Supporting Information

Naphthaquinone-based Composite Cathodes for Aqueous Rechargeable Zinc-ion Batteries

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Supporting figures:

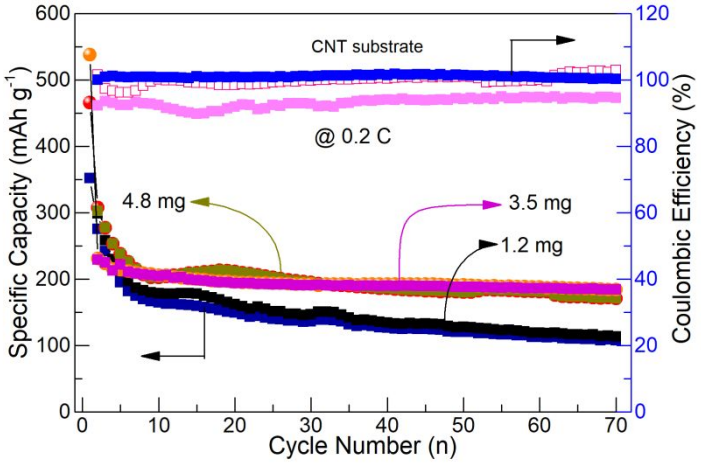

Figure S1. Electrochemical performance optimization with different mass loadings.

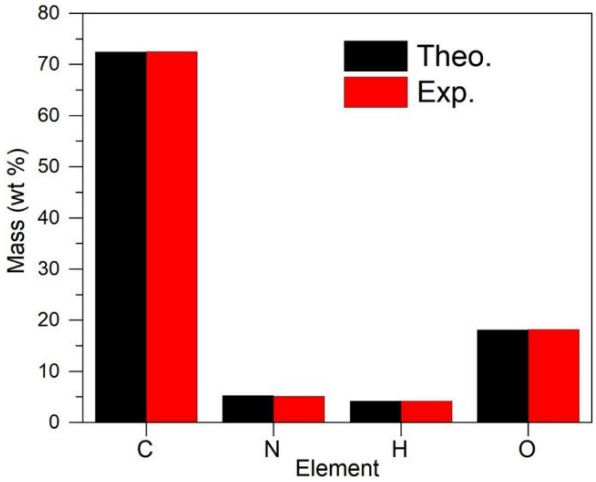

Figure S2. Elemental analysis of the as-synthesized APh-NQ.

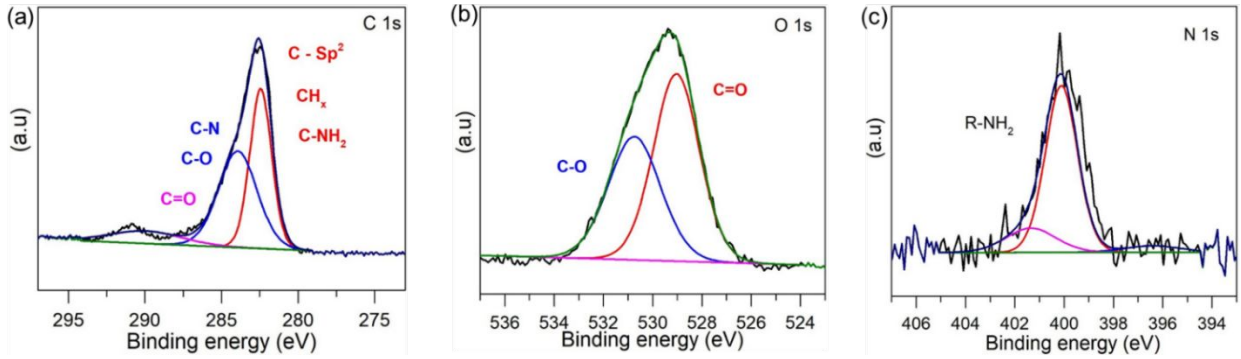

Figure S3. High-resolution X-ray photoelectron spectroscopy (XPS) spectra of pristine APh-NQ. (a) C 1s, (b) O 1s, and (c) N 1s.

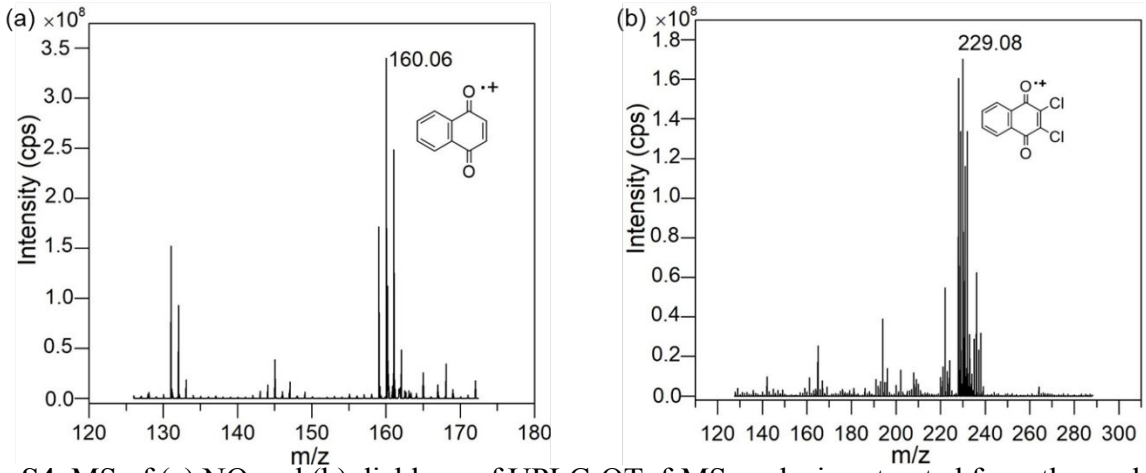

Figure S4. MS of (a) NQ and (b) dichlone of UPLC-QTof-MS analysis extracted from the cycled electrodes.

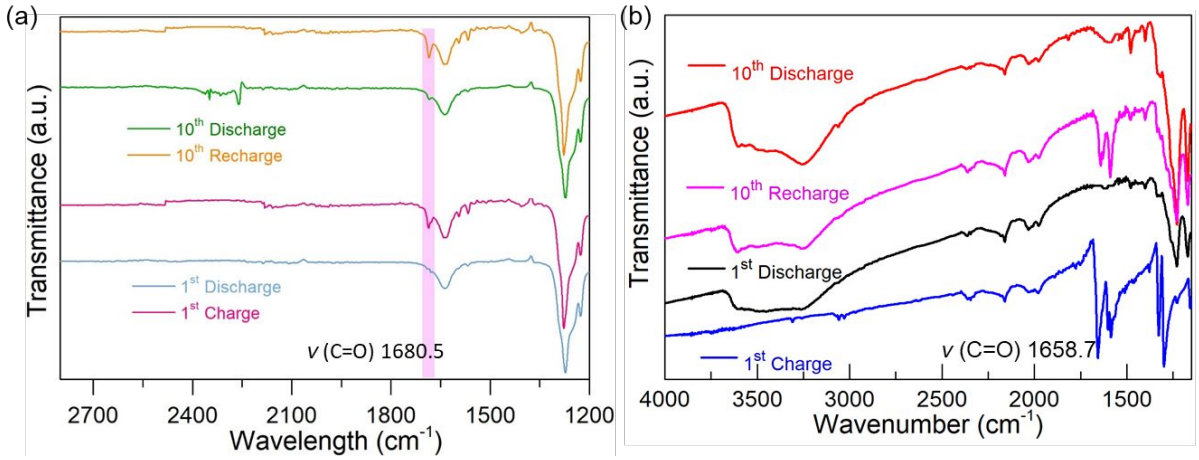

Figure S5. FTIR spectra of (a) dichlone and (b) NQ at 1st and 10th discharge/recharged state at complete discharge/charge voltage at 0.1 V and 1.7 V, respectively

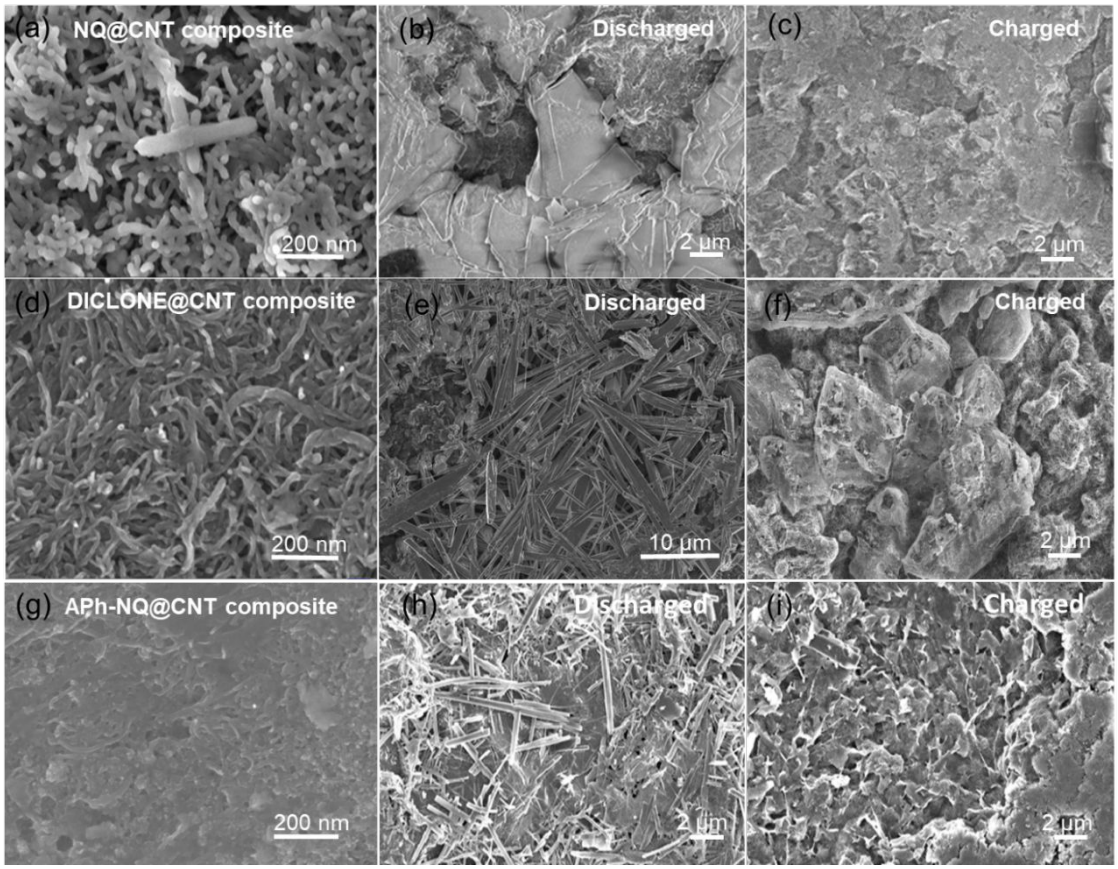

Figure S6. Typical SEM images of NQ@CNT at (a) pristine, (b) discharged, (c) charged states, dichlone@CNT at (d) pristine, (e) discharged, (f) charged states, and APh-NQ@CNT at (g) pristine, (h) discharged, (i) charged states.

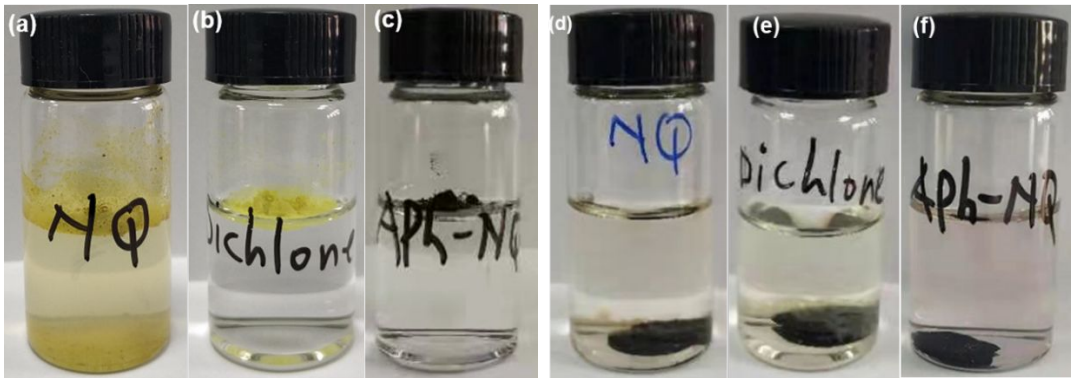

Figure S7. Digital photos of dissolution test of pristine samples (a) NQ, (b) dichlone, and (c) APh-NQ and cycled-composite electrodes (d) NQ@CNT, (e) dichlone@CNT, and (f) APh-NQ@CNT, which show faintly colored electrolyte after one week storage.

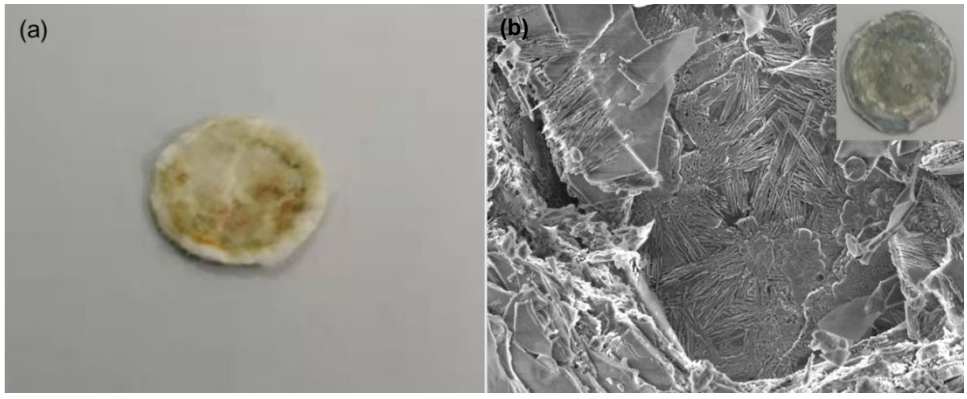

Figure S8. Digital photo of glass fiber separator (a) and the SEM image of (b) zinc anode after long cycles, the inset is the photo of the zinc anode.