Supporting Information

Insight into electrochemical properties and reaction mechanism of cobalt-rich Prussian blue analogue cathode in $NaSO_3CF_3$ electrolytes for aqueous sodium-ion batteries

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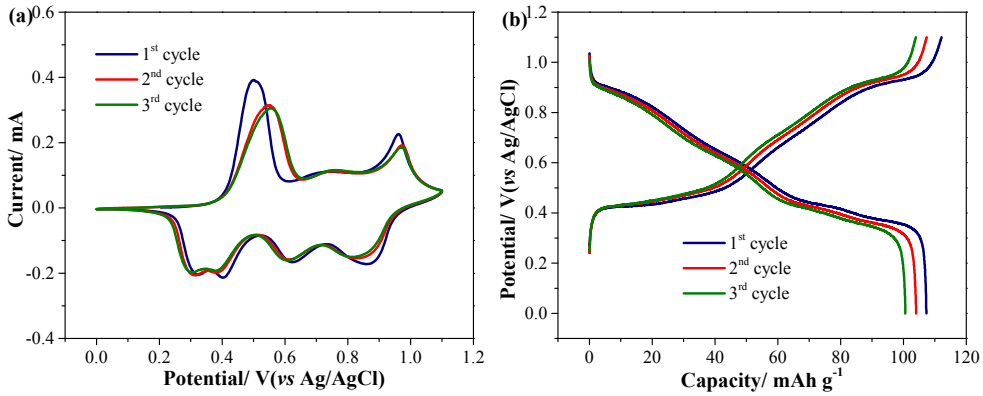

Figure S1. Electrochemical properties of $Na_2Co_{0.8}Ni_{0.2}[Fe(CN)_6]$ in 2 M Na_2SO_4 electrolytes: a) cyclic voltammograms at the scanning rate of 0.1 mV s^{-1} and b) charge/discharge profiles at the current of 50 mA g^{-1}.

Table S1. Performance comparison of Prussian-blue cathodes for aqueous SIBs reported in this work and literatures

Materials	Reversible capacity (mAh g^{-1})	Working potential (V *vs* Ag/AgCl)	Specific energy# (Wh kg^{-1})	Cycling performance
$Na_{0.44}MnO_2$[1]	45 (5.6 mA g^{-1})	0.41	54	96% capacity retention after 1000 cycles at 180 mA g^{-1}
$Na_{0.5}Mn_{0.5}Ti_{0.5}O_2$[2]	46 (30 mA g^{-1})	0.41	56	95% capacity retention after 100 cycles at 60 mA g^{-1}
$Na_3V_2(PO_4)_3$[3]	94.5 (1176 mA g^{-1})	0.4	113	20% capacity retention after 30 cycles at 2352mA g^{-1}
$Na_3VTi(PO_4)_3$[4]	56 (62 mA g^{-1})	0.42	68	92% capacity retention after 500 cycles at 310 mA g^{-1}
$Na_3MnTi(PO_4)_3$[5]	58.4 (29.35 mA g^{-1})	0.6	82	98% capacity retention after 100 cycles at 58.7 mA g^{-1}
$Na_2Ni[Fe(CN)_6]$[6]	65 (65 mA g^{-1})	0.48	83	93% capacity retention after 500 cycles at 325 mA g^{-1}
$Na_2Cu[Fe(CN)_6]$[7]	59 (60 mA g^{-1})	0.61	83	93% capacity retention after 500 cycles at 300 mA g^{-1}
$Na_2Co[Fe(CN)_6]$[8]	110.8 (240 mA g^{-1})	0.53	147	72% capacity retention after 100 cycles at 240 mA g^{-1}
$NaFe[Fe(CN)_6]$[9]	61 (18.432 mA g^{-1})	0.23	63	84% capacity retention after 200 cycles at 92.16 mA g^{-1}
$Na_2Fe[Fe(CN)_6]$[10]	113 (25 mA g^{-1})	0.53	150	79% capacity retention after 500 cycles at 200 mA g^{-1}
$Na_2Fe_{1-x}Ni_x[Fe(CN)_6]$[11]	106 (10 mA g^{-1})	0.59	147	96% capacity retention after 100 cycles at 10mA g^{-1}
$Na_2Co_{0.6}Ni_{0.4}[Fe(CN)_6]$[12]	85 (35 mA g^{-1})	0.62	121	90% capacity retention after 100 cycles at 70 mA g^{-1}
$Na_2Co_{0.8}Ni_{0.2}[Fe(CN)_6]$ (this work)	116.4 (50 mA g^{-1})	0.67	171	88% capacity retention after 100 cycles at 100 mA g^{-1}

#: specific energy is calculated based on the $NaTi_2(PO_4)_3$ anode (–0.8 V *vs* Ag/AgCl).

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