Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Electronic Supplementary Information (ESI)

Multi-electron Redox Reaction of Organic Radical Cathode Induced by Mesopore Carbon Network with Nitroxide Polymer

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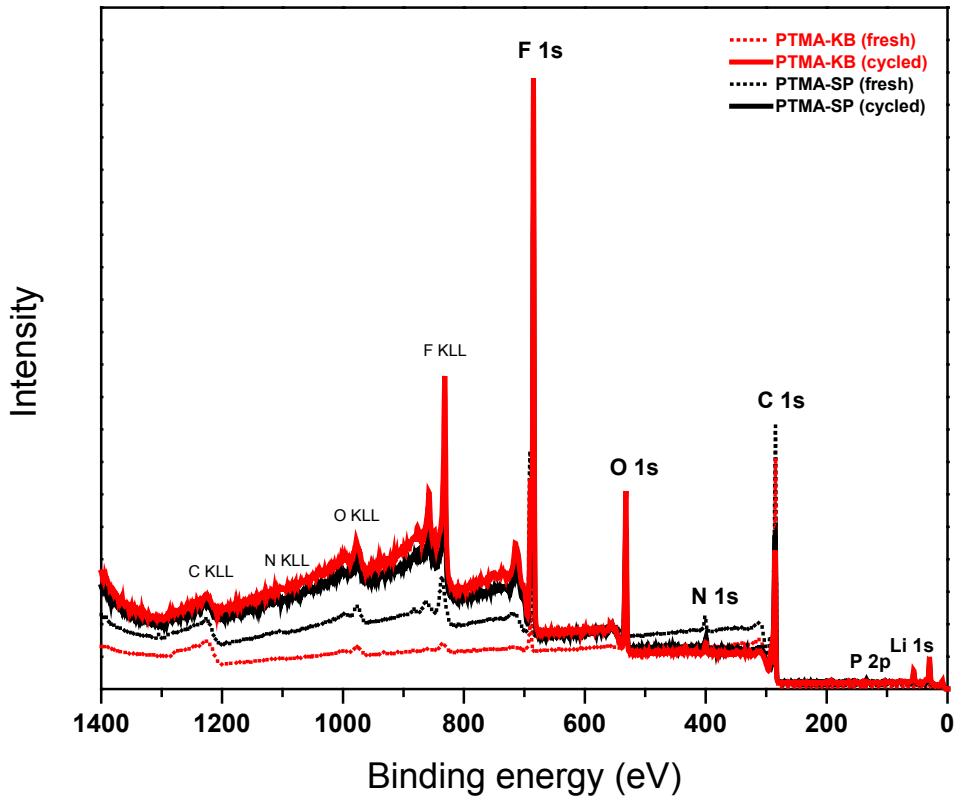


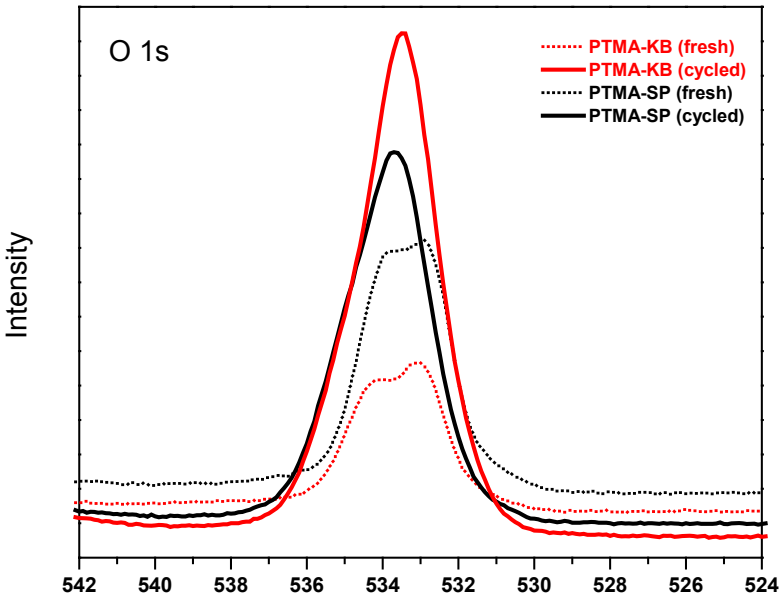
Fig. S1. XPS survey scans for PTMA electrodes before and after 100 cycles.

Table S1 Quantification of XPS spectra for PTMA electrodes before and after 100 cycles

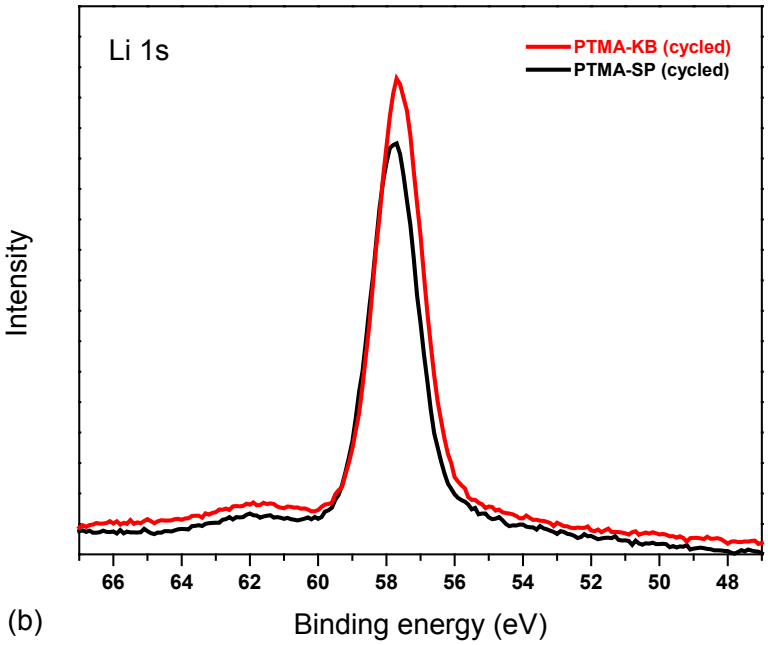
Samples	C 1s	F 1s	N 1s	O 1s	Li 1s	P 2p
PTMA-KB (fresh)	86.90* (284.8)**	5.07 (690.0)	2.23 (401.9)	5.81 (532.5)	-	-
PTMA-SP (fresh)	72.12 (284.8)	17.05 (692.0)	2.67 (402.1)	8.15 (532.9)	-	-
PTMA-KB (cycled)	30.07 (286.6)	29.87 (686.7)	1.38 (400.8)	10.51 (533.4)	29.87 (57.7)	0.38 (135.7)
PTMA-SP (cycled)	34.88 (286.7)	26.29 (686.8)	1.45 (400.8)	8.89 (533.7)	27.92 (57.7)	0.57 (135.9)

* At. Concentration (%)

** Position of binding energy (eV)


O 1s
PTMA-KB (fresh)
PTMA-KB (cycled)
PTMA-SP (fresh)
PTMA-SP (cycled)
Intensity
542
540
538
536
534
532
530
528
526
524
Binding energy (eV)

(a)


Li 1s
PTMA-KB (cycled)
PTMA-SP (cycled)
Intensity
66
64
62
60
58
56
54
52
50
48
Binding energy (eV)

(b)

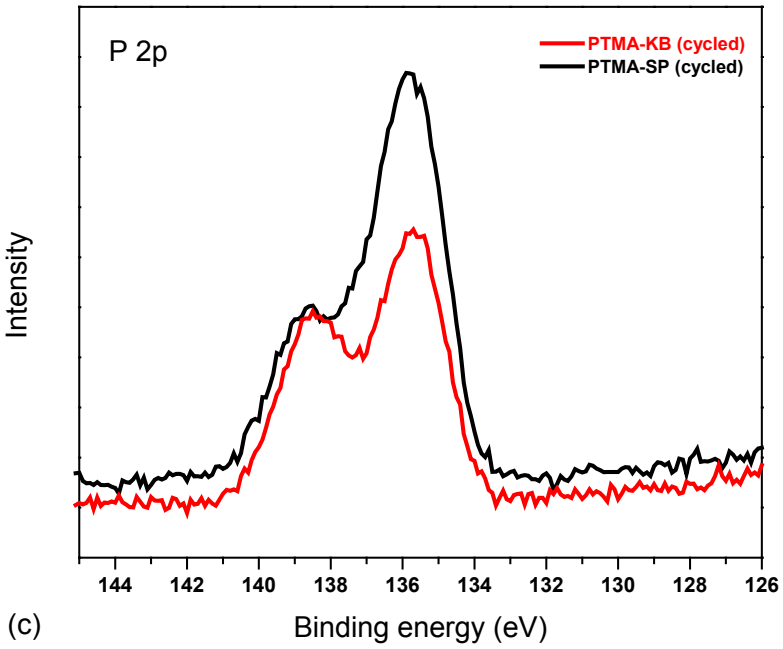


Fig. S2. High-resolution XPS spectra for the binding energy of (a) O 1s, (b) Li 1s, and (c) P 2p for PTMA electrodes before and after 100 cycles.