

Supporting Information for

Nanostructured CuP_2/C Composites as High-Performance Anode Materials for Sodium Ion Batteries

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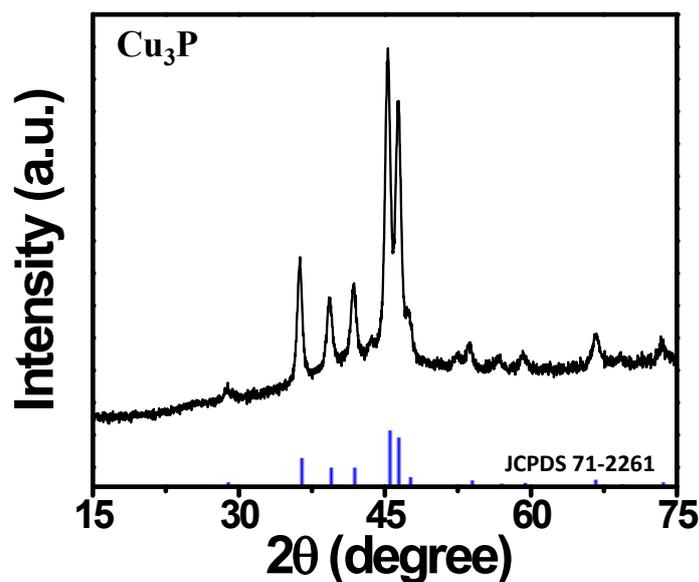


Figure S1. XRD pattern of Cu_3P prepared with a starting Cu to P ratio of 3 using HEBM.

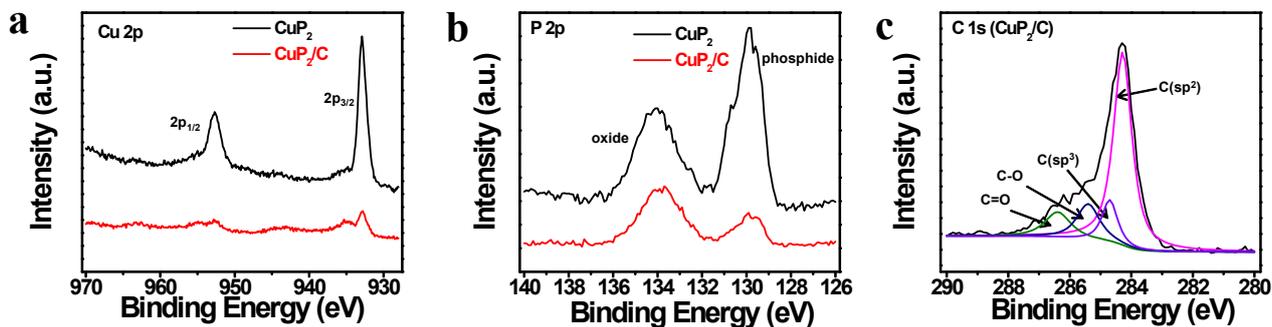


Figure S2. (a) Cu 2p, (b) P 2p and (c) C 1s XPS spectra of pure CuP₂ and CuP₂/C composites.

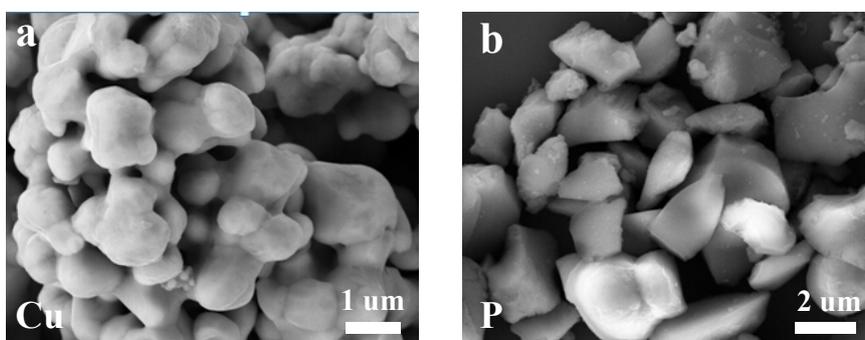


Figure S3. SEM images of (a) Cu and (b) P precursor powders for HEBM.

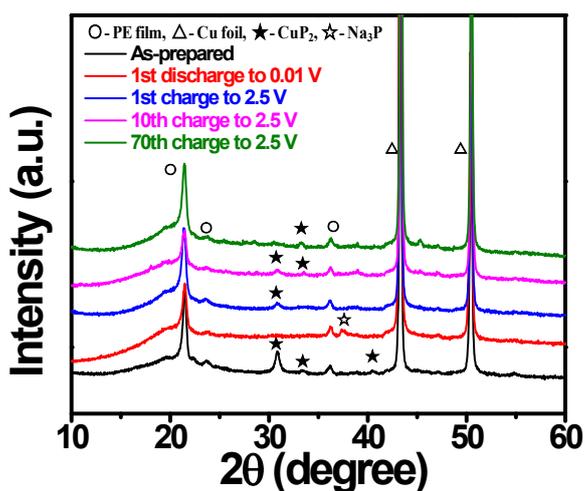


Figure S4. XRD patterns of electrode materials in different charge and discharge states in comparison with the initial state.

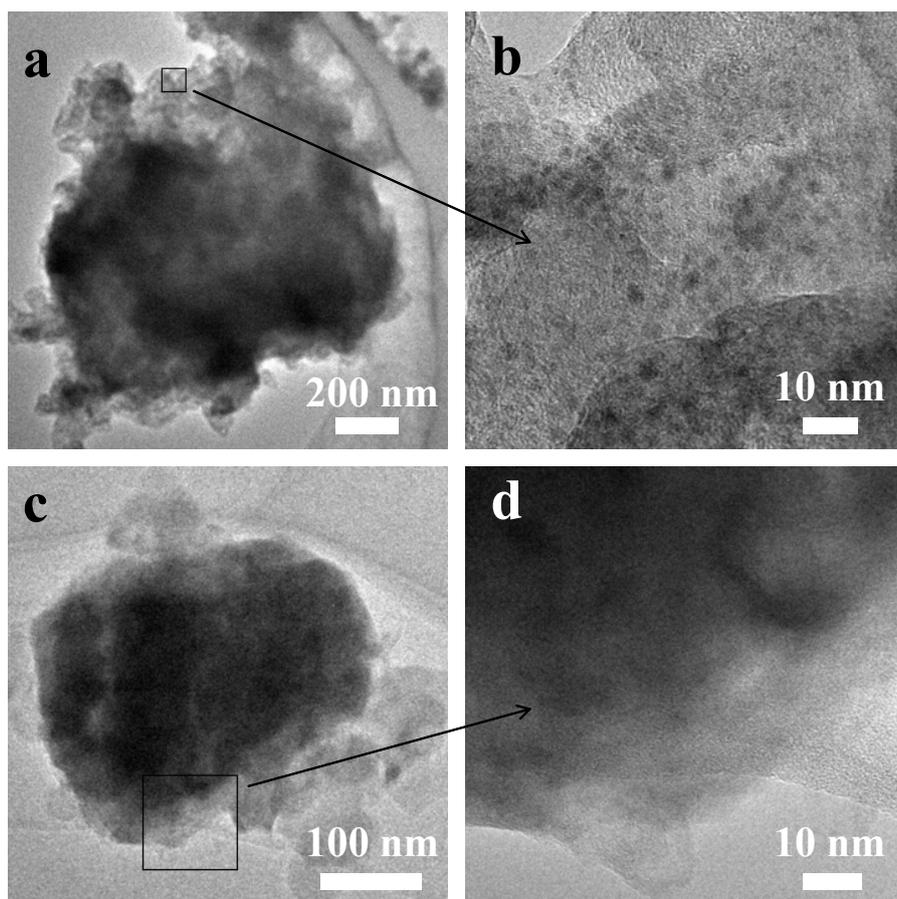


Figure S5. TEM images of electrode materials at (a,b) the fully discharged state and (c,d) the fully charged state.

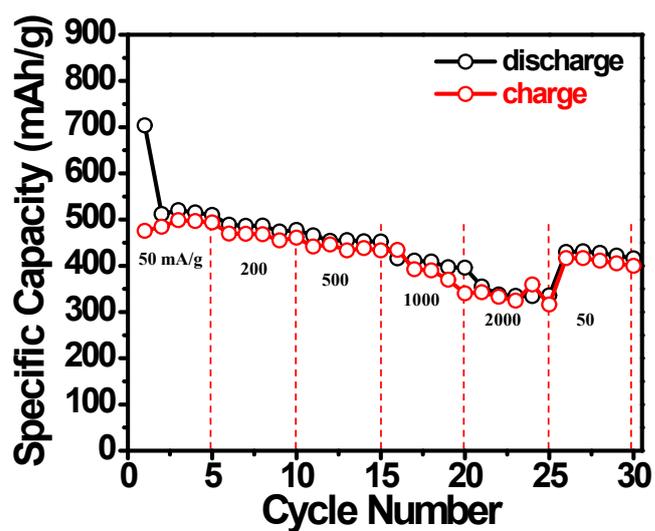


Figure S6. Rate capability of CuP_2/C electrode materials under fixed discharge current density (50 mA/g) and varying charge current densities as indicated.

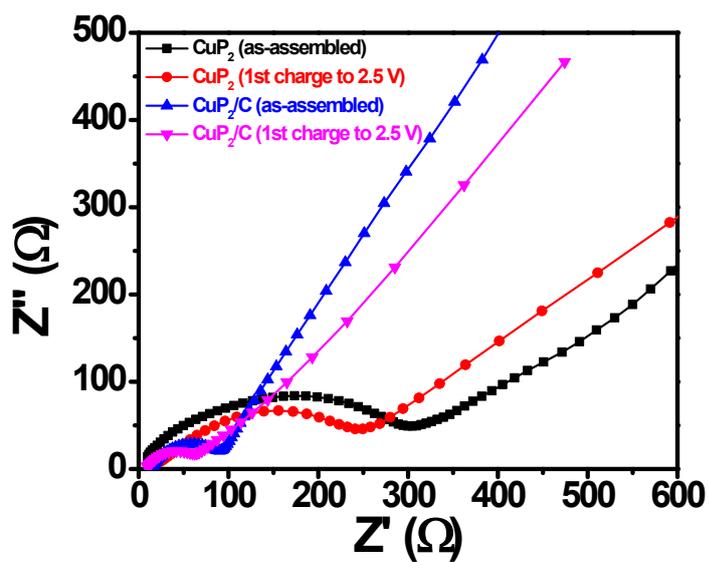


Figure S7. Electrochemical impedance spectroscopy (EIS) analysis of CuP_2 and CuP_2/C at both the as-assembled state and the 1st recharge back to 2.5 V.

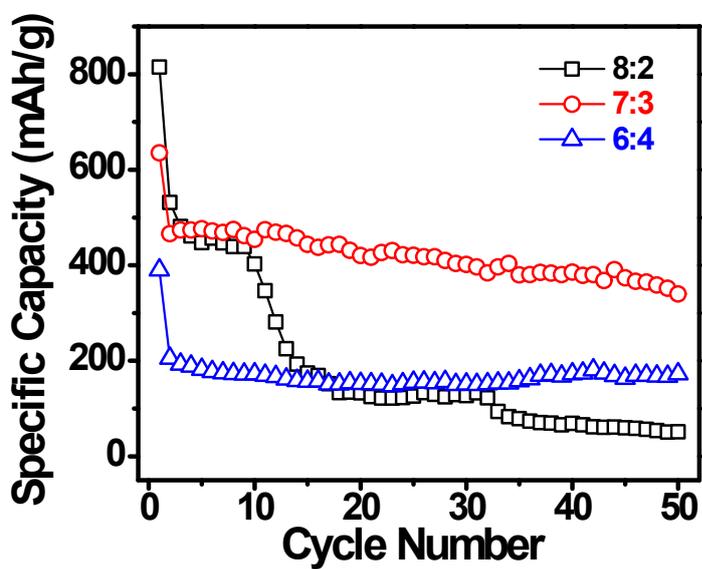


Figure S8. Cycling performances of CuP_2/C composites with different CuP_2 to carbon black ratios.

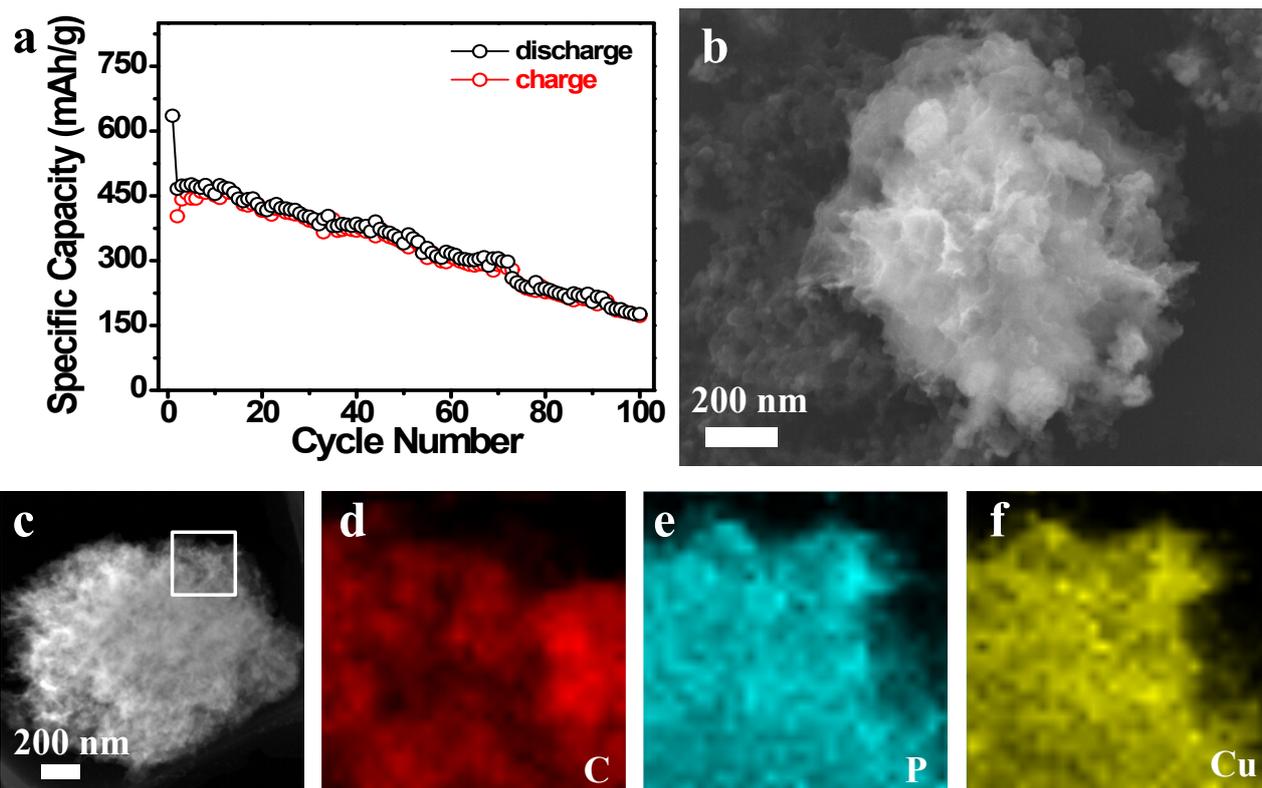


Figure S9. (a) Long-term cycling performance of CuP_2/C composites; (b) SEM image, (c) STEM image and (d-f) corresponding EDS elemental mapping of the electrode material after 70 charge/discharge cycles.