

2022 3 34

2022 8 30

Fellow

2022

VV

22

“ ”

2023

“ . ”

$\text{Bi}_2\text{Ti}_2\text{O}_7$

(~0.6)

182 J cm^{-3}

78%

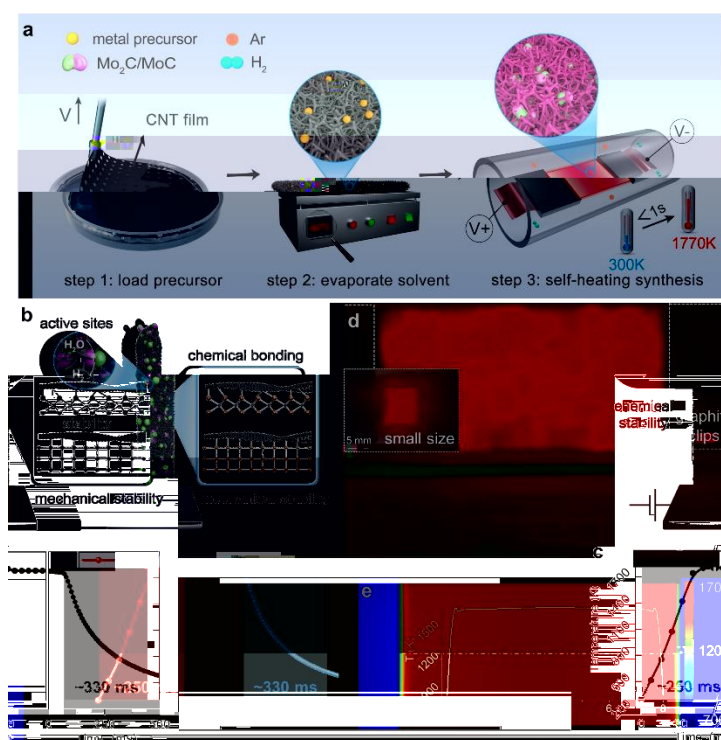
$x = 0.4$

High-entropy enhanced capacitive energy storage

Adv. Mater. 2021, 33, 2102435; ACS Nano 2021, 15, 10502; ACS Nano 2020, 14, 175; Nano Res. 2020, 13, 2035

CNT

104 K s⁻¹ ~1770K
 Mo₂C/MoC/CNT
 1000 mA cm⁻² 14 ~6% pH=14



Ultrafast self-heating synthesis of robust heterogeneous nanocarbides for high current density hydrogen evolution reaction

Nature Communications

2018

2021

2018

2017

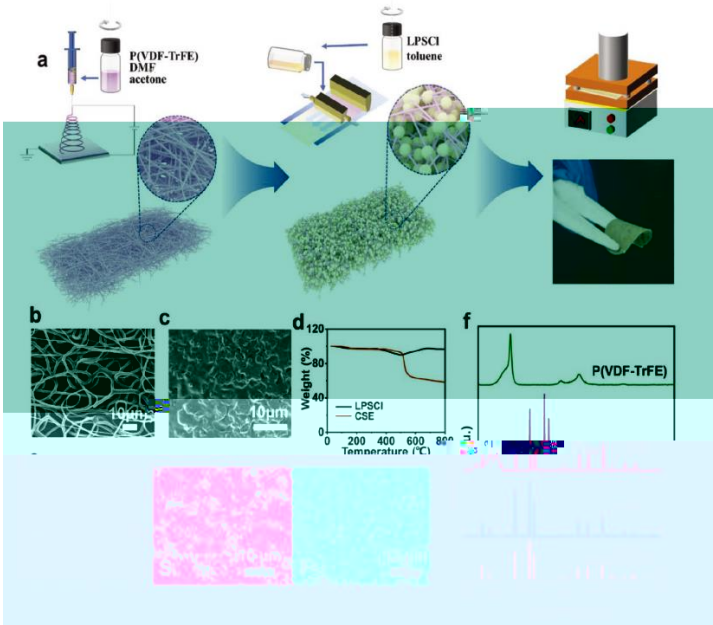
2017

2018

<https://www.nature.com/articles/s41467-022-31077-x>

P(VDF-TrFE) Li₆PS₅Cl - P(VDF-TrFE) Li₆PS₅Cl
 1.2 mS cm⁻¹
 1.0 mA cm⁻²

1000 92% 20000 71%



Li₆PS₅Cl
Thin Li₆PS₅Cl-Based Electrolyte

Super Long-Cycling All-Solid-State Battery with
Advanced Energy Materials

Nature Communications : Nature Review Materials Science
Energy Materials Advanced Materials Advanced
2018
2017

<https://doi.org/10.1002/aenm.202200660>

KNN

- KNN
KNN

-

-

{200}

1250 pm/V

Jürgen Rödel

Manuel Hinterstein

Qm d-33

KNN

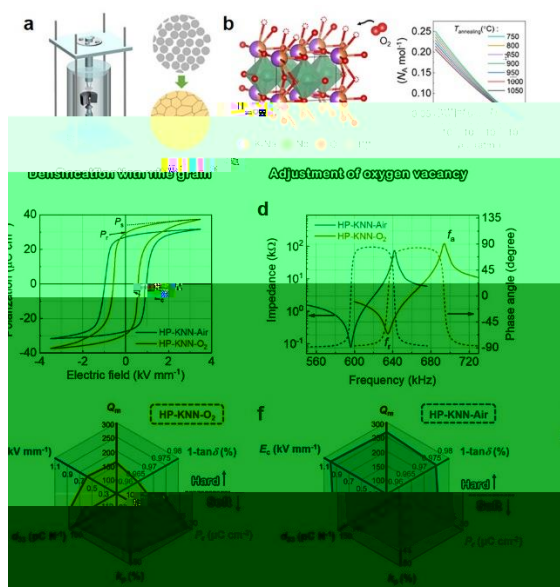
d33

Qm 60%

Qm d-33

KNN

Qm



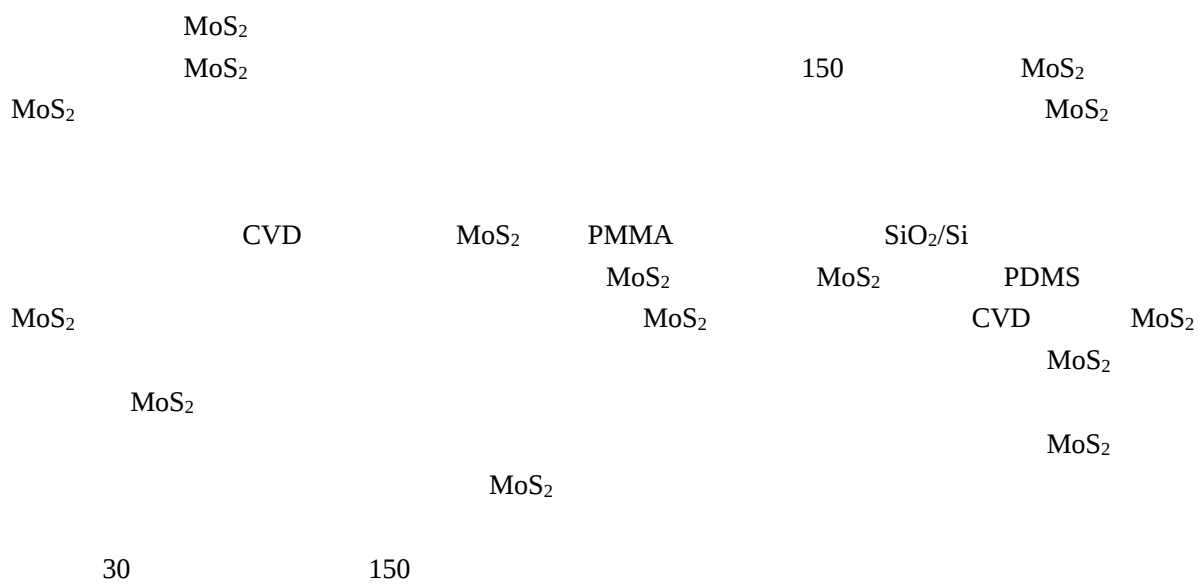
KNN

Piezoelectrics

Isolated-Oxygen-Vacancy Hardening in Lead-Free
 Advanced Materials

2022 6

2017



2019

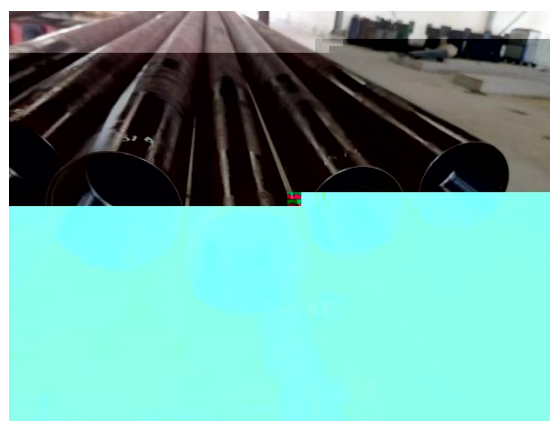
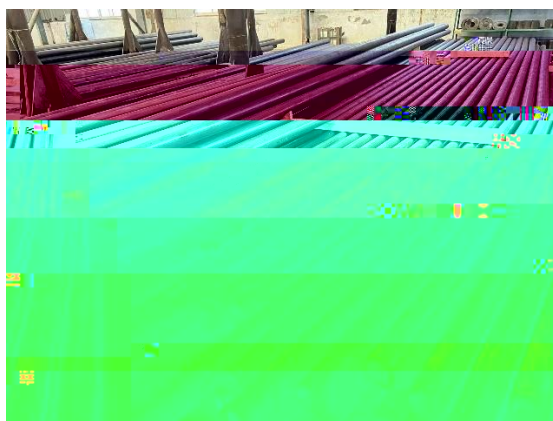
12

34.4%

500

10

500



<https://www.pnas.org/doi/epdf/10.1073/pnas.2208060119>

IUMRS

Fellow

Masaaki Yamada	Fellow Adrien Badel
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6 13

8 4
10
8
5 3

2022

6 26

2022

2002



2022

14:00

2022

Andy Godfrey

Andy

2002

2022

Quark Candle

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40 ”

90

2012

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6 23
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182

182
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A520

13

2022 6 21 2
PPT



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2

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7

62784560

clx@tsinghua.edu.cn

C201
