

Supporting Information

H_xMoO_{3-y} nanobelts for high-performance pseudocapacitors with sea water as electrolyte and desalination device

Liang Huang ‡^a, Xiang Gao ‡^a, Qiang Dong ‡^b, Zhimi Hu ^a, Xu Xiao ^a, Tianqi Li ^a,
Yongliang Cheng ^a, Bin Yao ^a, Jun Wan ^a, Dong Ding ^c, Zheng Ling ^b, Jieshan Qiu ^b
and Jun Zhou ^{a*}

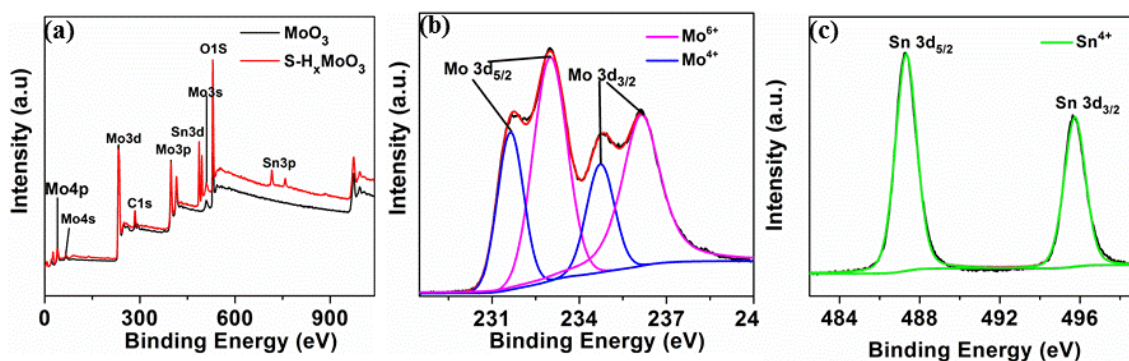


Fig. S1. (a) XPS of MoO₃ and S-H_xMoO_{3-y}; high resolution XPS spectra of S-H_xMoO_{3-y} and fitting curves, (b) Mo⁴⁺, Mo⁶⁺ and (c) Sn⁴⁺.

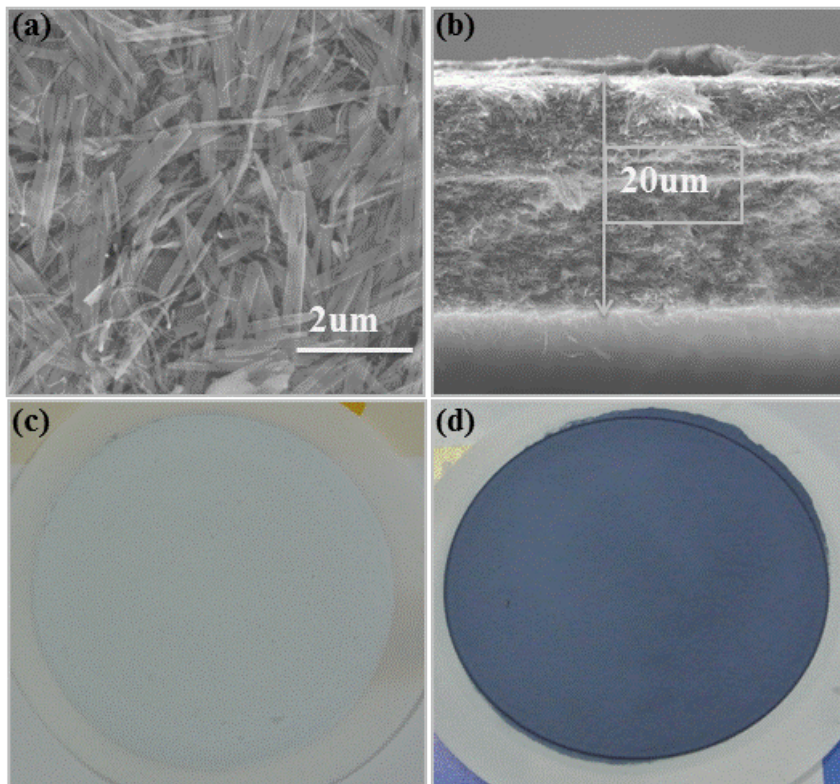


Fig. S2. (a) The hybrid film of $1S-H_xMoO_{3-y}$ and CNT; (b) The thickness of this hybrid film; optical image of pristine MoO_3 (c) and $1S-H_xMoO_{3-y}$ film (d).

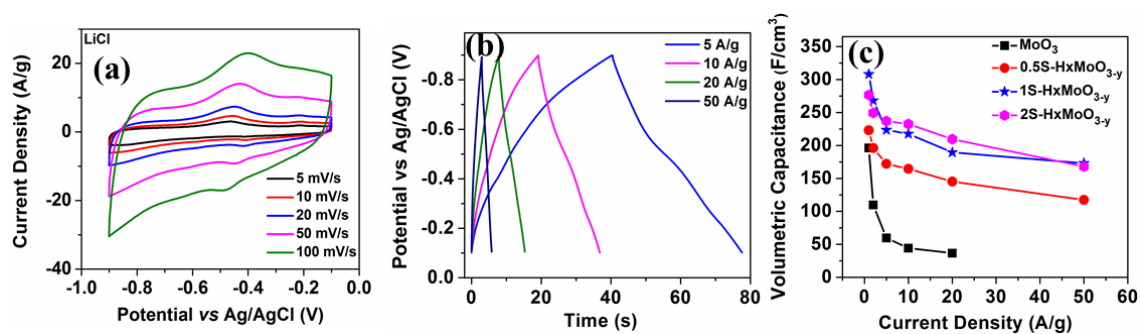


Fig. S3. CV curves (a) and CDG (b) specific capacitance of $1S-H_xMoO_{3-y}$ in the 5 M LiCl solution; (c) specific capacitance of $S-H_xMoO_{3-y}$ under different reaction time and MoO_3 .

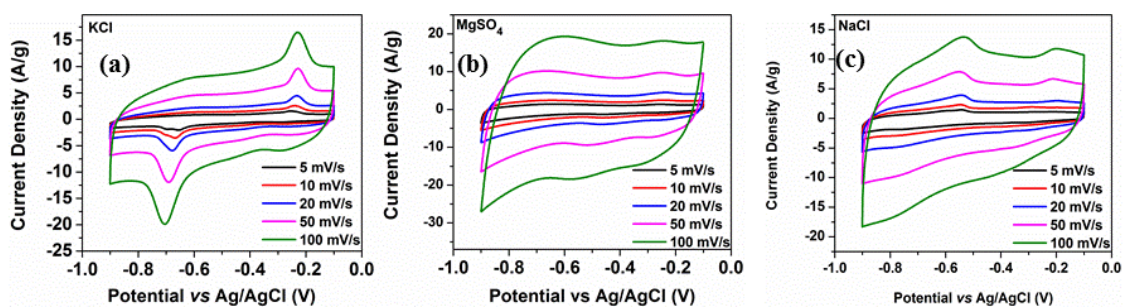


Fig. S4. CV curves of 1S-H_xMoO_{3-y} in the solution of (a) KCl, (b) MgSO₄ and (c) NaCl.

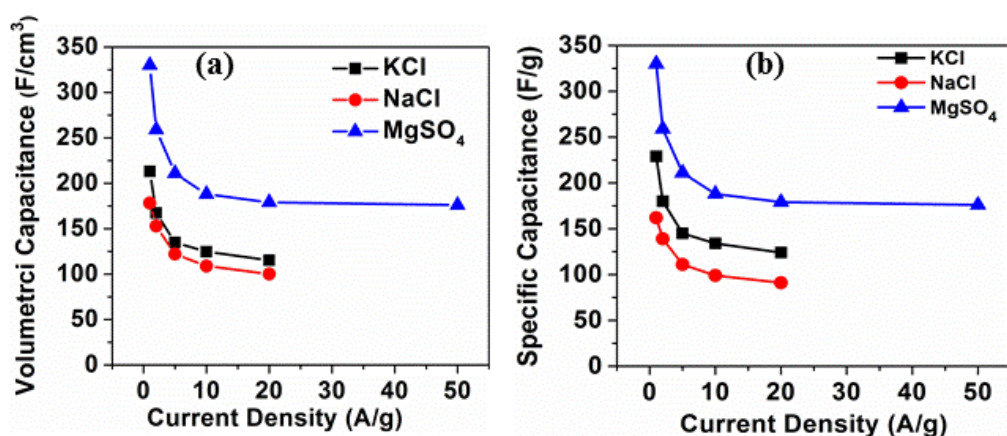


Fig. S5. (a) volumetric capacitance and (b) specific capacitance of 1S-H_xMoO_{3-y} in the different cations solution under current density from 1 A/g to 50 A/g.

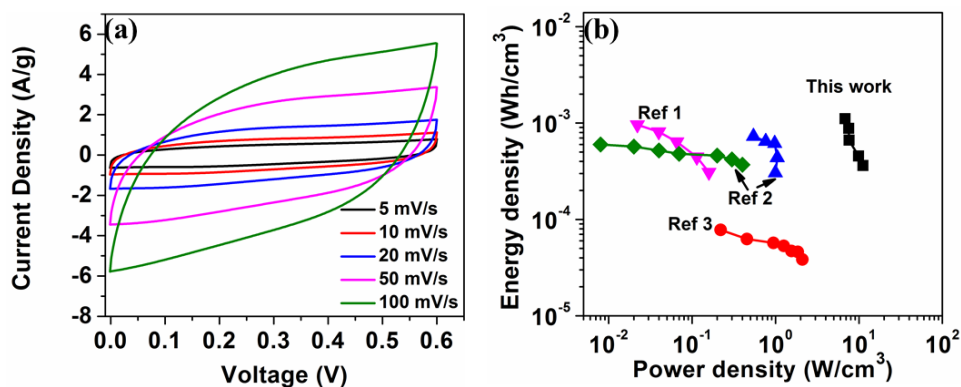


Fig. S6. (a) CV and (b) CDG curves of pristine MoO₃ in the 5 M LiCl solution.

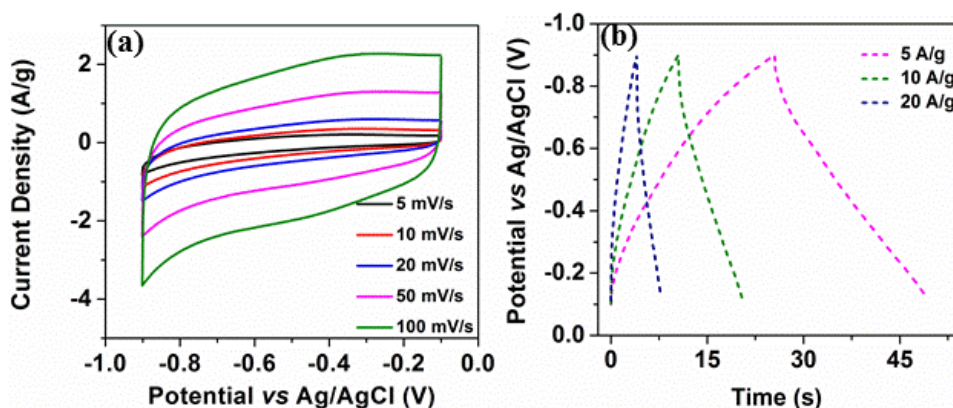


Fig. S7. (a) CV curves of symmetric device based on $1S-H_xMoO_{3-y}$ electrode and (b) Ragone plots compared with the selected previous device.

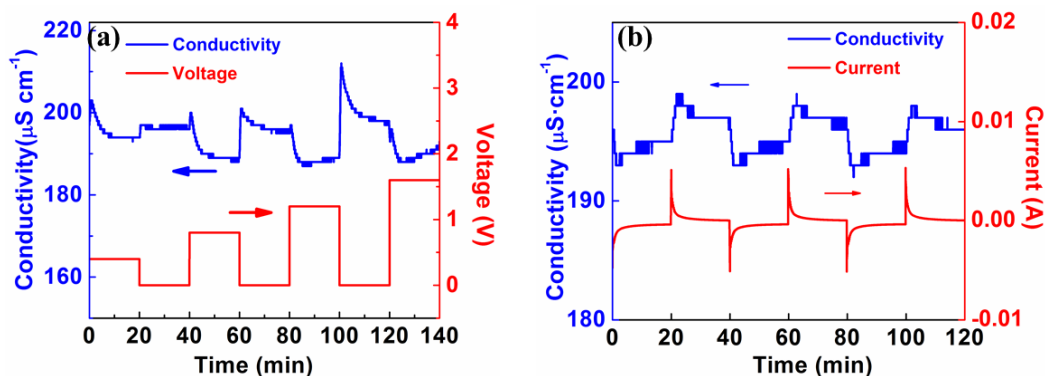


Fig. S8. (a) The electrodesorption–desorption performance of $1S-H_xMoO_{3-y}$ and CNT hybrid film in NaCl solution by varying the cell voltage from 0.4 to 1.2 V; (b) current response and electrodesorptive capacity of CNT at the voltage of 1.2 V.

Reference

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