

## Supplementary Information

**Table S1.** Main characteristics of redox behavior obtained by CV.

Substance	Scan rate (mV s <sup>-1</sup> )	Peak-to-peak separation <sup>a</sup> , dE (mV)	Half-wave potential <sup>b</sup> , E <sub>1/2</sub> (V)	Peak current ratio <sup>c</sup> , I <sub>c</sub> /I <sub>a</sub>
ASM	50	54	0.018	0.85
	100	59	0.017	0.83
	250	73 <sup>d</sup>	0.011	0.84
	500	98	0.005	0.86
	1000	103	0.005	0.90
2,7-AQDS	50	32	0.019	0.95
	100	36	0.019	0.94
	250	36	0.017	0.97
	500	29	0.013	1.01
	1000	27	0.012	1.03
2,6-AQDS	50	26	0.022	0.95
	100	27	0.022	0.94
	250	21	0.021	0.97
	500	20	0.019	1.01
	1000	23	0.012	1.03
2-AQS	50	24	-0.027	1.06
	100	28	-0.027	1.02
	250	23	-0.030	0.99
	500	23	-0.032	1.00
	1000	27	-0.031	0.94

<sup>a</sup> dE = E<sub>a</sub> - E<sub>c</sub>, where E<sub>a</sub>/E<sub>c</sub> – anodic/cathodic peak potentials

$$\text{<sup>b</sup> } E_{1/2} = \frac{E_a + E_c}{2}$$

<sup>c</sup> where I<sub>c</sub>/I<sub>a</sub> – anodic/cathodic peak current

<sup>d</sup> ASM anodic wave for scan rates over 50 mV s<sup>-1</sup> was treated as a single peak

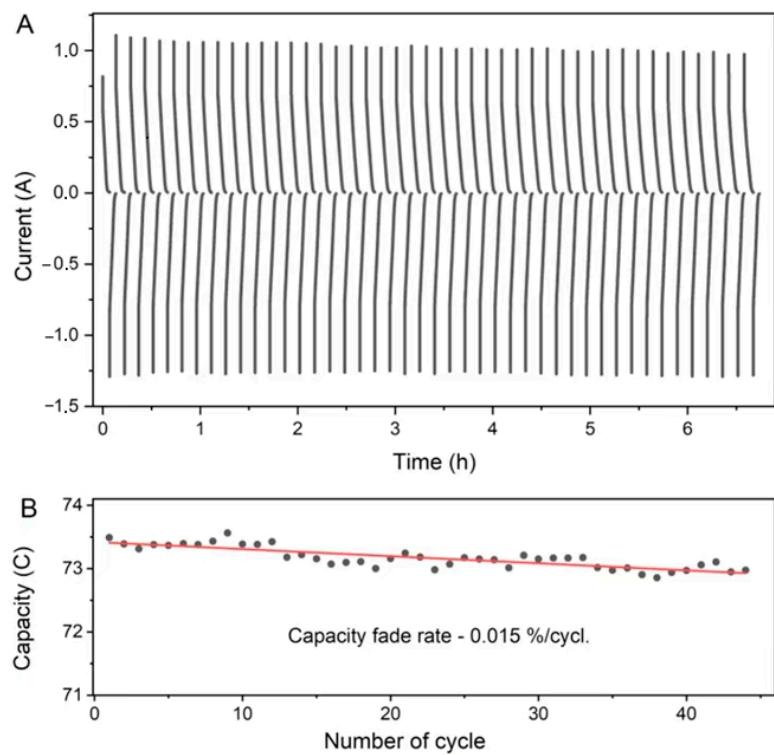


Figure S1. (A) Charge-discharge curves for constant current symmetrical cycling of ASM. Applied voltage – 0.2. (B) Dependence of the discharge capacity on the cycle number