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Supplementary Materials: PPy-Modified Prussian Blue Cathode Materials for Low-Cost and Cycling-Stable Aqueous Zinc-Based Hybrid Battery

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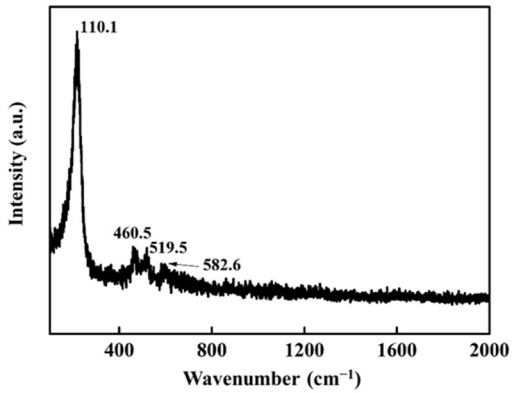

Figure S1. Raman spectrums of NMHFC@PPy.

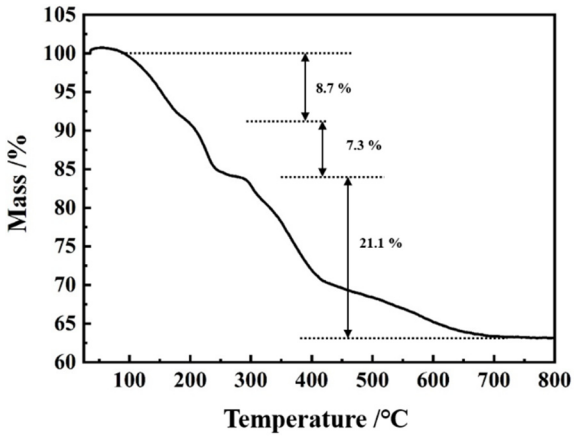

Figure S2. TG curve of NMHFC@PPy.

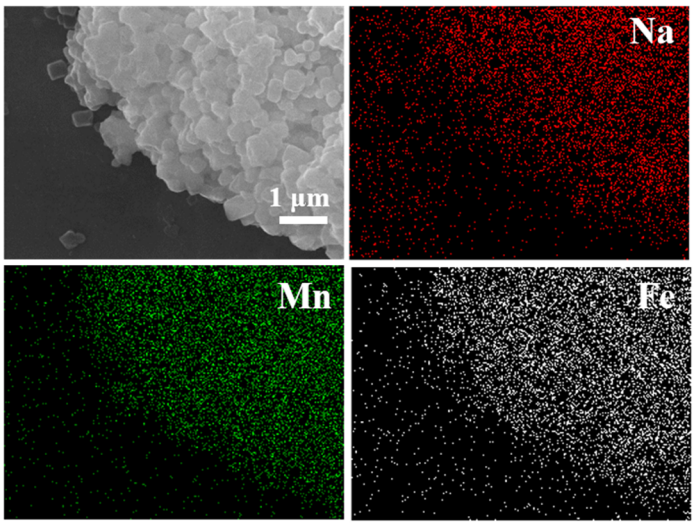

Figure S3. EDS-mapping elemental analysis of NMHFC.

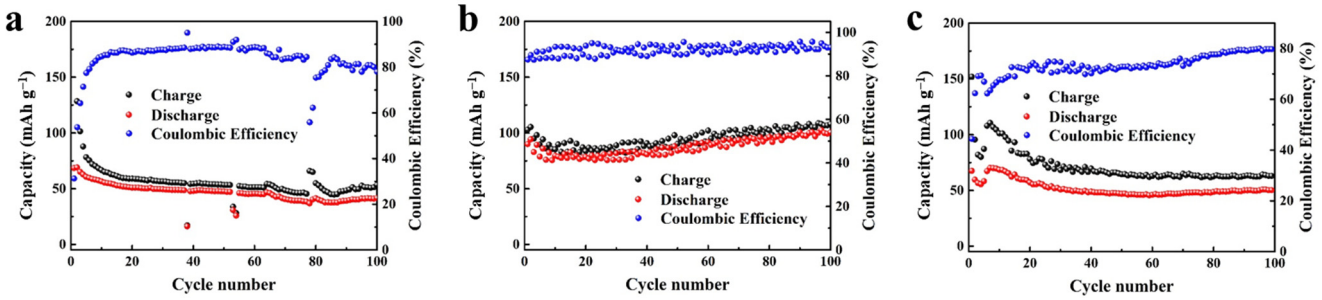

Figure S4. Cycling performance curves of NMHFC@PPy in (**a**) Li-Zn, (**b**) Na-Zn and (**c**) K-Zn mixed ionic electrolytes at current density of 50 mA g^{-1}, respectively.

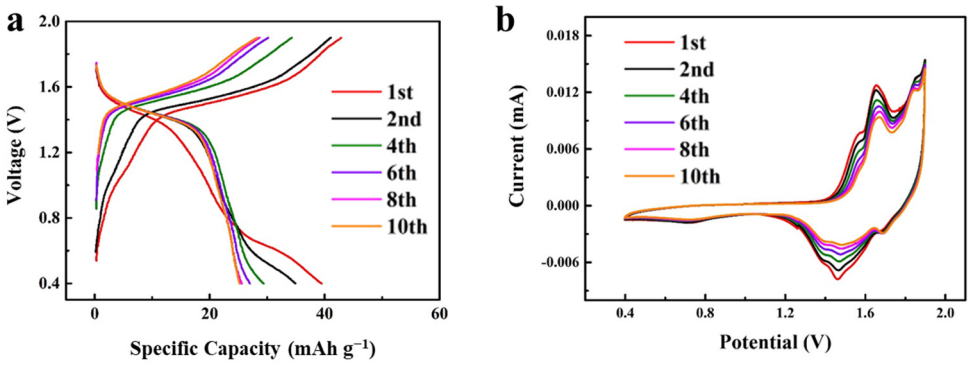

Figure S5. (**a**) charge and discharge curves of NMHFC from 1st to 10th cycles at a current density of 200 mA g^{-1}, (**b**) CV curves of NMHFC at a scan rate of 0.1 mV s^{-1}.

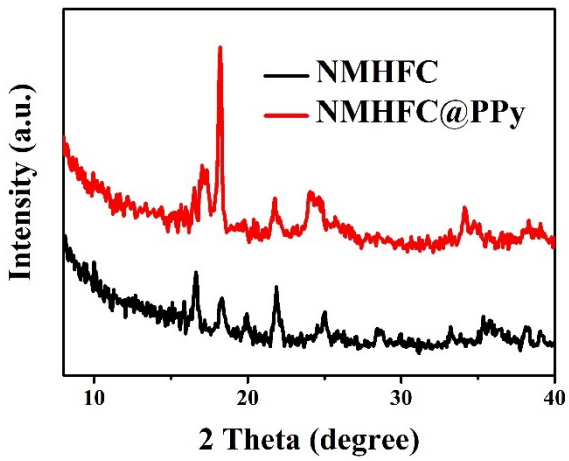

Figure S6. XRD patterns of NMHFC@PPy and NMHFC electrode material after 100 cycles.

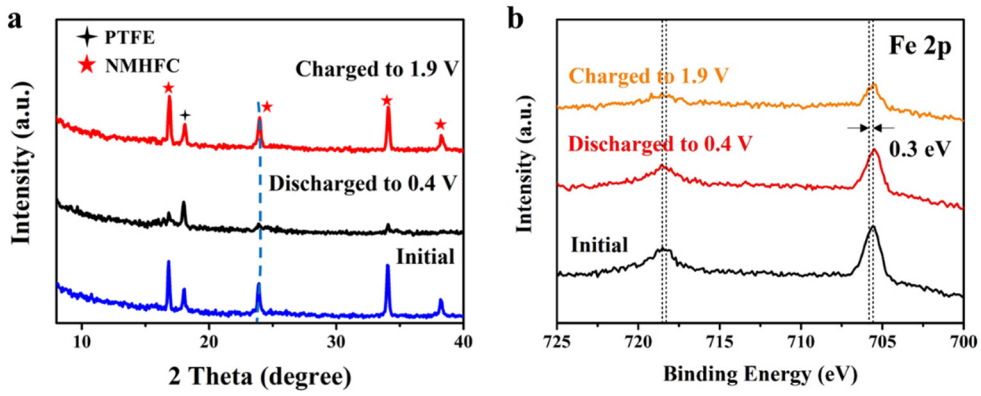

Figure S7. (**a**) Ex-situ XRD and (**b**) ex-situ Fe 2p XPS patterns of NMHFC cathode material during the first cycle in different states.

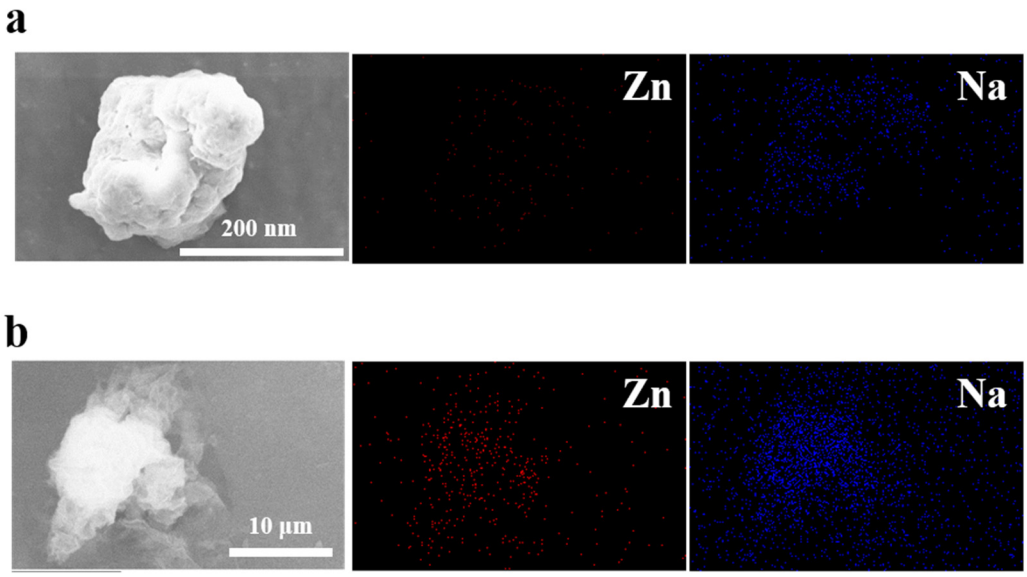

Figure S8. SEM and EDS-mapping analyses of NMHFC@PPy electrode material (**a**) before discharge and (**b**) after discharge to 0.4 V.

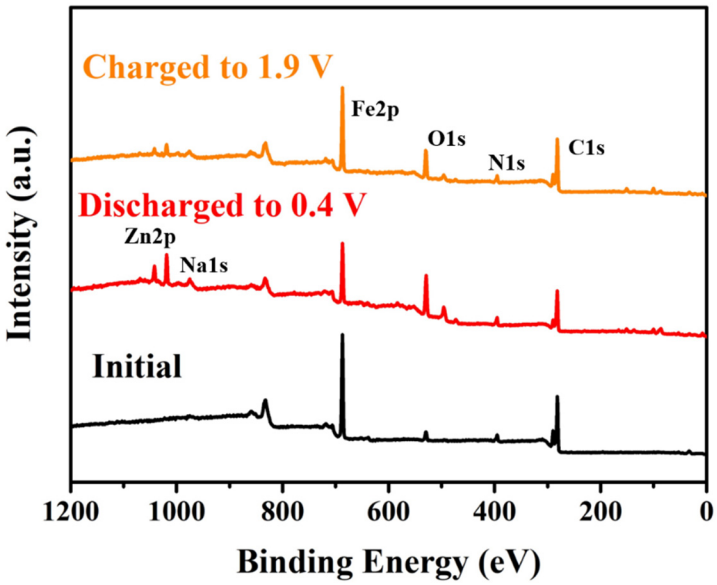

Figure S9. XPS spectra of NMHFC@PPy in different states.

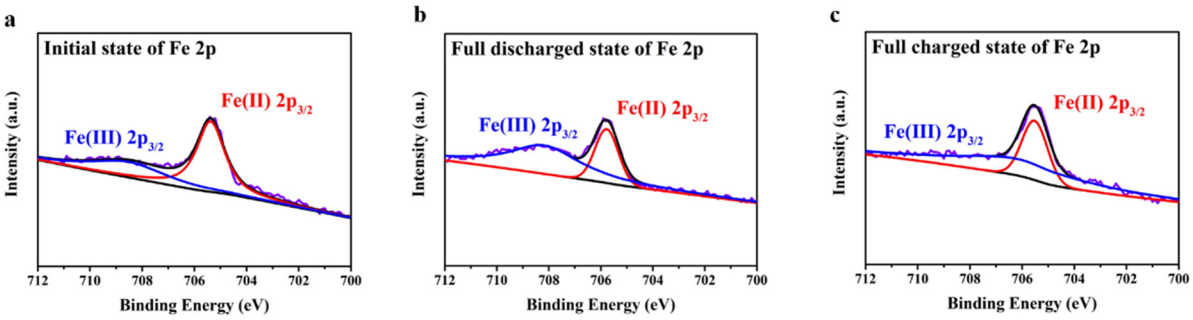

Figure S10. Fe 2p XPS spectra of NMHFC@PPy in different states.