

Electronic Supplementary Information for

MoS₂ nanosheets with expanded interlayer spacing for enhanced sodium storage

Huishuang Dong,^a Yang Xu,^{*,b} Chenglin Zhang,^b Yuhan Wu,^b Min Zhou,^b Long Liu,^b Yulian Dong,^a Qun Fu,^a Minghong Wu^a and Yong Lei^{*,a,b}

^aInstitute of Nanochemistry and Nanobiology, School of Environmental and Chemical Engineering,
Shanghai University, Shanghai 200444, China

^bFachgebiet Angewandte Nanophysik, Institut für Physik & ZMN MacroNano (ZIK), Technische
Universität Ilmenau, Ilmenau 98693, Germany

Email: yang.xu@tu-ilmenau.de; yong.lei@tu-ilmenau.de

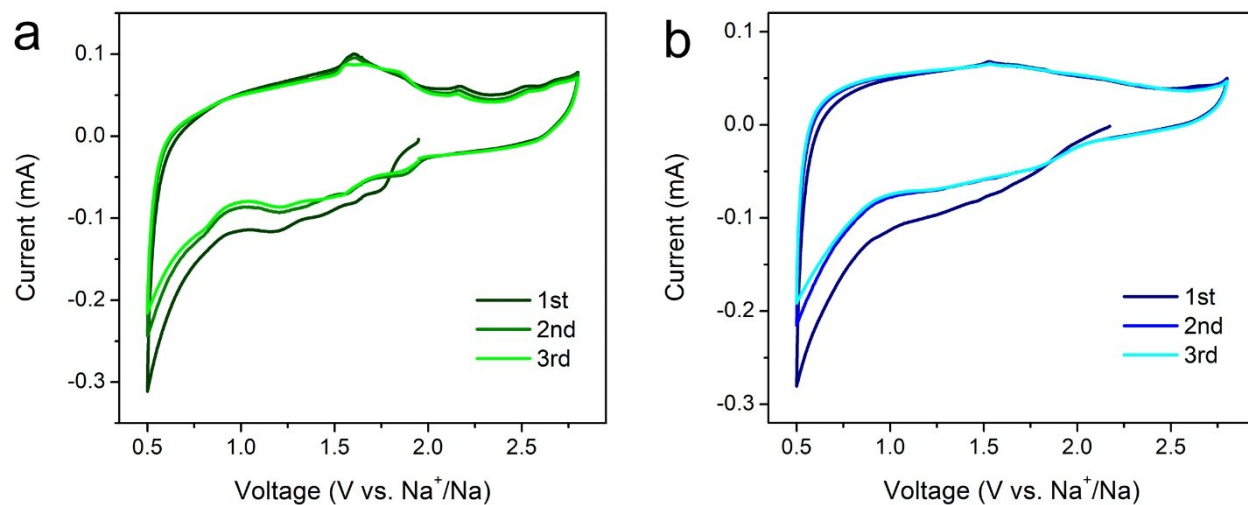


Figure S1. CV curves of E140 (a) and E160 (b) for the first three cycles at 0.1 mV s^{-1} .

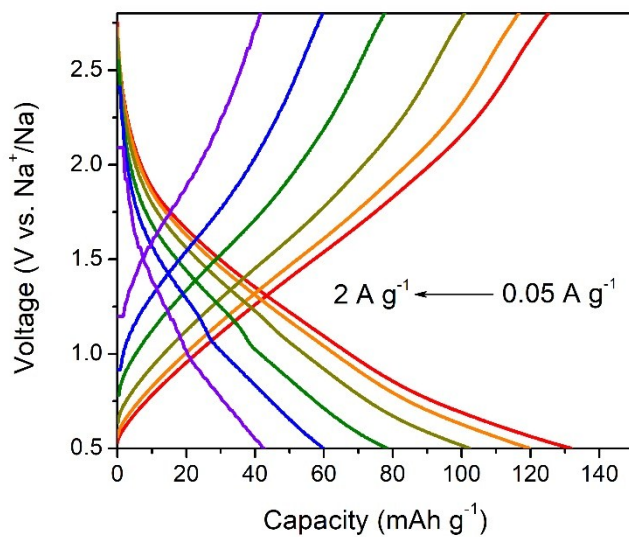


Figure S2. Charge/discharge profiles of E160 at various current densities.

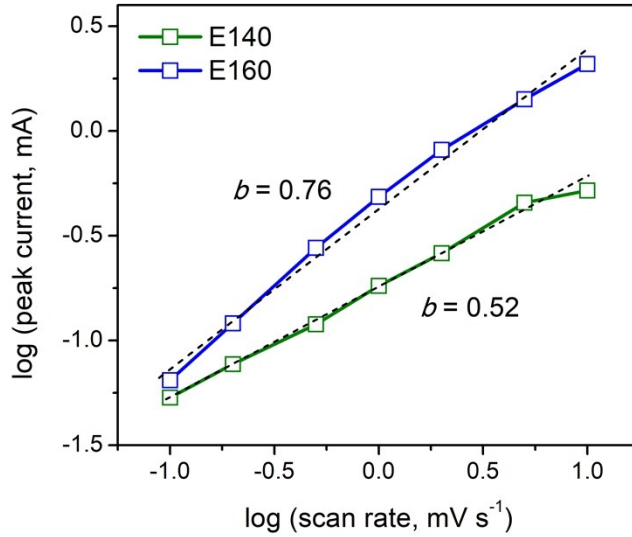


Figure S3. b -value determination from the peak current of the anodic scan at a scan rate range of 0.1 to 10 mV s^{-1} .

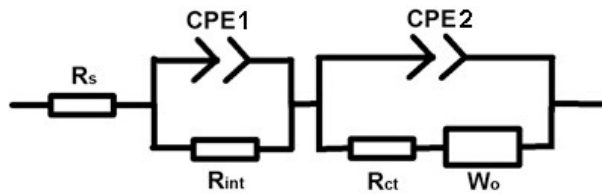


Figure S4. Equivalent circuit used for fitting Nyquist plots, where R_s is the total resistance of electrolyte, electrode, current collector and separator, R_{int} is the interface resistance from SEI, R_{ct} is the charge transfer resistance, W_o is the Warburg impedance, and $CPE1$ and $CPE2$ stand for constant phase elements that are related to the capacitive behavior at the interface and in the bulk electrode, respectively.

Table R1. Fitting results of resistances in the equivalent circuit.

	R_{ct} (Ω)			R_{int} (Ω)			R_s (Ω)		
	2nd	10th	30th	2nd	10th	30th	2nd	10th	30th
E140	53.9	4907	31992	83.1	80.1	55.4	21.2	21.6	27.8
E160	101.8	207.6	295.3	13.8	23.2	31.8	13.0	12.4	12.5