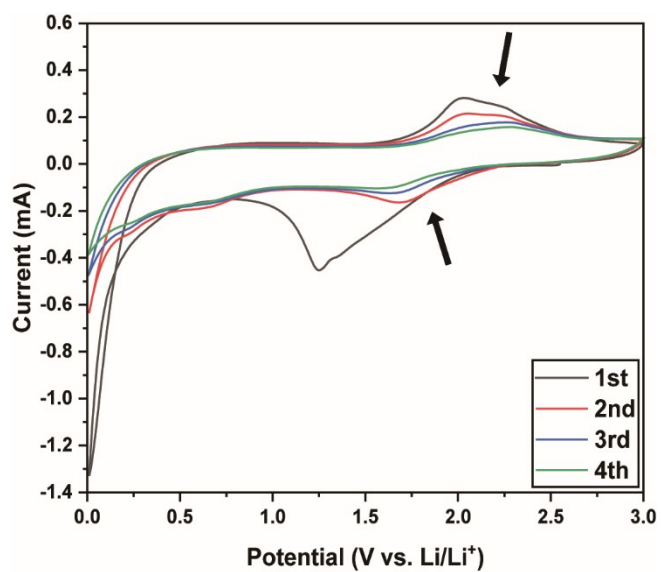


Figure S2. Cyclic voltammetry graphs of NbSe₂@PPy-2 for first 4 cycles.

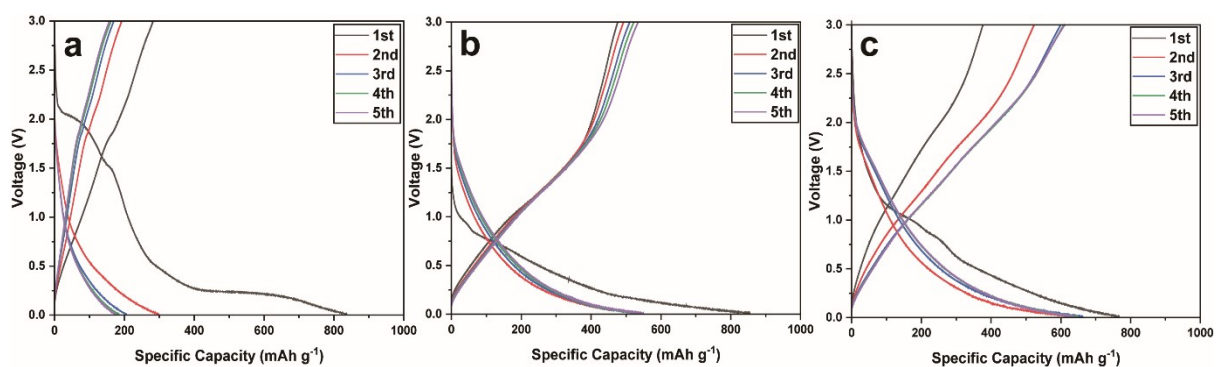


Figure S3. GCD graphs of first 5 cycles for (a) NbSe₂, (b) PPy, (c) NbSe₂@PPy-2.

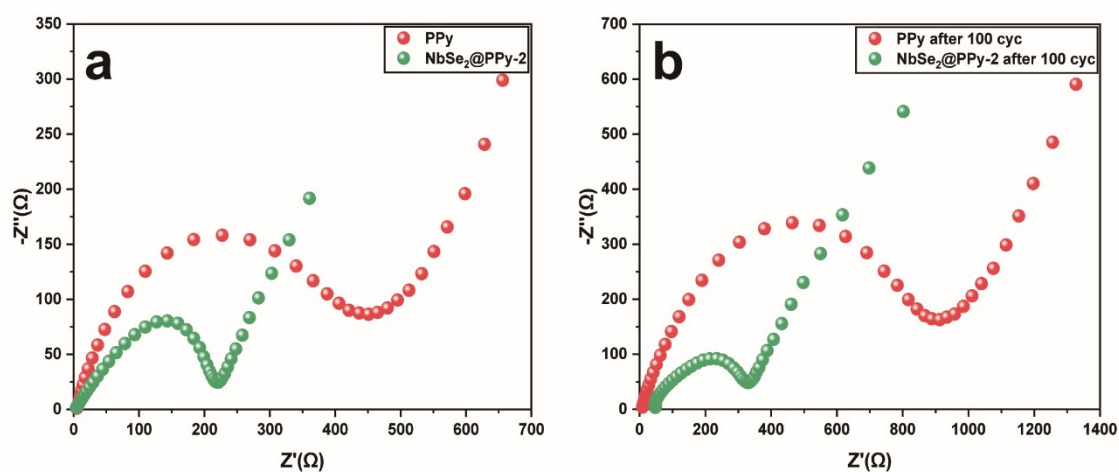


Figure S4. (a) Nyquist plots of PPy and NbSe₂-PPy-2 before cycling, (e) Nyquist plots of PPy and NbSe₂-PPy-2 after 100 cycles.

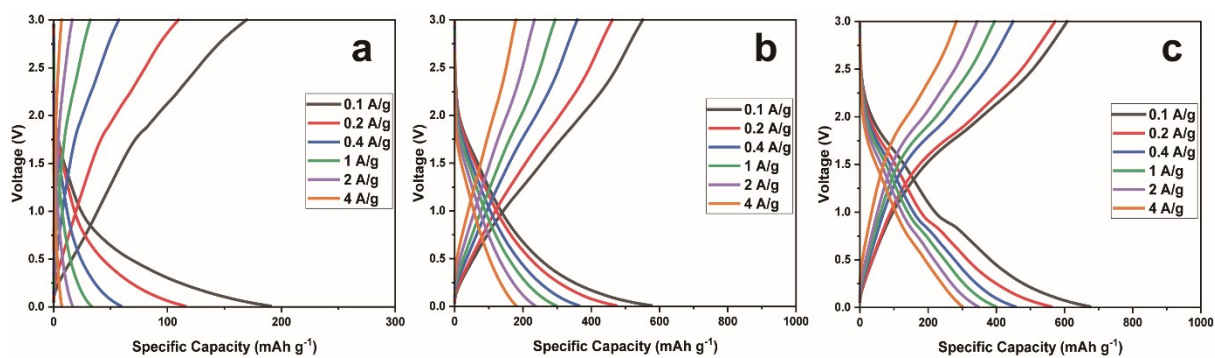


Figure S5. GDC graphs of (a) NbSe₂, (b) PPy, and (c) NbSe₂@PPy-2 by increasing the current density from 0.1 A/g to 4 A/g.