Electronic Supplementary Material (ESI) for Polymer Chemistry.

Structural design of pyrene-functionalized TEMPO containing polymers for enhanced electrochemical storage performance

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Table S1. The interaction energy for graphene/pyrene derivatives and graphene/TEMPO.

Molecules	*ΔE* (eV)
1-aminopyrene	-0.022
1-pyrenemethanol	0.006
4-amino-TEMPO	0.071

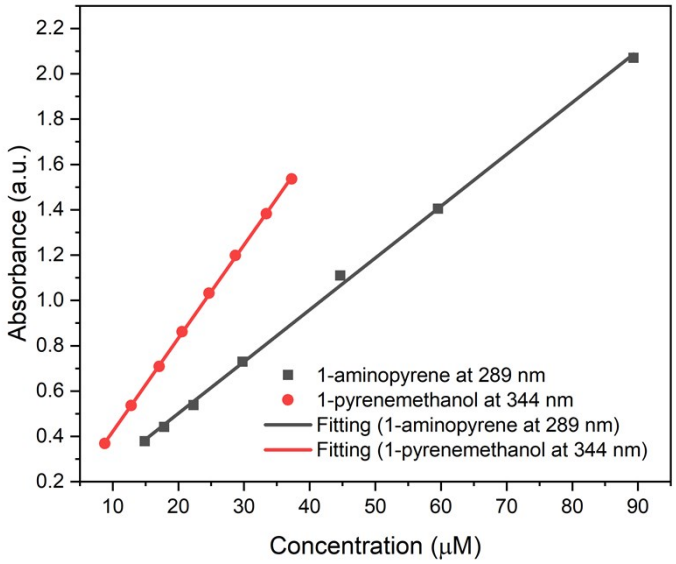


Figure S1. Calibration curves of pyrene derivatives.

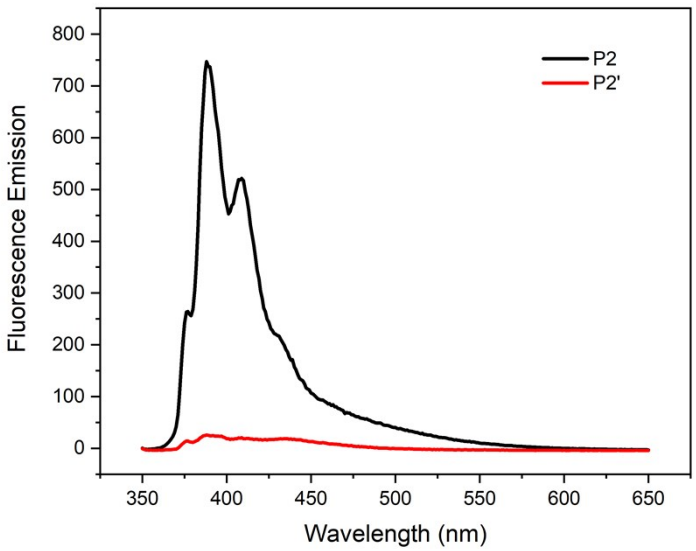


Figure S2. Fluorescence spectra of P2 and P2'.

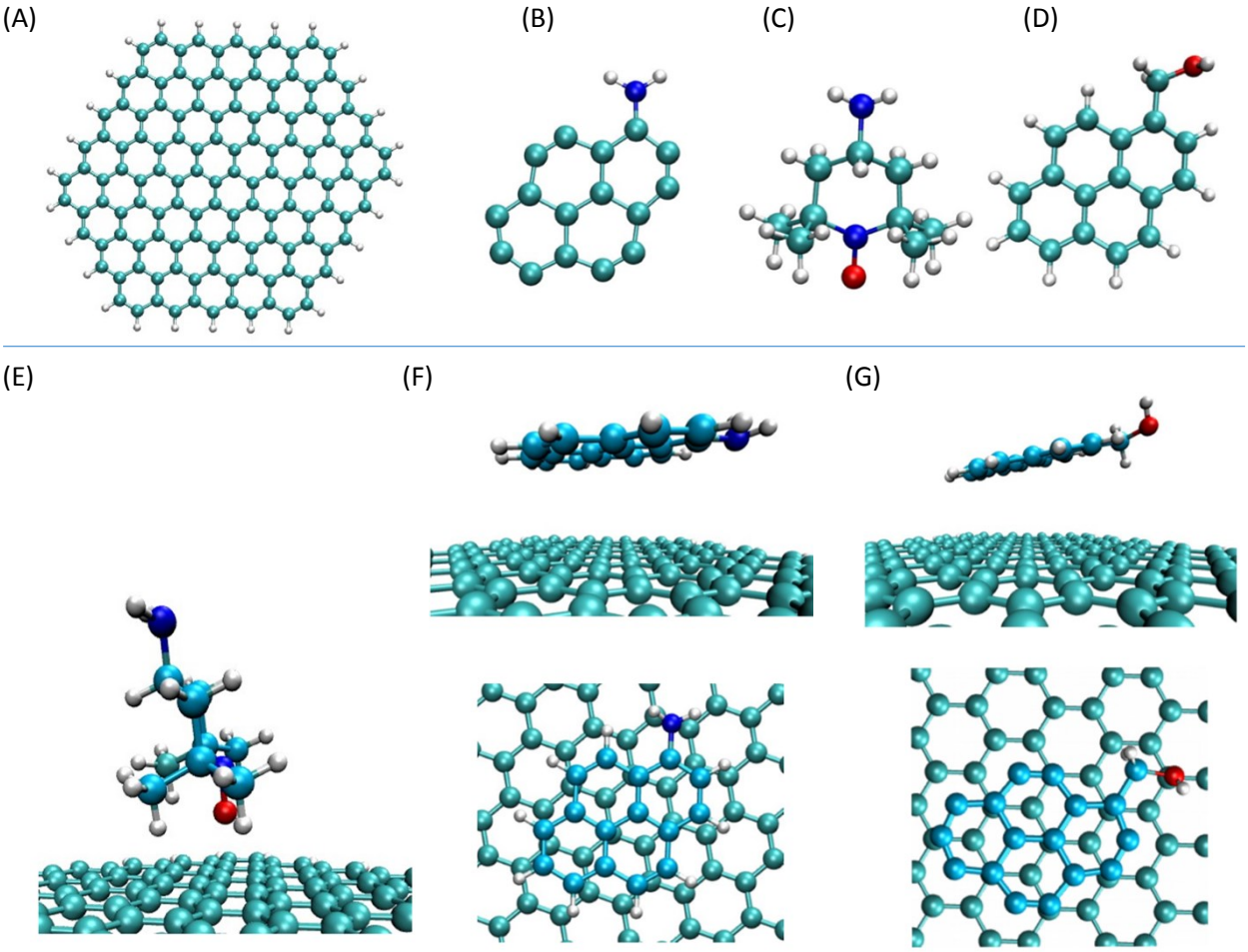
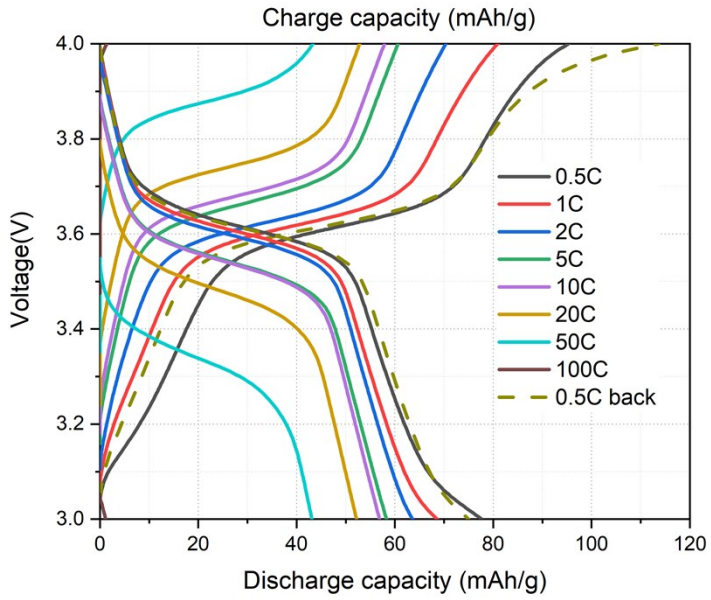


Figure S3. Molecular model of (A) graphene layer, (B) 1-amino-pyrene, (C) TEMPO and (D) 1-pyrenemethanol, as well as adsorption geometry of (E) TEMPO/graphene, (F) 1-amino-pyrene/graphene and (G) 1-pyrenemethanol/graphene.

(A)



(B)

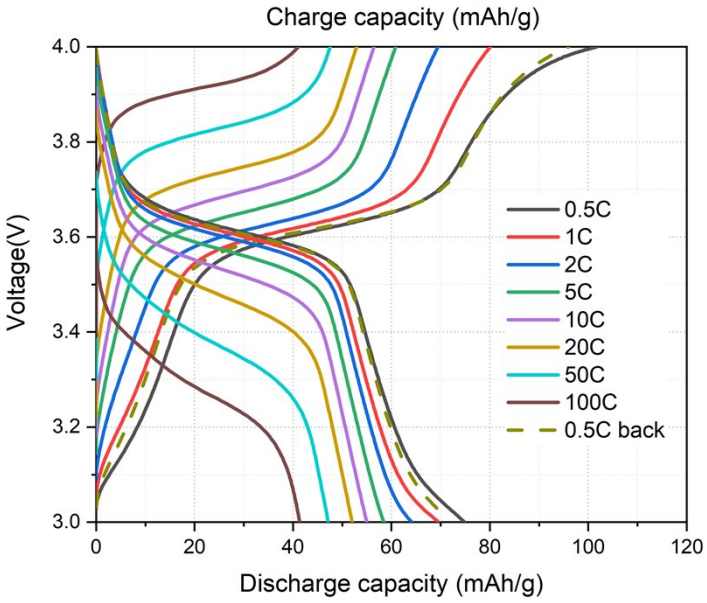


Figure S4. Charge-discharge profile of (A) P3 and (B) P4 at various C-rates.