Electronic Supplementary Information

Poly(anthraquinonyl imide) as a high capacity organic cathode material for Na-ion batteries

Fei Xu,*a Hongtao Wang,a Jianghui Lin,a Xiao Luo,a Shun-an Cao,a Hanxi Yang*b

a School of Power and Mechanical Engineering, Wuhan University, Wuhan 430072, China

b College of Chemistry and Molecular Science, Wuhan University, Wuhan 430072, China

* E-mail:
Fei Xu (xufei2058@whu.edu.cn)
Hanxi Yang (hxyang@whu.edu.cn)
Fig. S1 Synthesis routes of PAQIs.
Fig. S2 Structures of PMDI and NTCDI groups.
Fig. S3 (a) Typical discharge/charge profiles (5th cycle) and (b) cycling performance of Na/KB cells with the voltage intervals of 1.5‒3.0 and 1.3‒3.0 V at a constant current of 50 mA g\(^{-1}\).
Fig. S4 TG curves of PAQIs and the reactants.
Fig. S5 FTIR spectra of PAQIs, PMDA, and NTCDA.
Fig. S6 CV curves of PAQI electrodes at a scan rate of 0.1 mV s$^{-1}$. 
Fig. S7 Discharge/charge profiles of Na/PAQI cells at a constant current of 50 mA g$^{-1}$ with the voltage interval of 1.5–3.0 V.
Fig. S8 Discharge/charge profiles and cycling performance of Na/PAQI cells at a constant current of 50 mA g$^{-1}$ with the voltage interval of 1.3–3.0 V.