

Supporting information for

**T-Nb<sub>2</sub>O<sub>5</sub> nanoparticles enabled pseudocapacitance with fast Li-ion intercalation**

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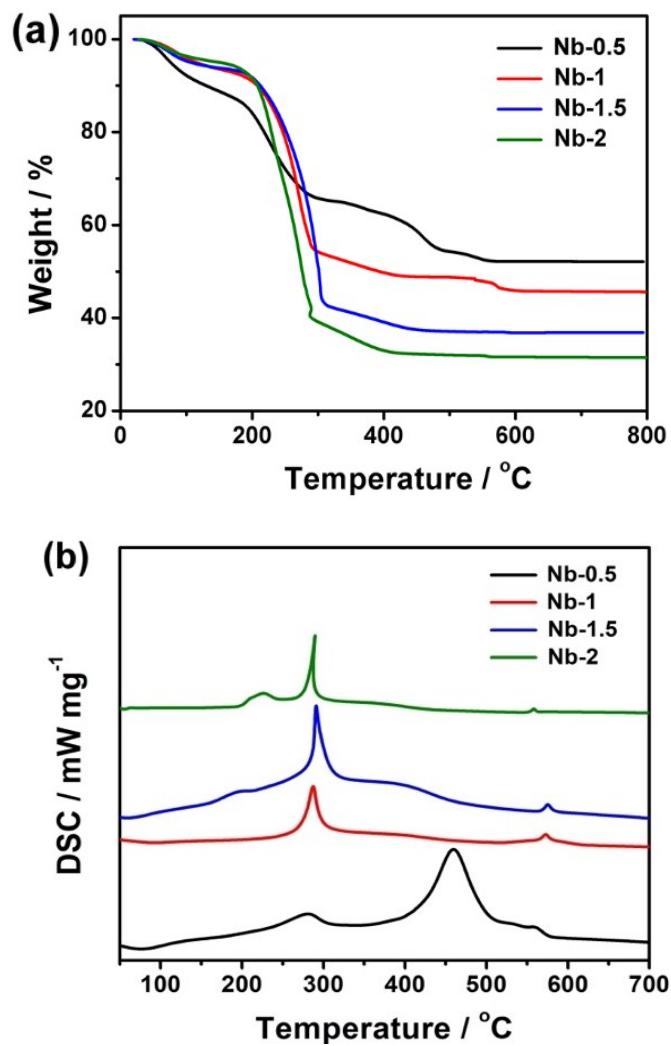
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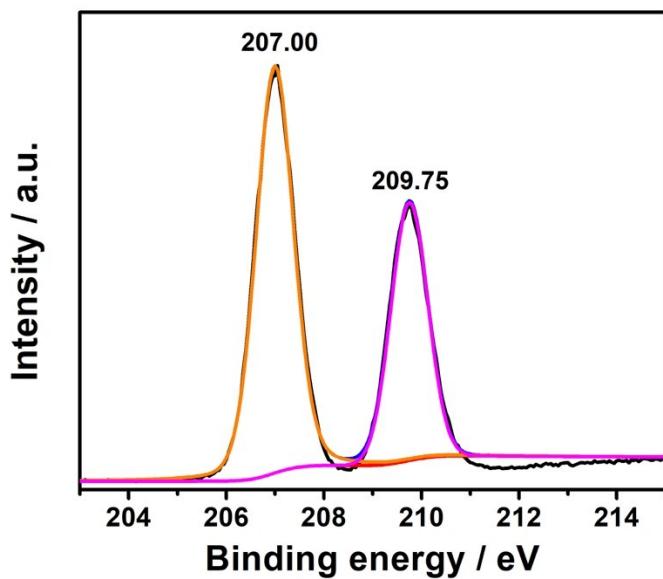
**Table S1. The porosity parameters and crystallite size of samples**

Sample	$S_{\text{BET}} / \text{m}^2 \text{ g}^{-1}$ <sup>a</sup>	$V_T / \text{cm}^3 \text{ g}^{-1}$ <sup>b</sup>	$D_{\text{ave}} / \text{nm}$ <sup>c</sup>	Size / nm <sup>d</sup>
Nb-0.5	12.9	0.02	7.1	41.7
Nb-1	26.3	0.11	16.6	33.7
Nb-1.5	31.1	0.15	19.7	27.1
Nb-2	33.1	0.14	16.8	24.7

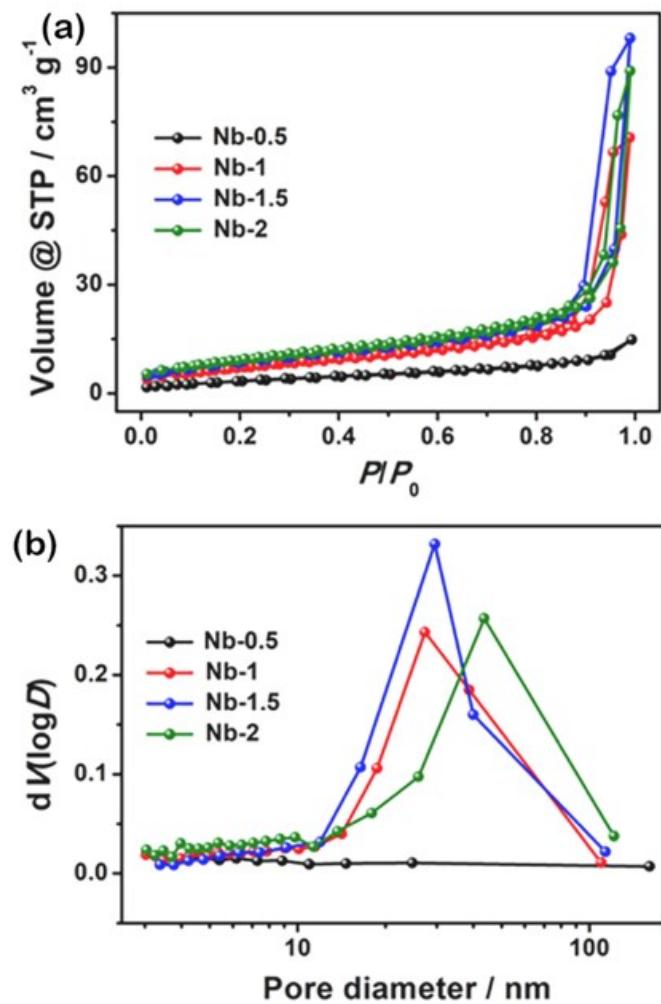
<sup>a</sup> BET specific surface area; <sup>b</sup> total pore volume ( $P/P_0=0.993$ ); <sup>c</sup> BJH average pore diameter from desorption branch; <sup>d</sup> particle size calculated from the Scherrer formula using (001) peak.



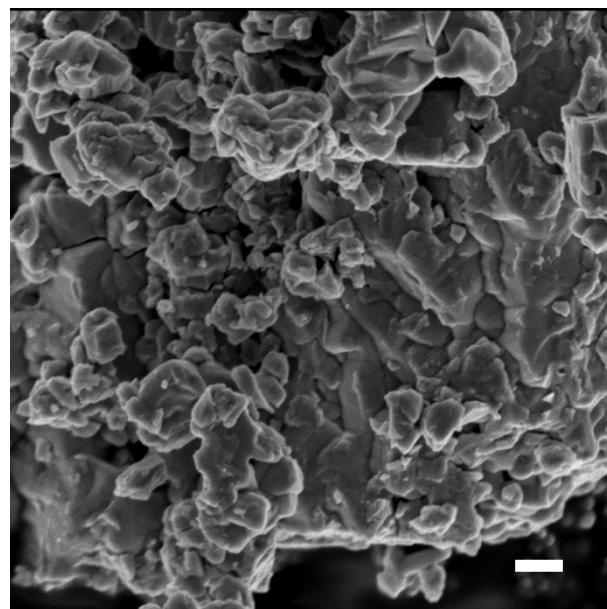
**Fig. S1** Thermal analysis results of Nb/F127 precursor films under an open air, (a) TGA, (b) DSC.



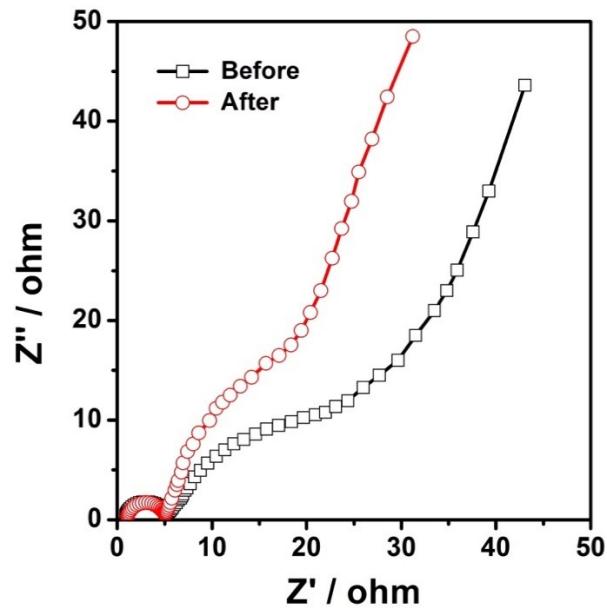
**Fig. S2** High resolution XPS result of Nb-2.



**Fig. S3** (a)  $N_2$  adsorption-desorption isotherms and (b) BJH pore size distributions.



**Fig. S4** SEM for pure  $\text{Nb}_2\text{O}_5$  without any guiding agent, the scale bar is 200 nm.



**Fig. S5** Nyquist plots of Nb-2 before and after CV cycling.