

Supplementary Information

Synergistic effect of porous carbon shell confinement and catalytic conversion of nickel nanoparticles core for improved lithium-sulfur batteries

Liu Jianming¹, Zhang Jin^{1*}, Jiang Shang¹, Zhao Jianguo^{1, 2*}

1. Engineering Research Center of Coal-based Ecological Carbon Sequestration Technology
of the Ministry of Education, Shanxi Datong University, Datong, 037009 China

2. Research Institute of Shaoxing, Shanghai University, Shaoxing, 312000 China

*Corresponding authors.

E-mail addresses: jgzaoshi@163.com (Zhao Jianguo), zhangjing8014484@163.com
(Zhang Jin)

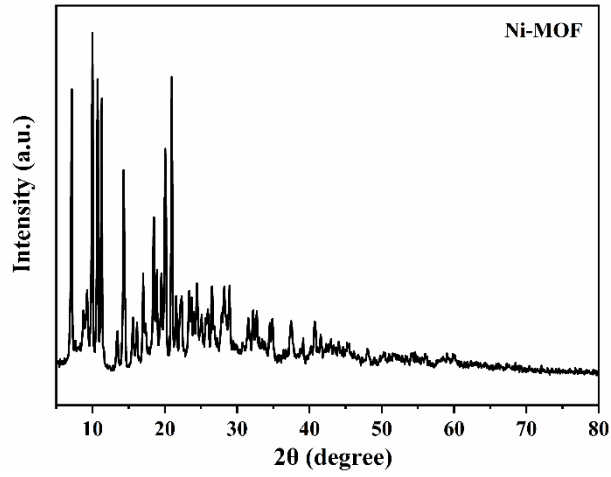


Figure S1. XRD pattern of Ni-MOF.

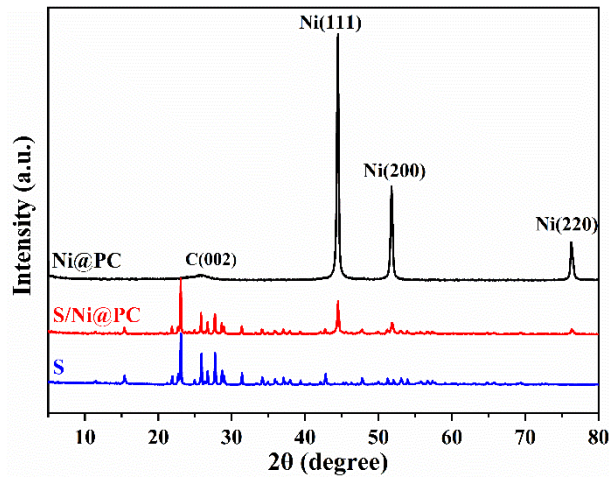


Figure S2. XRD patterns of Ni@PC, S/Ni@PC and S.

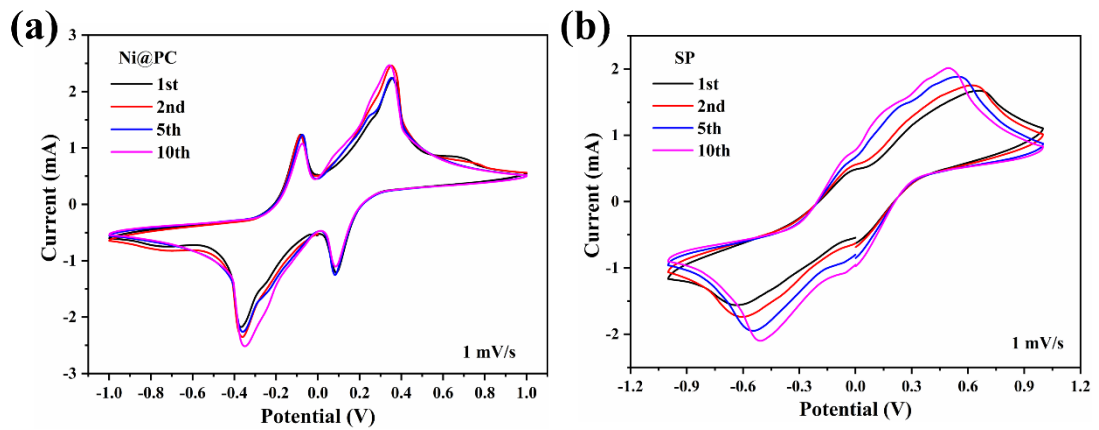


Figure S3. CV curves of Ni@PC (a) and SP (b) symmetric cell with 0.2 M Li_2S_6 electrolytes at $1 \text{ mV}\cdot\text{s}^{-1}$.

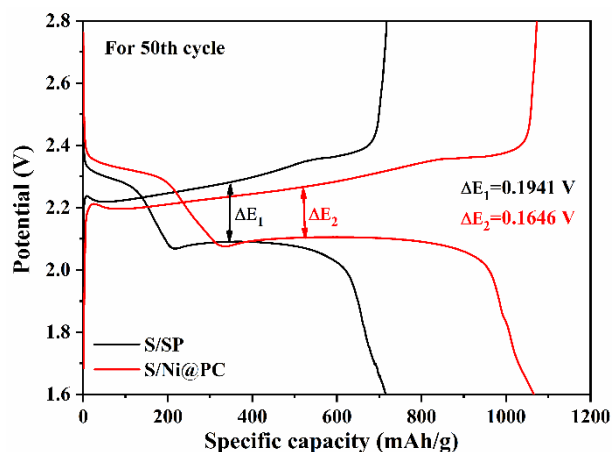


Figure S4. Galvanostatic charge/discharge curves of S/Ni@PC and S/SP for the 50th cycle at 0.2C.

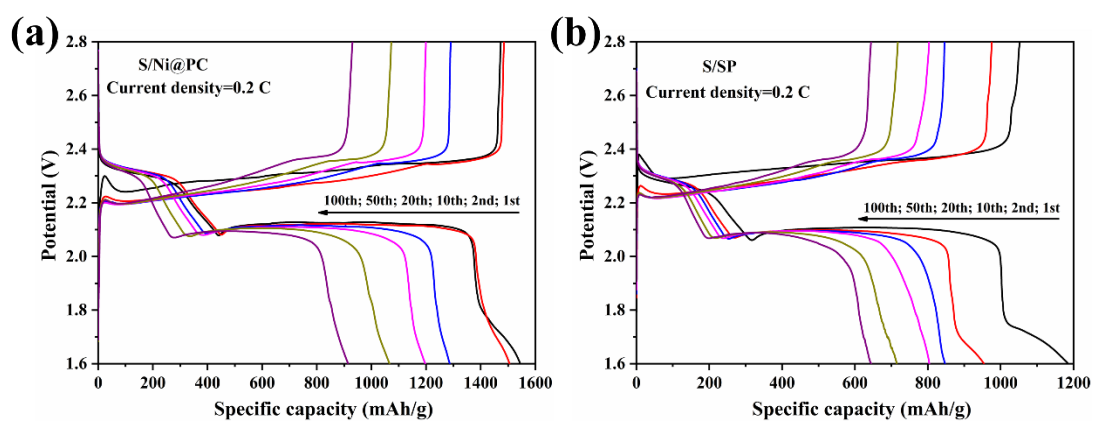


Figure S5. Galvanostatic charge/discharge curves of S/Ni@PC (a) and S/SP (b) at 0.2C.

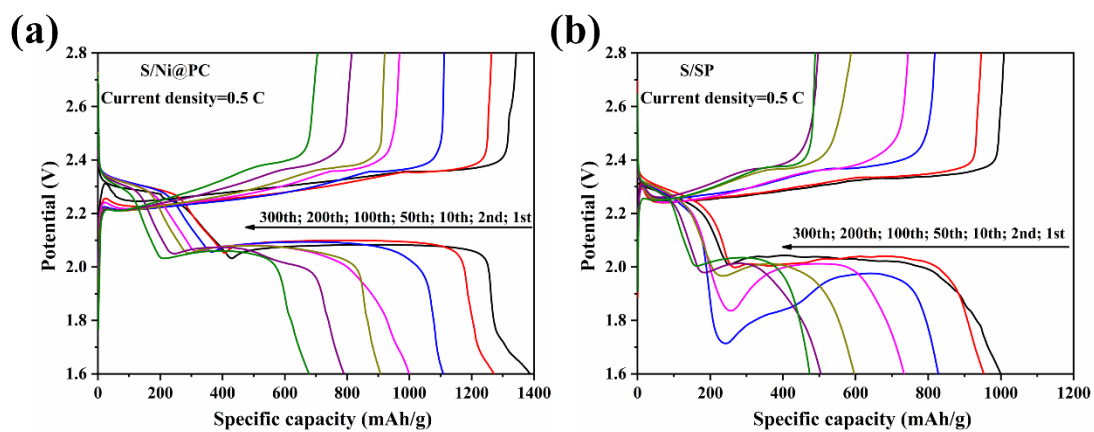


Figure S6. Galvanostatic charge/discharge curves of S/Ni@PC (a) and S/SP (b) at 0.5C.

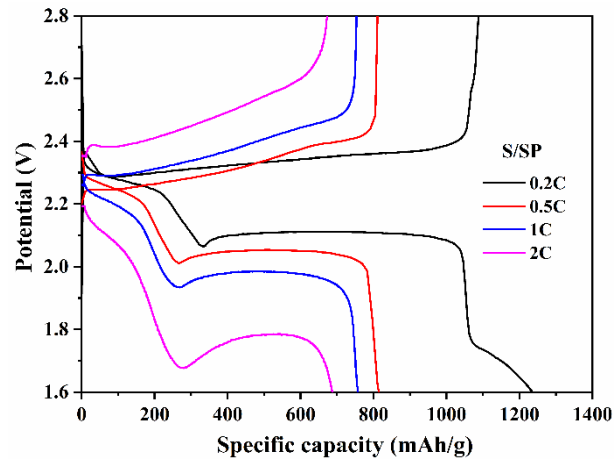


Figure S7. Galvanostatic charge/discharge curves of S/SP at 0.2~2C.