Supplementary Information for

Electrospun porous carbon nanofiber@MoS₂ core/sheath fiber membranes as highly flexible and binder-free anode for lithium-ion batteries

Yue-E Miao, Yunpeng Huang, Longsheng Zhang, Wei Fan, Feili Lai, Tianxi Liu*

State Key Laboratory of Molecular Engineering of Polymers, Department of Macromolecular Science, Fudan University, Shanghai 200433, PR China. E-mail addresses: <u>txliu@fudan.edu.cn</u>; Tel: +86-21-55664197; Fax: +86-21-65640293.

Figure S1. Nitrogen sorption isotherms of CNF and PCNF-20 fiber membranes.

Figure S2. TGA curves of PCNF-20 fiber membrane, PCNF-20@MoS₂ composite fiber membranes, and MoS₂ powder.

Figure S3. Initial charge/discharge curves of electrospun PCNF-10 (a), PCNF-20 (b),

PCNF-30 (c) fiber membranes at a current density of 0.05 A g^{-1} .

Figure S4. Rate behavior of PCNF-20@MoS₂-5, PCNF-20@MoS₂-10 and PCNF-20@MoS₂-20 composite fiber membranes at various current densities.

Figure S5. Charge/discharge curves of PCNF-20@MoS₂-10 composite fiber membrane for the 1st, 25th and 50th cycles.

Figure S6. XRD patterns of PCNF-20@MoS₂-10 composite fiber membrane before and after cycling tests.

Figure S7. Low (a) and high (b) magnification FESEM images of PCNF-20@MoS₂-

10 composite fiber membrane after the cycling test.

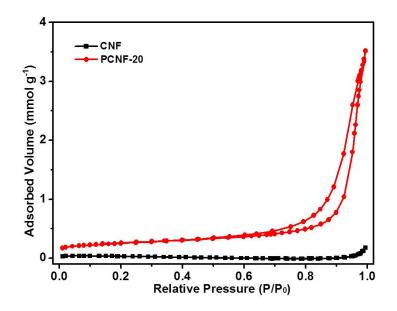


Figure S1

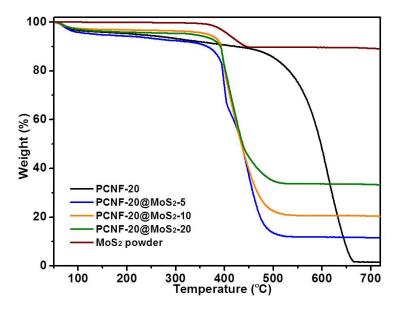


Figure S2

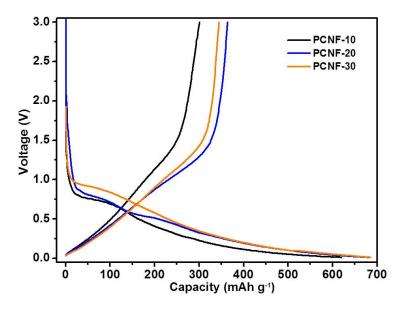


Figure S3

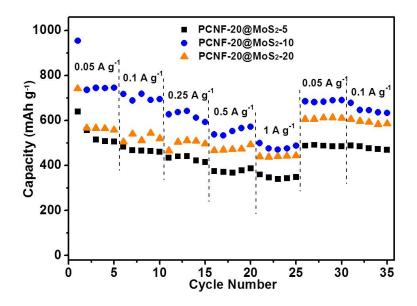


Figure S4

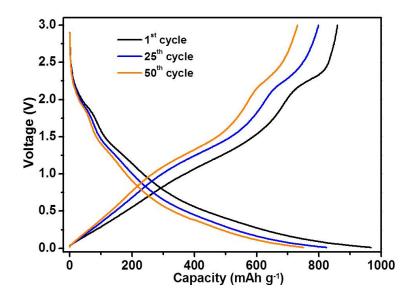


Figure S5

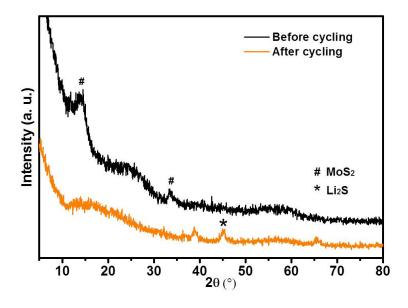


Figure S6

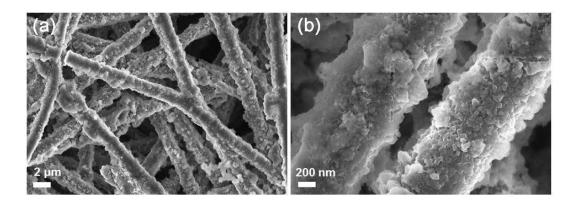


Figure S7