Supporting Information for

Ultrafast lithium energy storage enabled by interfacial constructing interlayer-expanded MoS_2/N-doped carbon nanowires

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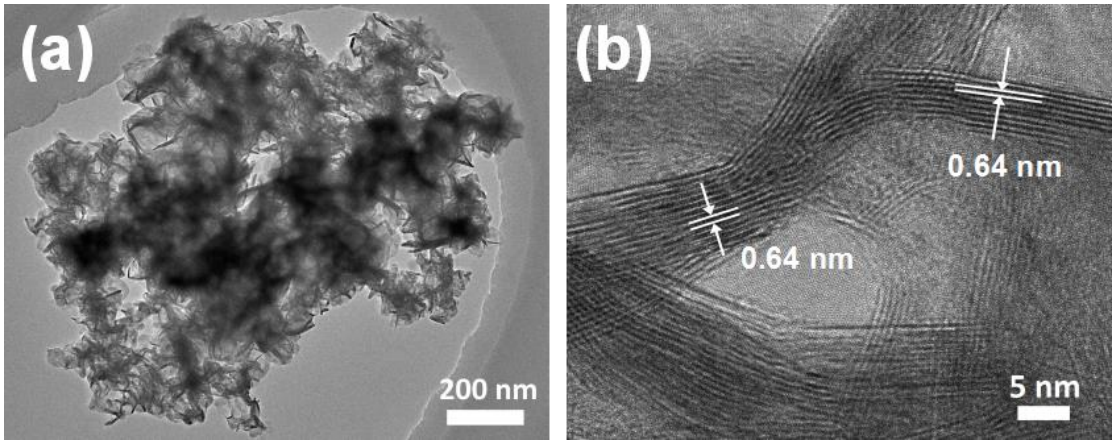

Fig. S1. TEM and HRTEM images of pure MoS_2.

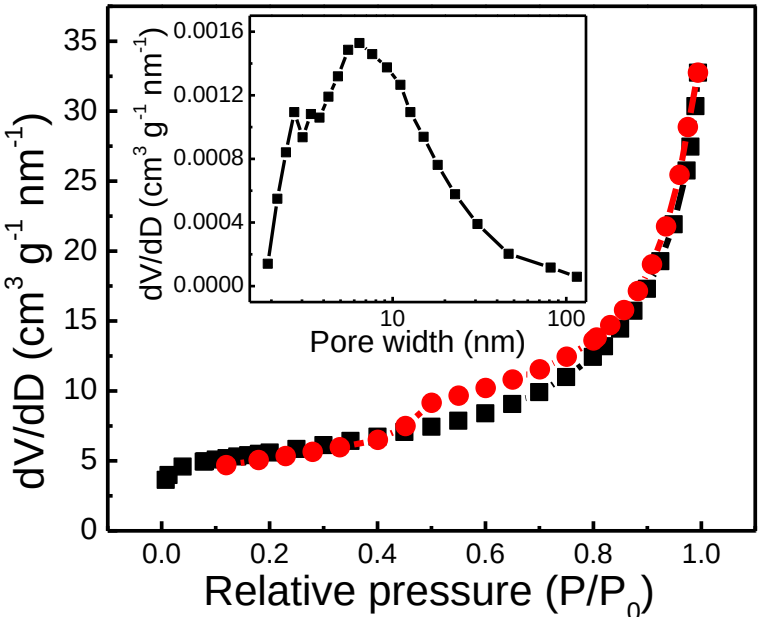

Fig. S2. N_2 adsorption-desorption isotherms and pore size distribution (the inset) of pure MoS_2.

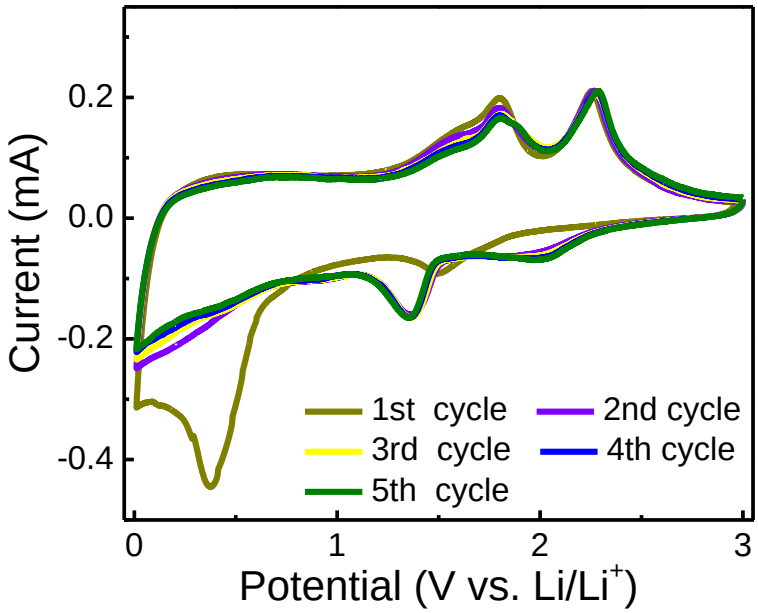

Fig. S3. CV curves of pure MoS_2 electrode in the first five cycles.

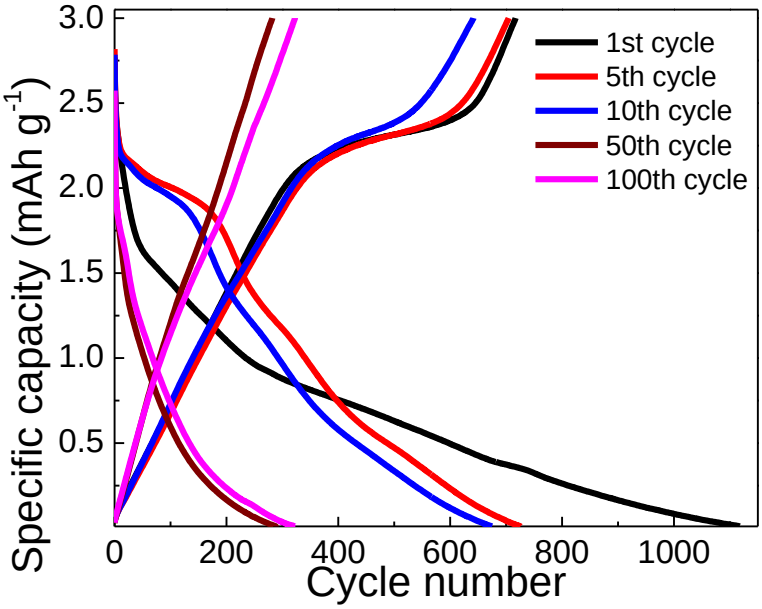

Fig. S4. Galvanostatic charge/discharge profiles of pure MoS_2 electrode at different cycles.

μ

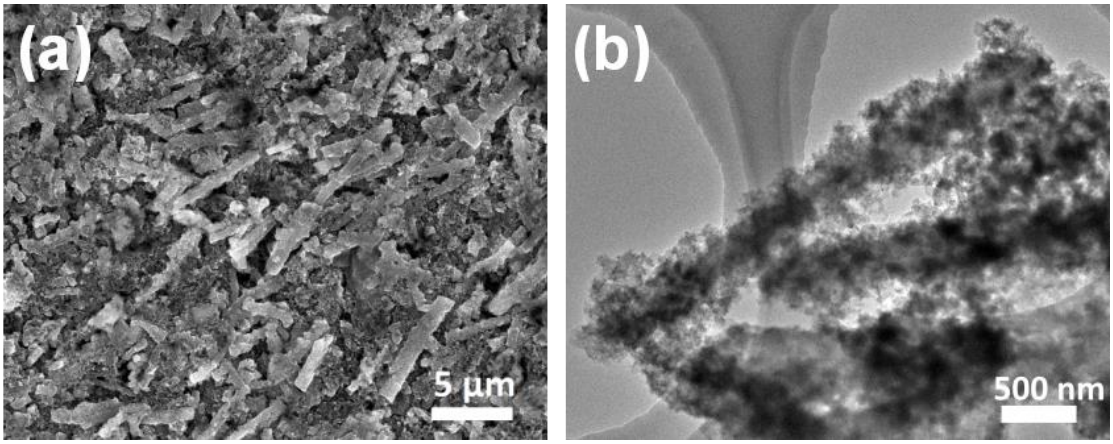

Fig. S5. (a) SEM and (b) TEM images of images of MoS_2/N-C NWs after 100 cycles.

Table S1. Li-ion storage comparison of MoS_2-based materials.

Sample	Specific Capacity at 0.1 A g^{-1} (mAh g^{-1})	Rate capability at different current densities relative to the initial value				Ref.
		1 A g^{-1}	2 A g^{-1}	5 A g^{-1}	10 A g^{-1}	
TiO_2@Carbon@ MoS_2	925	81.7 %	72.4 %	-	-	1
MoS_2/CMK-3	893	79.8%	66.2%	-	-	2
MoS_2/N-Carbon	1299	46.7 %	42.7 %	38 %	33.1 %	3
MoS_2/C	820	62.2 %	55.7 %	-	-	4
MoS_2/C	944	80.7%	75.3%	61%	-	5
MoS_2/N-rGO film	1109	78 %	70.8 %	64 %	-	6
rGO/MoS_2/N-rGO	770	76.5 %	68.6 %	-	-	7
MoS_2/ rGO	1077	82.6 %	-	-	-	8
MoS_2@carbon	1110	65.3 %	54.1 %	40.5 %	-	9
MoS_2/graphene	825	69.2%	-	-	-	10
MoS_2/C	1127	78 %	62.9 %	42.6 %	22.2 %	11
MoS_2/graphene	854	73%	-	51.1%	38.8%	12
MoS_2/TiO_2 nanosheet	990	70.7 %	-	57.1 %	-	13
MoS_2/Carbon	900	66.7 %	50.5 %	-	-	14
MoS_2/C	900	77.8%	-	-	-	15
MoS_2/C	653	78.5 %	67.3 %	51.2 %	-	16
MoS_2@MoO_3	929	41.3 %	-	-	-	17
MoS_2/N-C	840	83.7 %	76.7 %	71.4 %	53.9 %	This work

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