

Supporting Information

Self-assembling few-layer MoS₂ nanosheets on CNT backbone for high-rate and long-life

lithium-ion batteries

Dayong Ren, Hao Jiang, Yanjie Hu, Ling Zhang, Chunzhong Li**

Key Laboratory for Ultrafine Materials of Ministry of Education, School of Materials Science
and Engineering, East China University of Science and Technology, Shanghai 200237, China

Tel.: +86-21-64250949, Fax: +86-21-64250624

E-mail: jianghao@ecust.edu.cn(H. Jiang) and cqli@ecust.edu.cn (C. Z. Li)

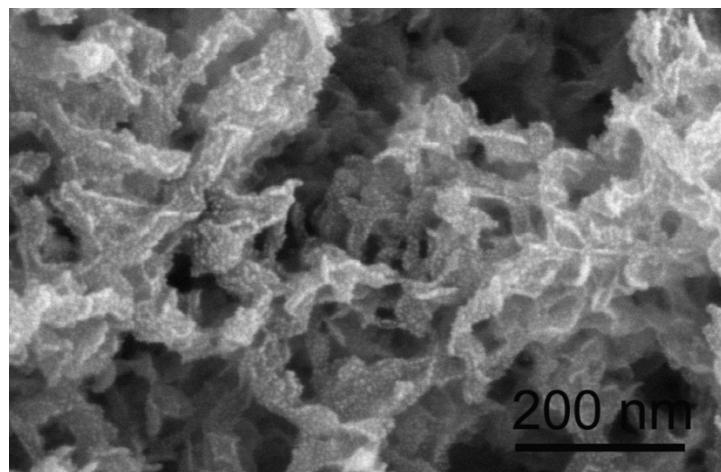


Fig.S1 FESEM images of the fresh MoS₂/CNTs hybrids.

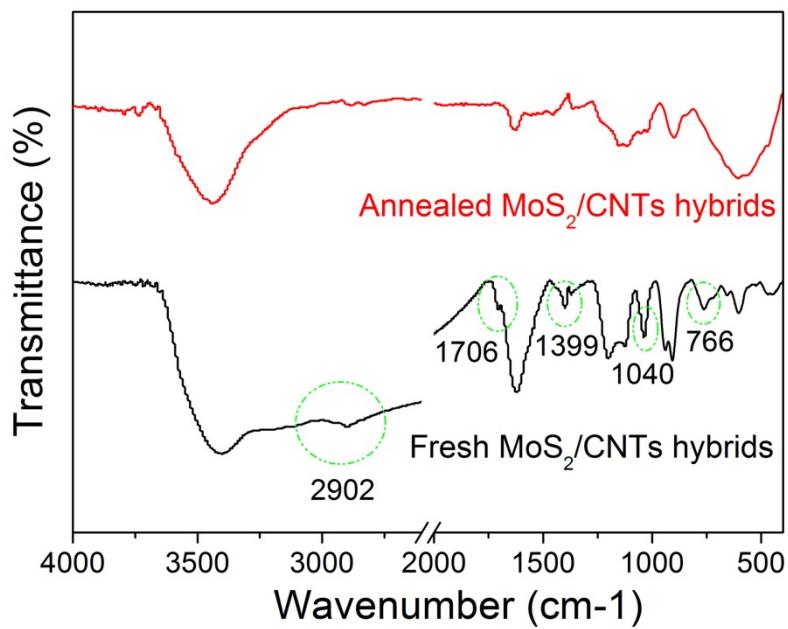


Fig.S2 FTIR spectra of the annealed MoS₂/CNTs hybrids (red line) and the fresh MoS₂/CNTs hybrids (black line), respectively.

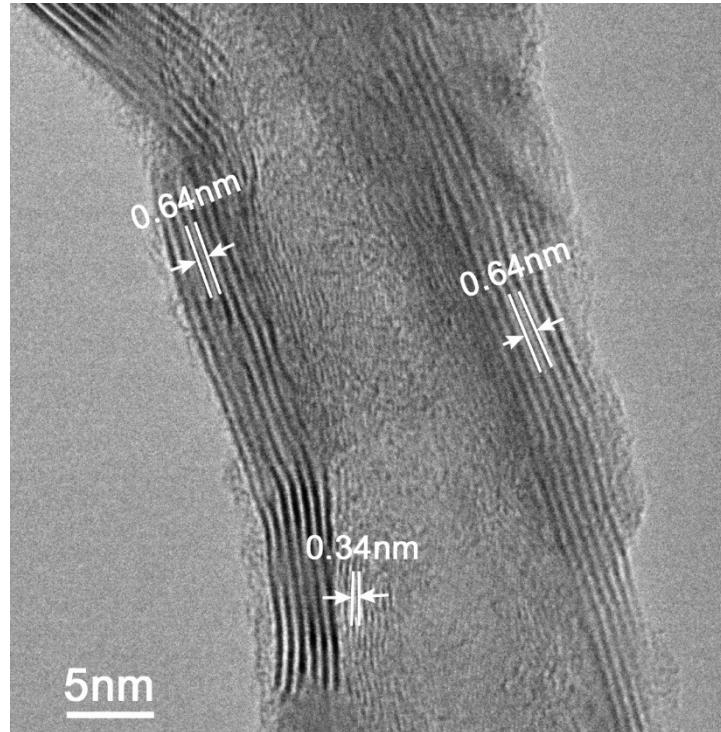


Fig. S3 High-resolution TEM images of the annealed MoS₂/CNTs hybrids at 800 °C for 2 h.

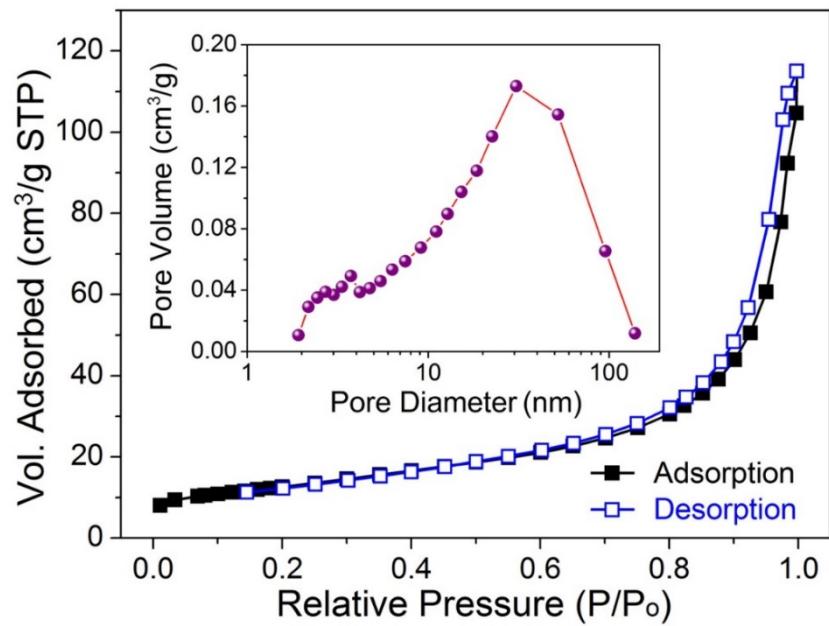


Fig. S4 Nitrogen adsorption-desorption isotherms and PSD (inset) of the annealed MoS_2/CNTs hybrids.

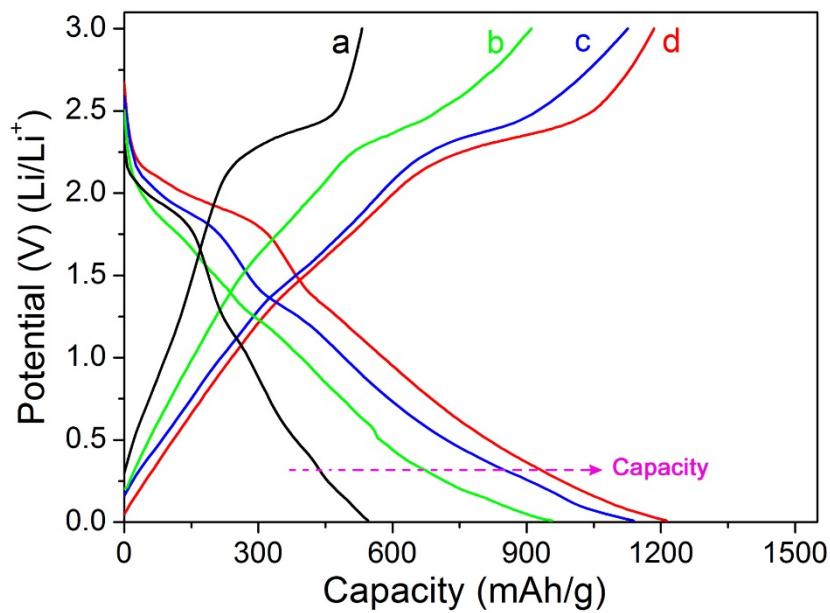


Fig. S5 The relationship between discharge capacity and the MoS_2/CNTs hybrids with different MoS_2 content (a) commercial MoS_2 , (b) MoS_2 :CNTs = 69:31, (c) MoS_2 :CNTs = 75:25, (d) MoS_2 :CNTs = 85:15.

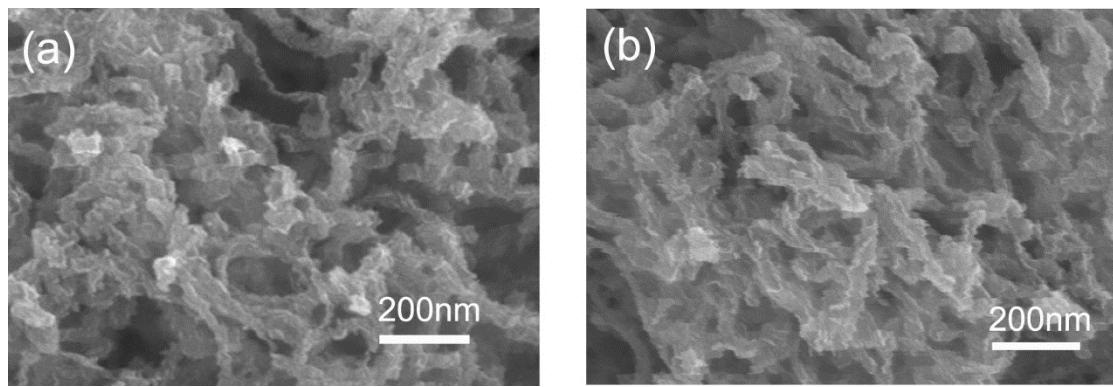


Fig. S6 The FESEM images of the MoS_2/CNTs hybrids with different MoS_2 content: (a) $\text{MoS}_2/\text{CNTs} = 69:31$, (b) $\text{MoS}_2/\text{CNTs} = 75:25$