

A **M** **-F** **-B** **E** **-D** **L** **B**

*

B **7.8** **E** **B** **C** **E** **F** **F** **3D** **D** **E** **F** **3D**

Dr. Z. Wang, R. Tan, Dr. H. Wang, Dr. L. Yang, J. Hu,
Prof. H. Chen, Prof. F. Pan
School of Advanced Materials
Peking University Shenzhen Graduate School
Shenzhen 518055, P. R. China
E-mail: panfeng@pkusz.edu.cn

The ORCID identification number(s) for the author(s) of this article
can be found under <https://doi.org/10.1002/adma.201704436>.

D **I**: **10.1002/** **.201704436**

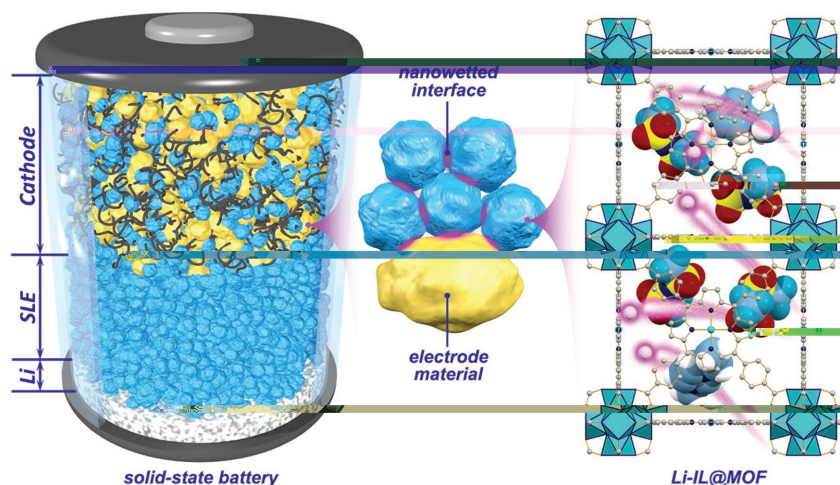


Figure 1. Schematic illustration for the architecture and nanowetted interfacial mechanism of the solid-state battery with a magnification showing crystal structures of the MOF. [EMIM]⁺ and [TFSI]⁻ ions in space-filling model are randomly displayed in the pores of the MOF. The migrating Li⁺ ions are highlighted by glowing pink spheres. Hydrogen atoms are omitted in MOF structure for clarity.

Figure 1. A

Scheme 1.

0.8 0.2 F (1 M F

1- 1-3-

0.8 0.2

11,12

7.6

F-525(C)¹⁴

5,10,15,20-

(C C)

F-525(C)

12 × 7

15

50

(E)

(D)

14

2 (

@ F E.¹⁰

@ F

F

10,12

2.0

1.5

1,

@ F

F

4 (

F (: 2.0 - @1.2 F),

C ()

C ()

1.5

B

(1.5 - @1.2 F, 10.1 %

F, 55.4 % E F, 34.5 % FV

BE

1630 2 -1

2

BE

21 2 -1 (F 5,

0.05 3 -1 - @ F

BE

F

D

F 2 (

@ F

2θ > 7°

18,19

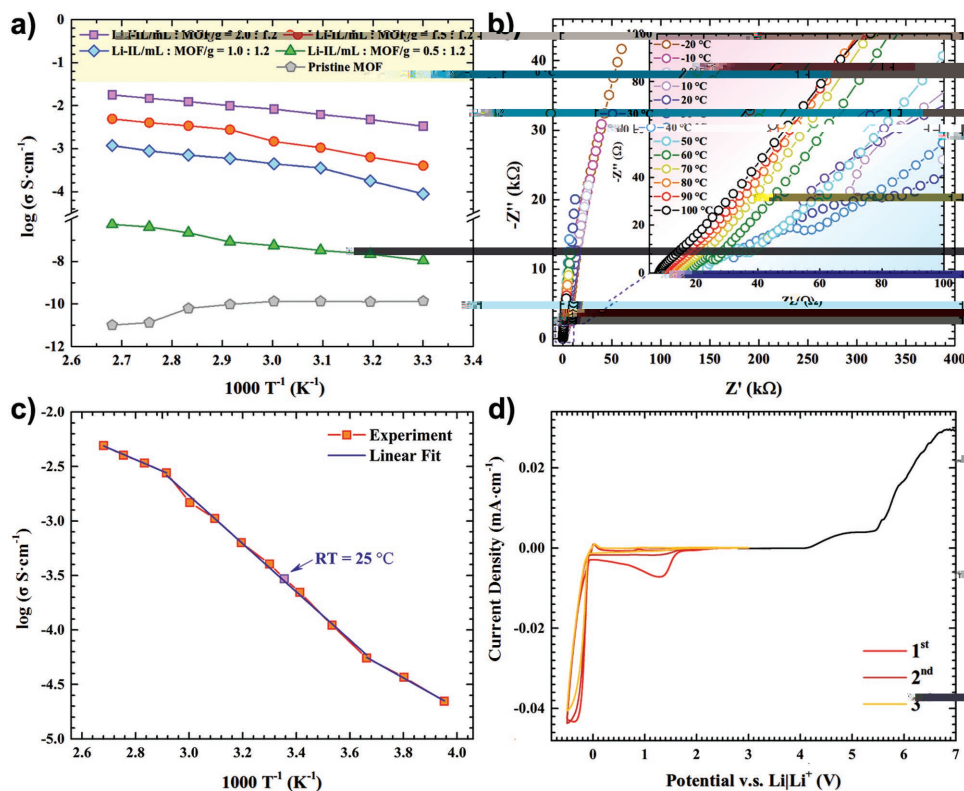
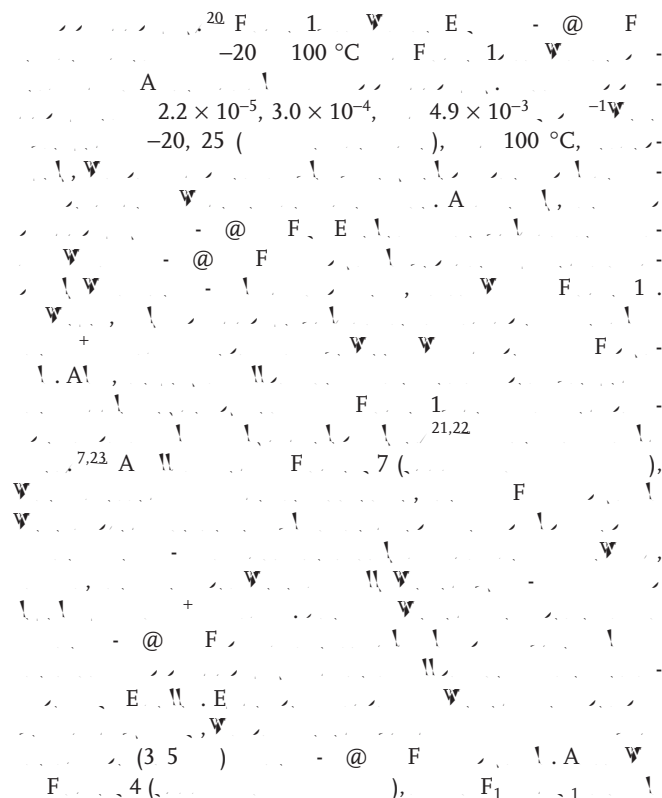
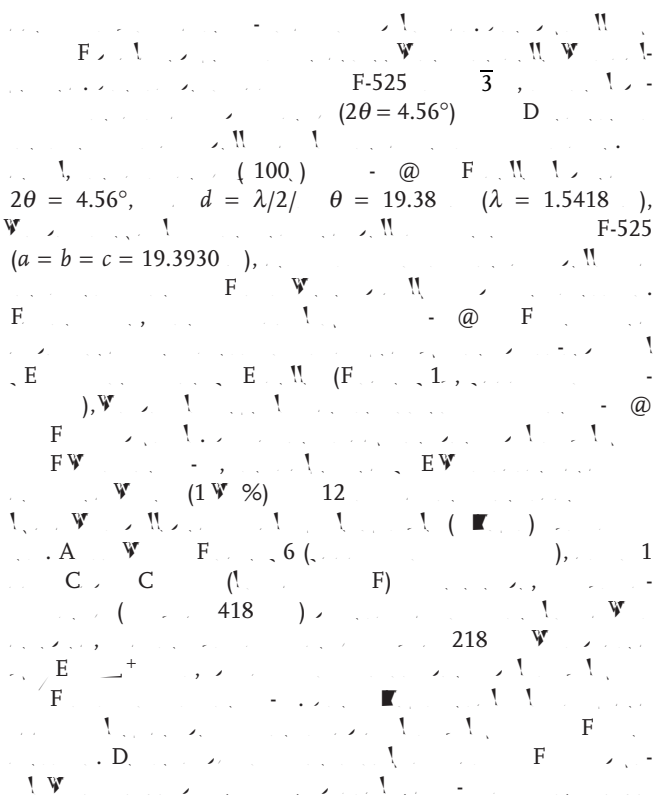


Figure 1. a) Arrhenius plots for the ionic conductivity of Li-IL@MOF SLEs with different Li-IL loading amount. b) EIS of Li-IL@MOF (1.5 mL: 1.2 g) at temperatures from -20 to 100 °C, inset: magnified high-frequency region, and c) corresponding Arrhenius plot of the ionic conductivity. d) CV (-0.5 to 3 V) for the first three cycles and LSV (3–7 V) profiles of Li|Li-IL@MOF|SS asymmetric cell under room temperature at a scan speed of 0.2 mV s^{-1} .



0.5, 1.0, 1.5) F @ F E () F | @ F 1 . A 2

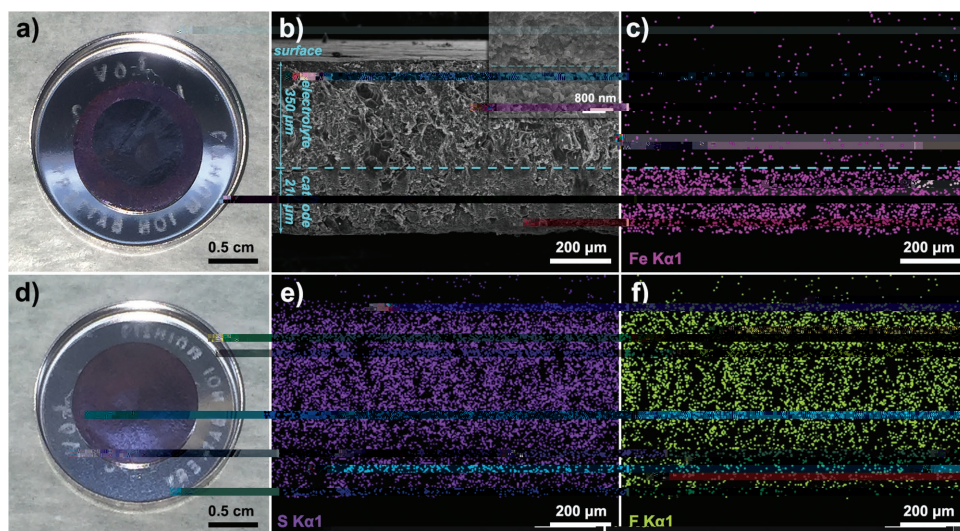
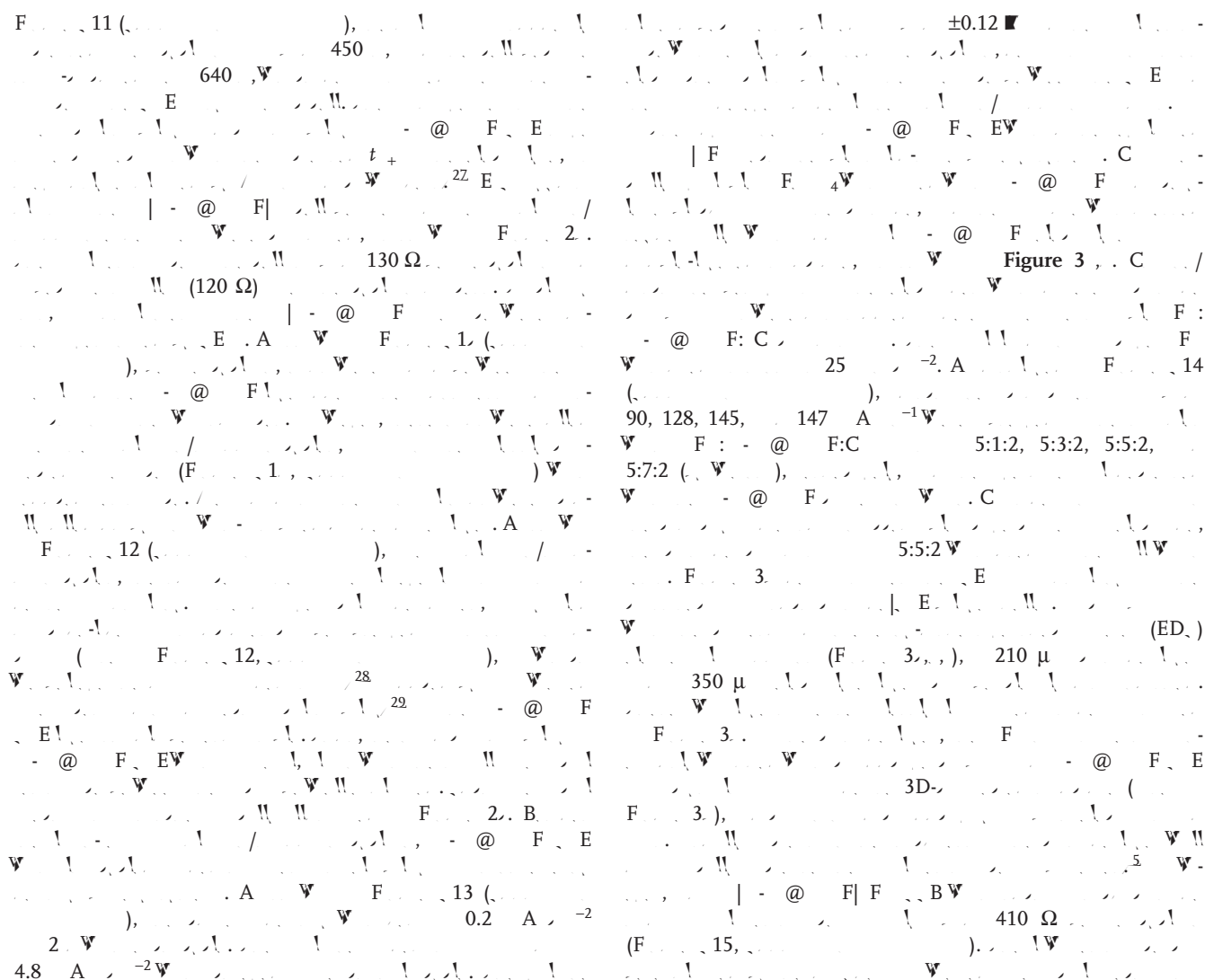
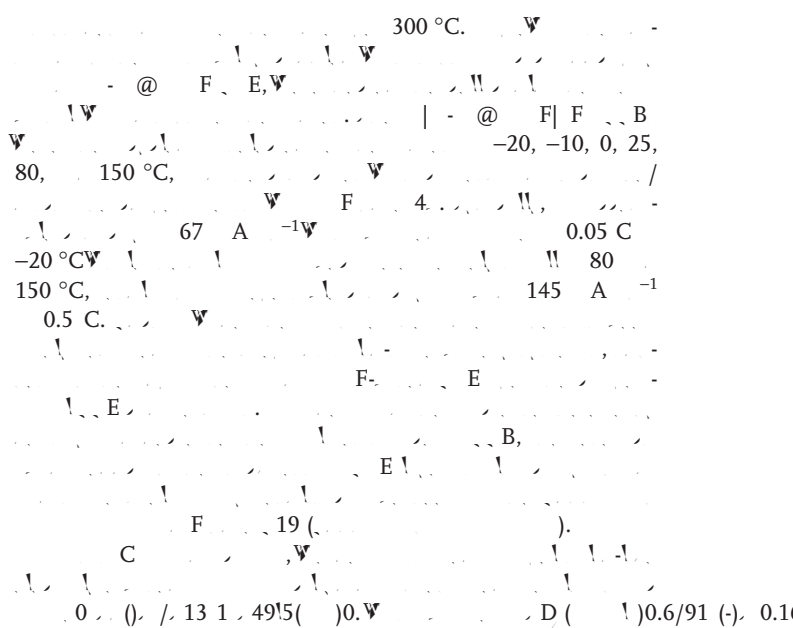


Figure 3. Photos of the a) cathode and d) electrolyte layers. b) SEM morphology for the cross section of the double-layer structure (the inset shows the interface between the two layers at a higher magnification) and c,e,f) corresponding EDS elemental mappings.





... (−20 ... 150 °C) ...
 @ F| F ... B ... 3D- ...
 ... @ F E ...
 ... 2 ...
