

Supporting information

Stable liquid-solid interface of lithium metal anode enabled by micro-region meshing

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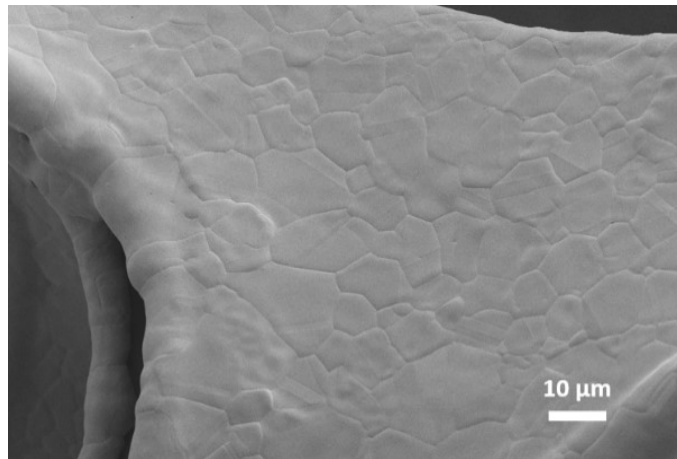


Fig. S1 SEM image of NF.

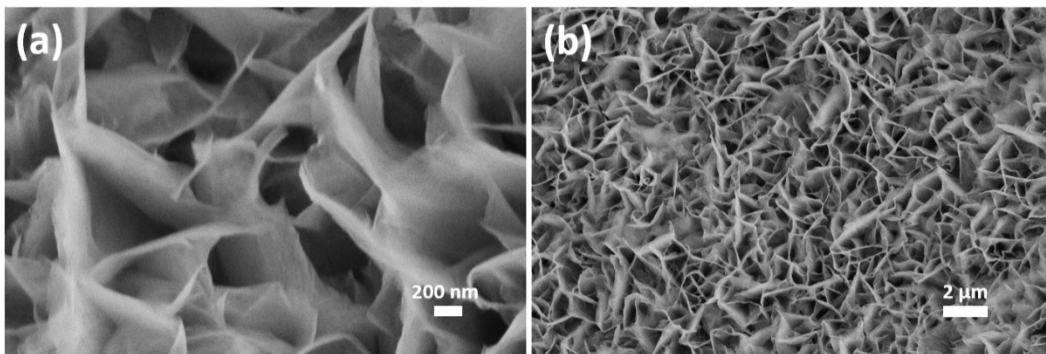


Fig. S2 SEM image of Ni₃N@NF precursor.

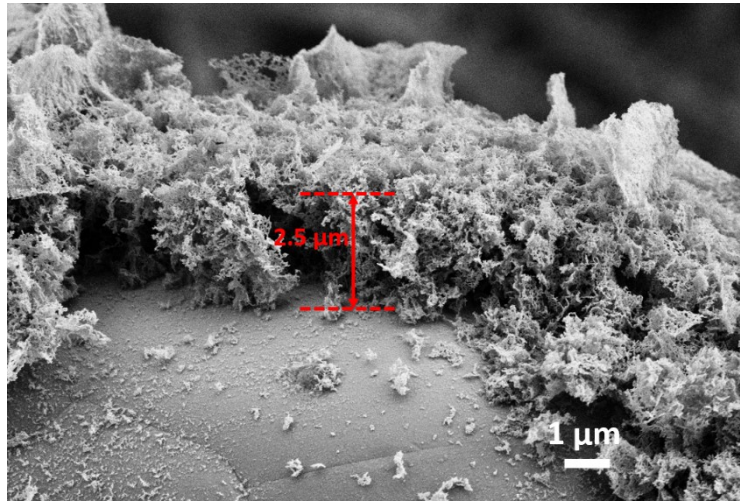


Fig. S3 The thickness of Ni₃N nanosheet arrays.

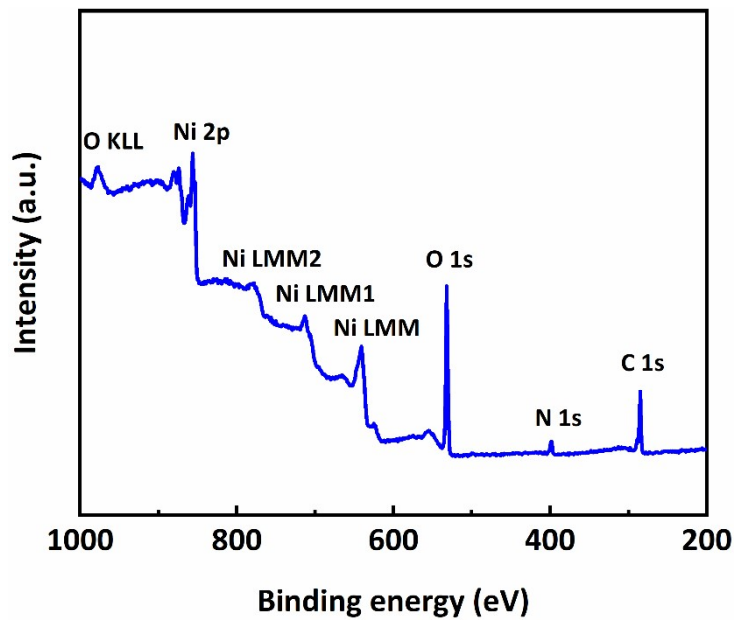


Fig. S4 The XPS survey spectra of Ni₃N@NF.

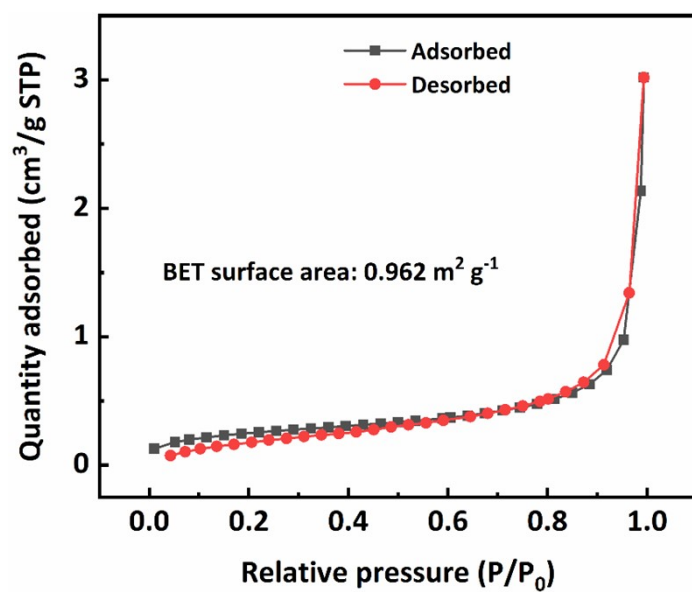


Fig. S5 N₂ adsorption-desorption isotherms of Ni₃N@NF.

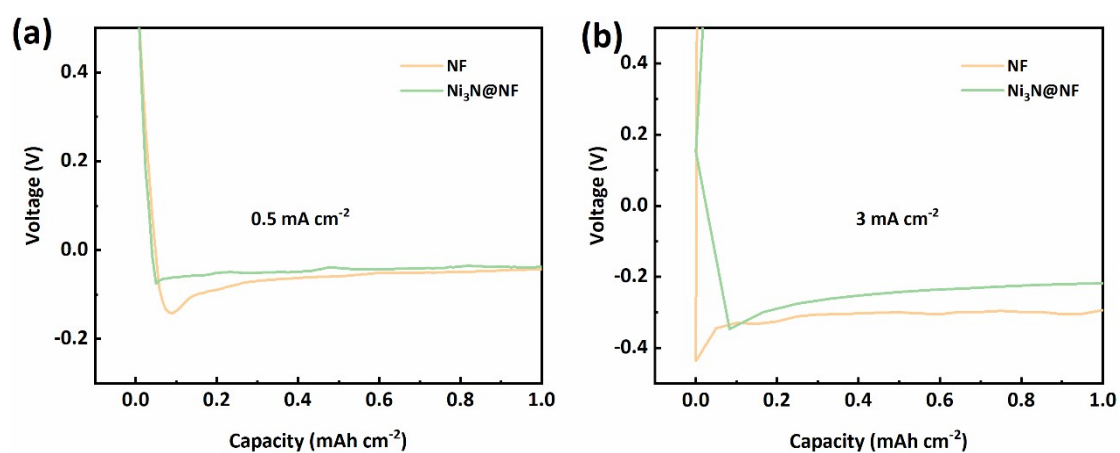


Fig. S6 Comparison of nucleation overpotential of Ni₃N@NF and NF at (a) 0.5 mA cm⁻² and (b) 3 mA cm⁻².

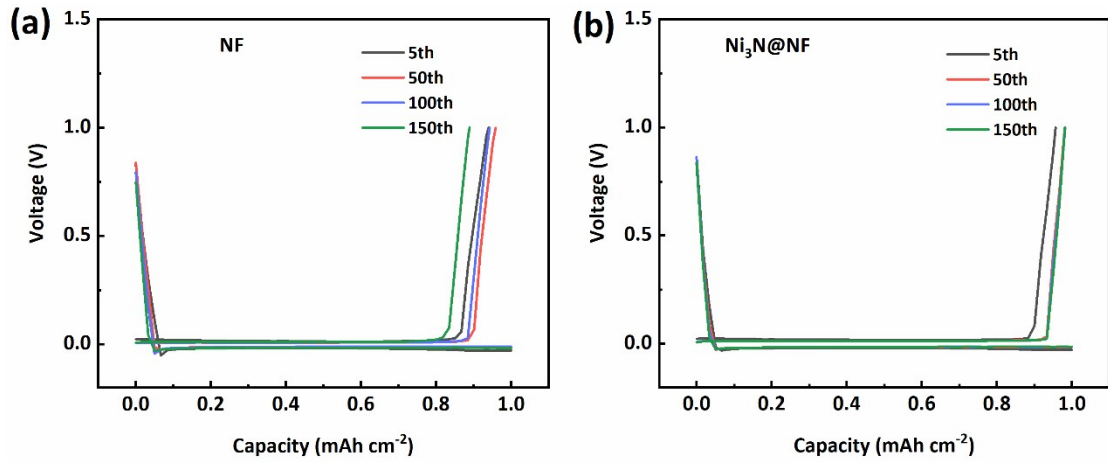


Fig. S7 Galvanostatic charge-discharge curves at different cycles for (a) NF and (b) Ni₃N@NF.

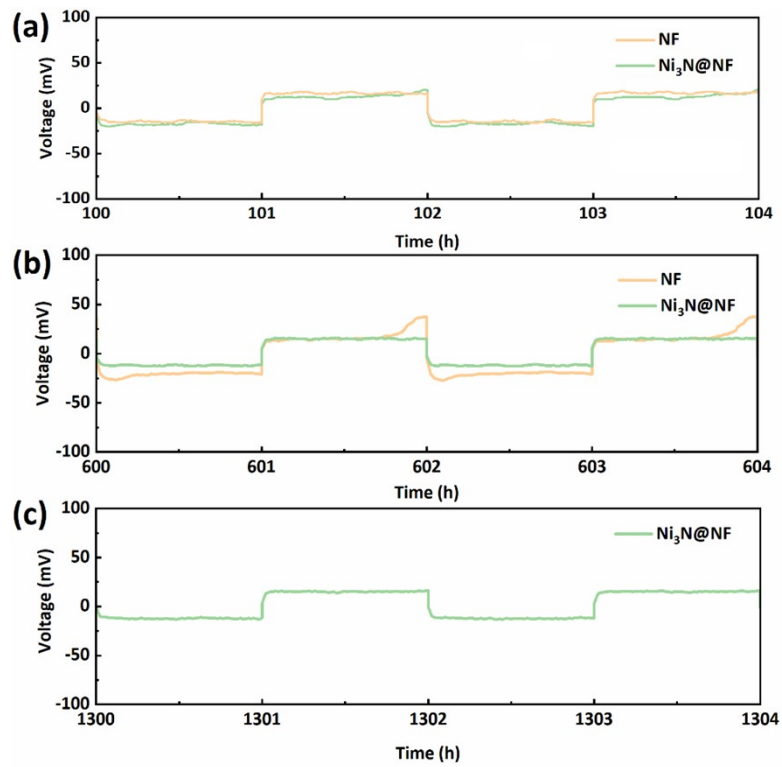


Fig. S8 Partially magnified periods of Fig. 4f.

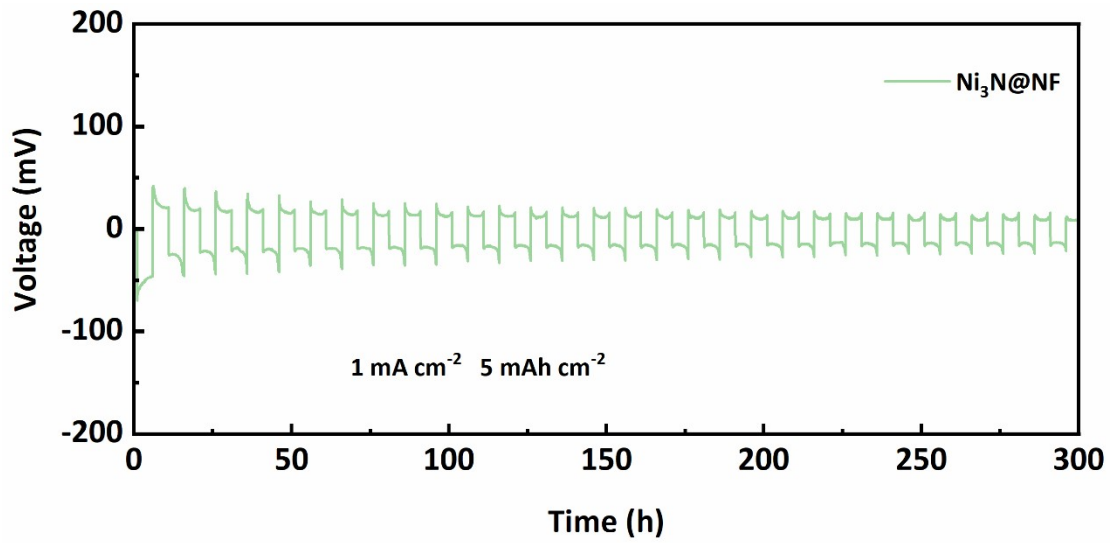


Fig. S9 The galvanostatic charge/discharge profile of $\text{Ni}_3\text{N@NF-Li}$ symmetrical cell at the current density of 1 mA cm^{-2} with a capacity of 5 mAh cm^{-2} .

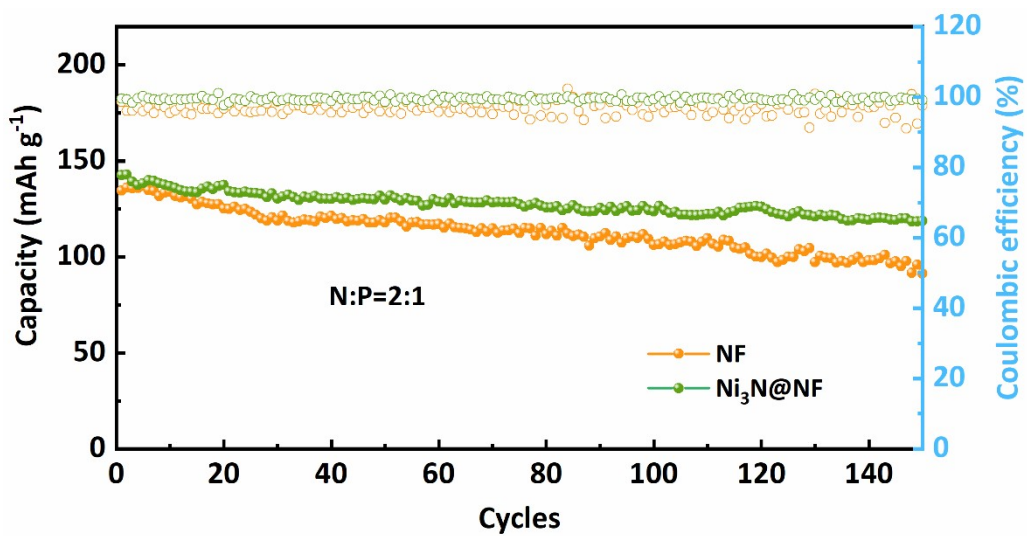


Fig. S10 Comparison of performance of full cells when the N/P is 2:1.

Table S1 Comparison of symmetrical cell cycling performance between this work and reported literature with the similar electrode configuration.

Composite Li metal anode	Current density-capacity (mA cm ⁻² - mAh cm ⁻²)	Hysteresis Voltage (mV)	Cycling time (h)	Reference
NCNT/NF/Li	1-1	29	1000	1
NPNF	1-1	200	700	2
MCuF	1-2	11	600	3
LiF@Li matrix	1-1	40	600	4
CuF@Au	0.5-0.5	~10	250	5
PNNF	1-1	15	800	6
Li-NiO/NF	1-1	39	1000	7
	2-1	~100	200	
Ni ₃ N@NF-Li	1-1	16	1500	This work
	3-1	~80	200	

References

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