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- Electronic Supplementary Information -

Synthesis of $Li_2Ni_2(MoO_4)_3$ as a high-performance positive electrode for asymmetric supercapacitor

Dongwei Du [a], Rong Lan [a], Kui Xie [c], Huanting Wang [b] and Shanwen Tao [a,b,*]

[a] School of Engineering, University of Warwick, Coventry CV4 7AL, UK

[b] Department of Chemical Engineering, Monash University, Clayton, Victoria 3800, Australia

[c] Key Lab of Design and Assembly of Functional Nanostructure, Fujian Institute of Research on the Structure of Matter, Chinese Academy of Sciences, Fuzhou, Fujian 350002, China

∗ Corresponding author:

School of Engineering, University of Warwick, Coventry CV4 7AL, UK

E-mail: S.Tao.1@warwick.ac.uk

Tel: +44 (0)24 761 51680

Fax: +44 (0)24 76 418922

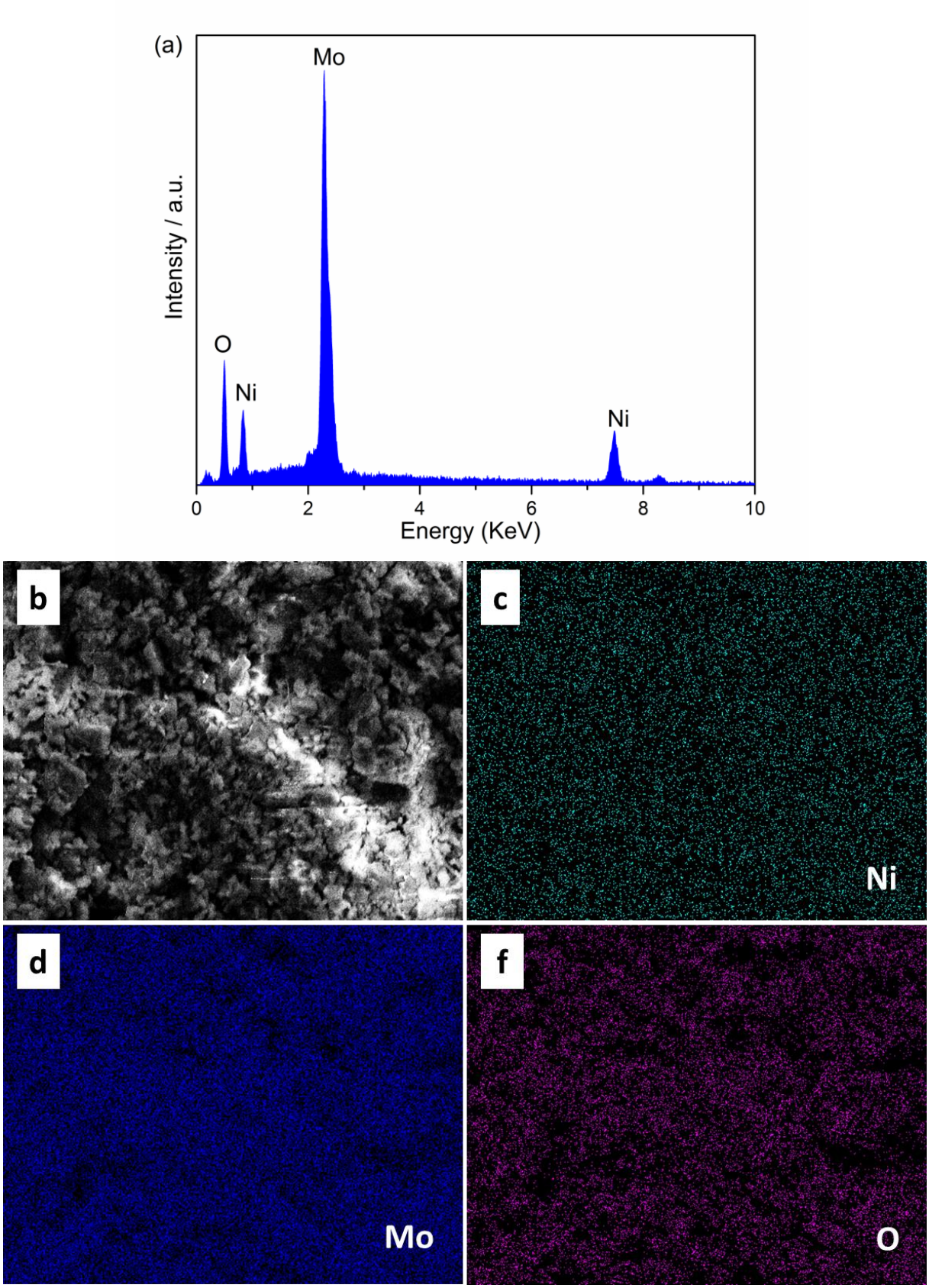

Fig. S1. a) EDX spectrum $Li_2Ni_2(MoO_4)_3$ and b-f) the mapping results according to the position.

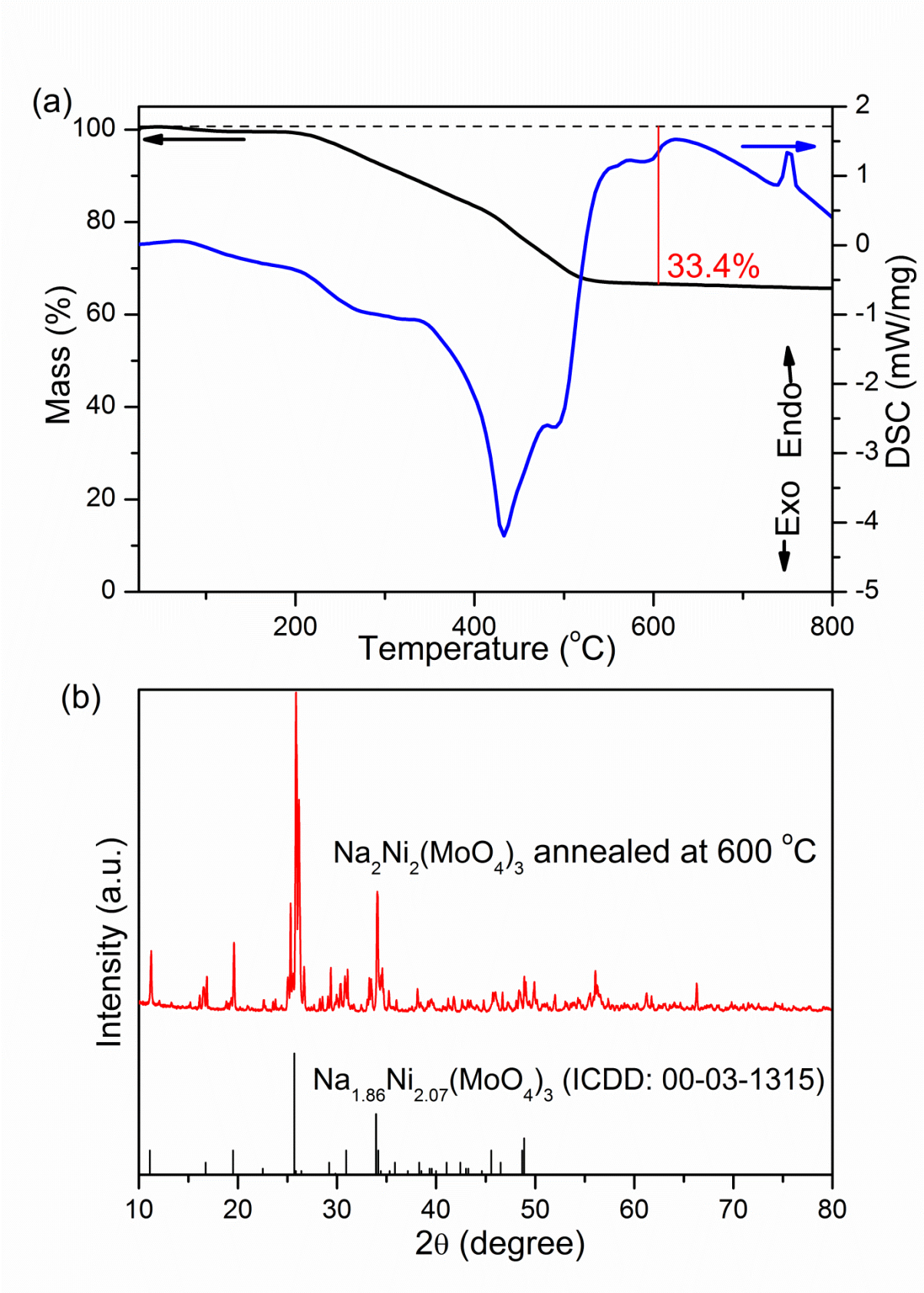

Fig. S2. a) TG and DSC curves of the $Na_2Ni_2(MoO_4)_3$ precursor complex and b) XRD patterns of the $Na_2Ni_2(MoO_4)_3$ after annealed at 600 °C.

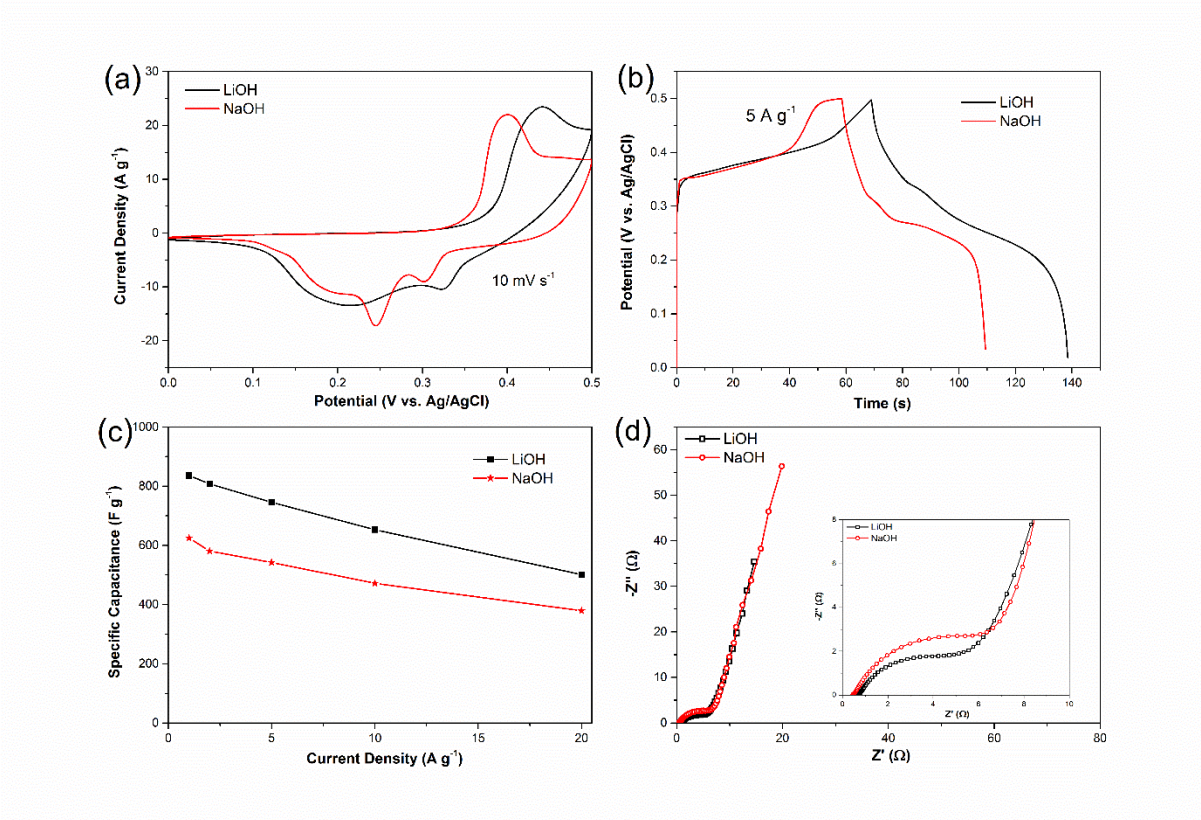

Fig. S3. a) CV curves at 10 mV s^{-1} and b) GCD curves at 5 A g^{-1} of $Na_2Ni_2(MoO_4)_3$ in 2M LiOH and 2M NaOH solution. c) Specific capacitances at various current densities in LiOH and NaOH. d) Nyquist plots of $Li_2Ni_2(MoO_4)_3$ electrode carried out at open circuit potential in the frequency range of 100 kHz to 0.01 Hz in LiOH and NaOH. The inset of (d) shows the impedance in high-frequency region.

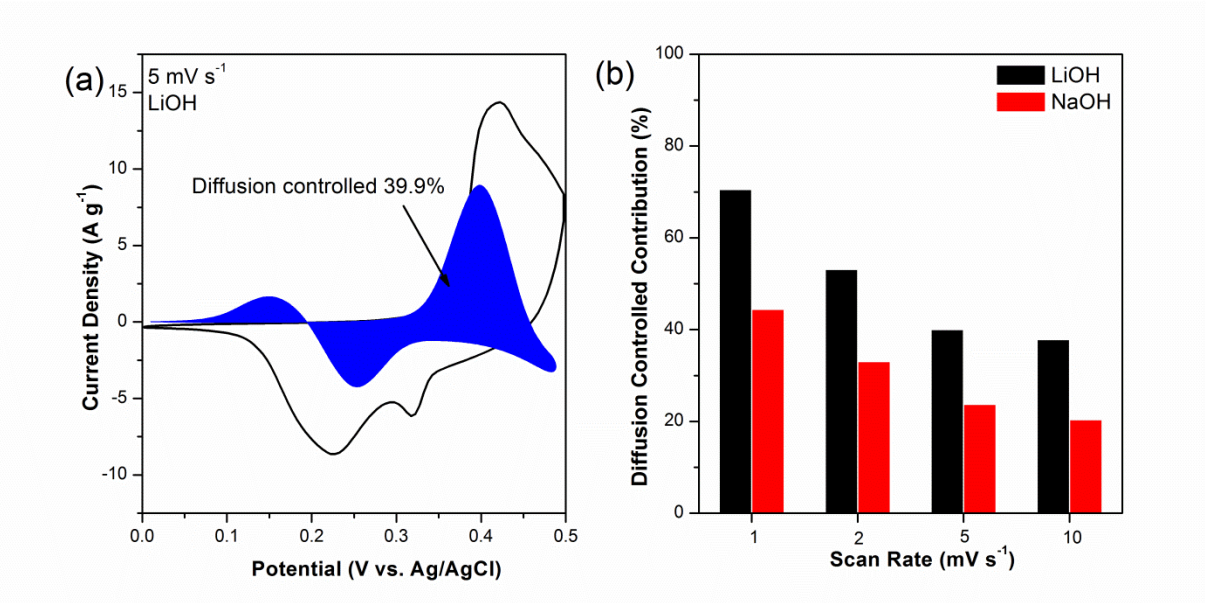

Fig. S4. a) Capacitive and diffusion-controlled charge storage process of $Na_2Ni_2(MoO_4)_3$ at scan rate of 5 mV s^{-1} in LiOH electrolyte, b) Contribution ratio of diffusion-controlled charge storage at various scan rate in LiOH and NaOH..

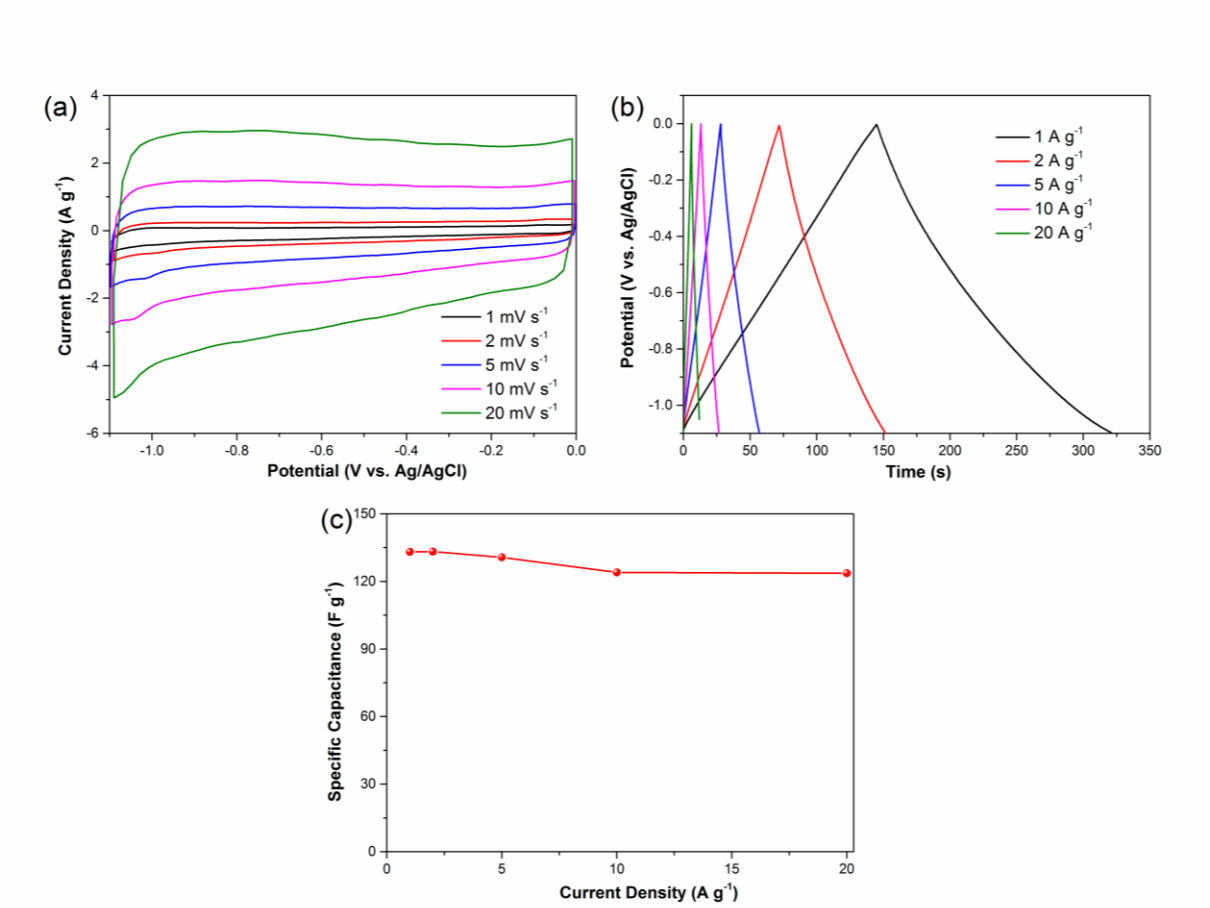

Fig. S5. a) CV curves of the AC electrode at various scan rates. b) Galvanostatic charge–discharge curves of the AC electrode at various current densities. c) Specific capacitance at various current densities for $Li_2Ni_2(MoO_4)_3$ asymmetric cell.

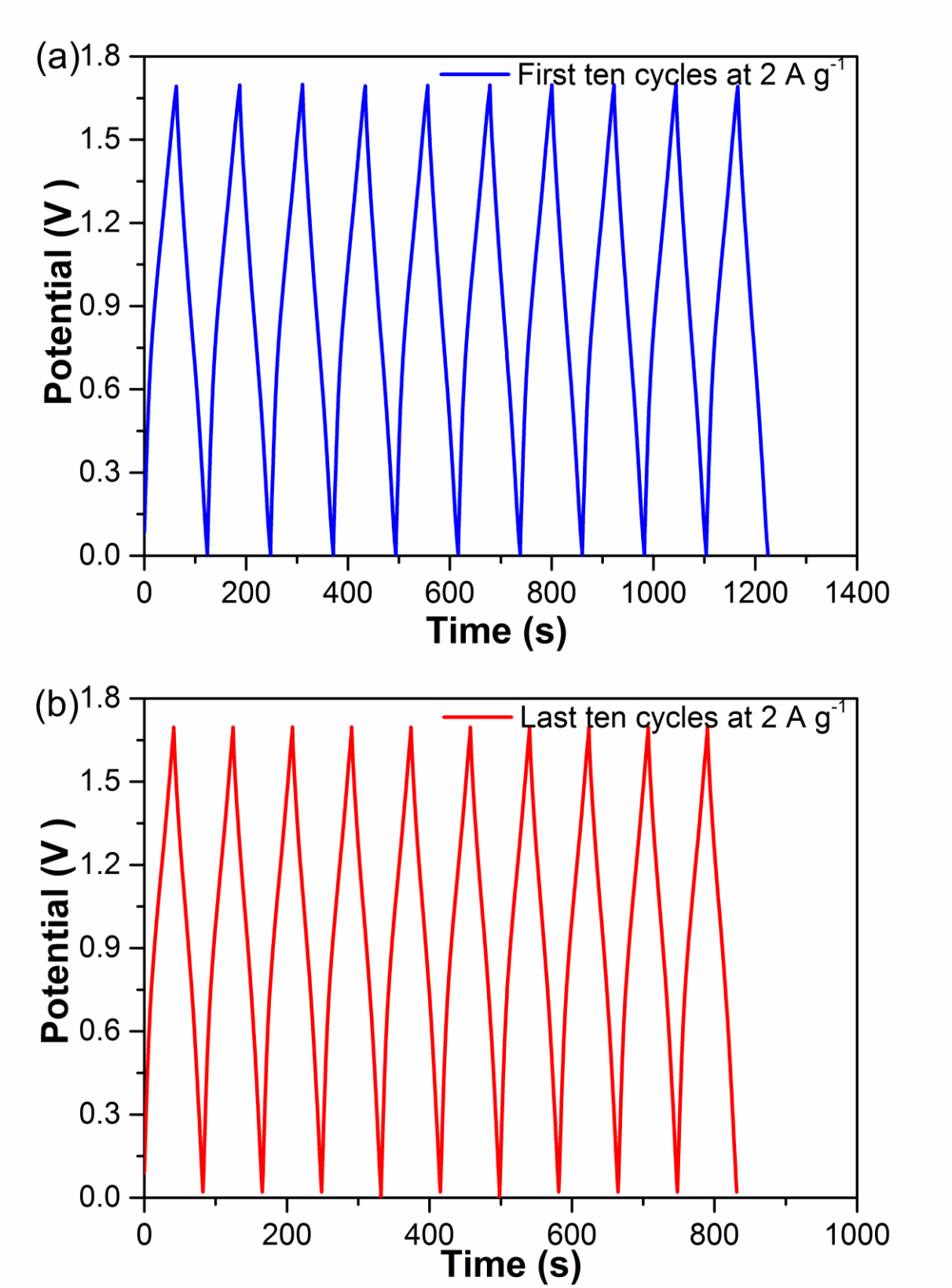

Fig. S6. a) First and b) last ten charge-discharge curves of the $Li_2Ni_2(MoO_4)_3$//AC asymmetric supercapacitor at a current density of 2 A g^{-1}.