

Table S1. Electrochemical performance of representative studies on 3D composite Na-MIEC scaffold anodes.
 Note: The N/P ratio is calculated based on the ratio of the areal capacity of the Na anode to that of the NVP cathode at the fully discharged state.

Materials	Areal capacities at current densities	Time (h)	Electrolytes	Performance in NVP-based full cells	N/P ratio
SnO ₂ -CNFs ⁷⁸	1 mA h cm ⁻² at 1 mA cm ⁻²	3000	1M NaPF ₆	1C, 86.1 mAh cm ⁻² , 130 cycles	26.5
	5 mA h cm ⁻² at 5 mA cm ⁻²	1500	in diglyme	5C, 90 mAh cm ⁻² , 400 cycles	25
MgF ₂ @rGO ⁷⁹	0.5 mA h cm ⁻² at 0.5 mA cm ⁻²	1600	1M NaClO ₄	1C, 79.88 mAh g ⁻¹ , 200 cycles	18.9
			in EC/DEC/FEC	0.5C, 110 mAh g ⁻¹ , 30 cycles	2.5
IEDC ⁸⁰	1 mA h cm ⁻² at 5 mA cm ⁻²	250	1M NaPF ₆	1C, 102.3 mAh g ⁻¹ , 300 cycles	1.56
			in diglyme	0.5C, 90 mAh g ⁻¹ , 100 cycles	0
NiF ₂ @NF ⁸¹	2 mA h cm ⁻² at 2 mA cm ⁻²	1600	1M NaPF ₆ in diglyme	3C, 76.5 mAh g ⁻¹ , 500 cycles	15
	4 mA h cm ⁻² at 4 mA cm ⁻²	800		5C, 70.9 mAh g ⁻¹ , 300 cycles	16.6
	10 mA h cm ⁻² at 5 mA cm ⁻²	480			
NSCA-31 ⁸²	1 mA h cm ⁻² at 1 mA cm ⁻²	700	1M NaCF ₃ SO ₃	1C, 86.84 mAh g ⁻¹ , 300 cycles	/
	1 mA h cm ⁻² at 2 mA cm ⁻²	500	in diglyme		
SnSe@GF ⁸³	1 mAh cm ⁻² at 1 mA cm ⁻²	2000	1M NaCF ₃ SO ₃	1C, 100 mAh g ⁻¹ , 450 cycles	13.76
	5 mAh cm ⁻² at 5 mA cm ⁻²	900	in diglyme	5C, 70.3 mAh g ⁻¹ , 100 cycles	16.5
h-Ti ₃ C ₂ /CNTs ³⁶	1 mAh cm ⁻² at 1mA cm ⁻²	> 4000	1M NaOTF in diglyme	/	/
3D-NVP ⁸⁴	1 mAh cm ⁻² at 1 mA cm ⁻²	300	1M NaClO ₄	10C, 93.6 mAh g ⁻¹ , 500 cycles	/
	2 mAh cm ⁻² at 1 mA cm ⁻²	400	in PC/FEC		