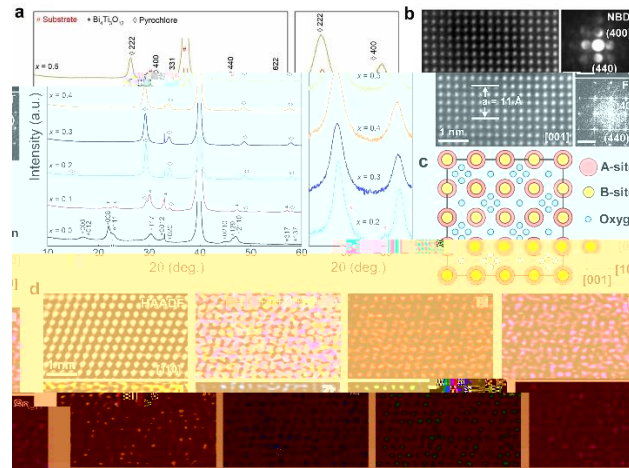


Fellow

" 2022 " 2023 .

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



(~0.6)

182 J cm^{-3}

78%

$x = 0.4$

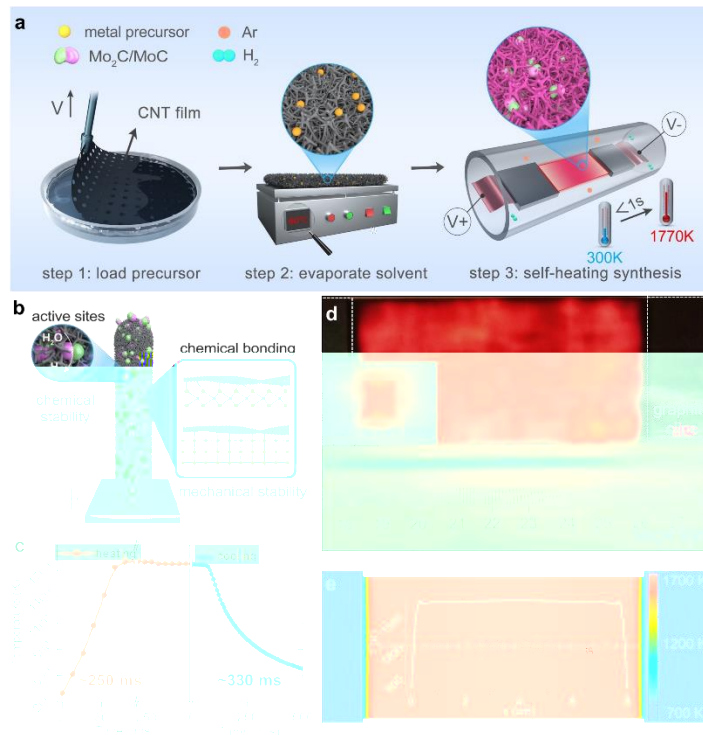
High-entropy enhanced capacitive energy storage
Nature Materials

<https://www.nature.com/articles/s41563-022-01274-6>

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
1000 mA cm⁻² Mo₂C/MoC/CNT pH=14
14 ~6%



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

Nature Communications

2018

2021

2018

2017

2017

2018

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

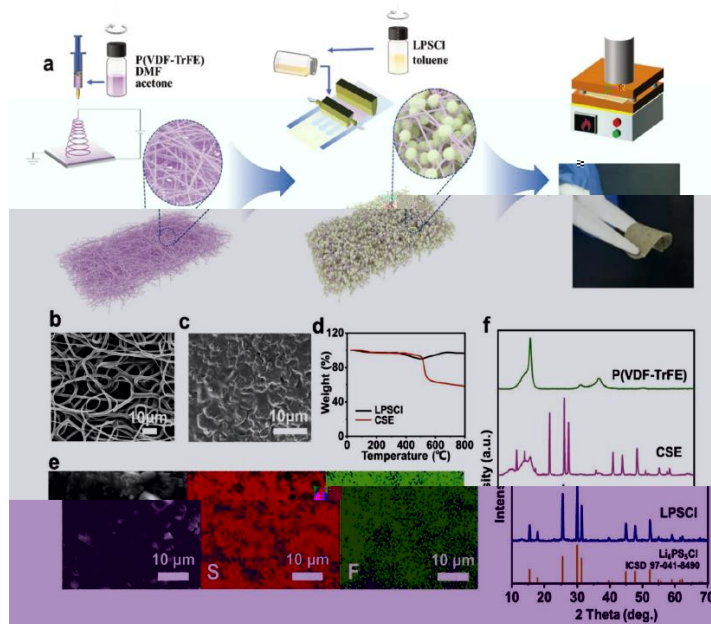
P(VDF-TrFE)	Li ₆ PS ₅ Cl	-	P(VDF-TrFE)	Li ₆ PS ₅ Cl
				1.2 mS cm ⁻¹
				1.0 mA cm ⁻²

1000

92%

20000

71%



Li₆PS₅Cl

Thin Li₆PS₅Cl-Based Electrolyte

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

:

Nature Review Materials
Advanced Materials

Science
Advanced

Nature Communications

Energy Materials

2018

2017

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

KNN

-

KNN

KNN

-

-

{200}

1250 pm/V

Jürgen Rödel

Manuel Hinterstein

Qm d 33

KNN

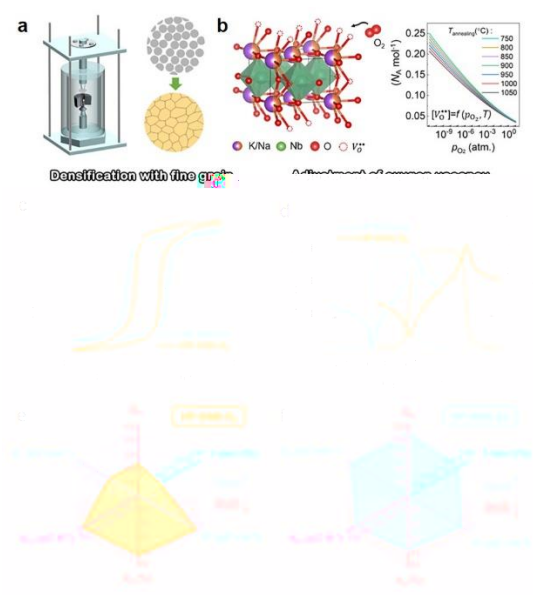
d33

Qm 60%

Qm d 33

KNN

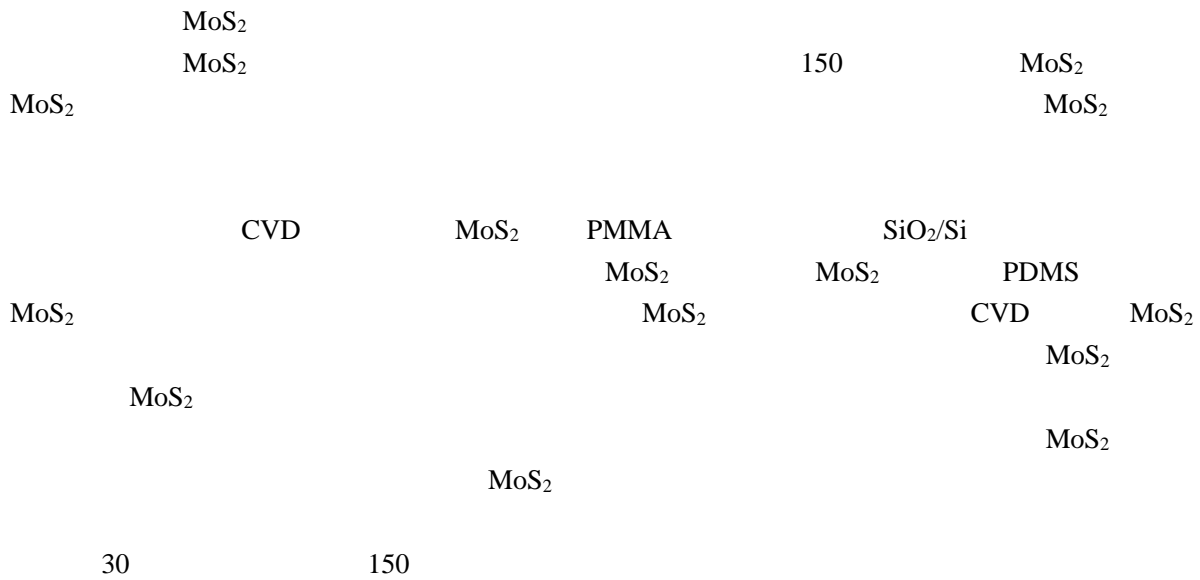
Qm



KNN

Piezoelectrics

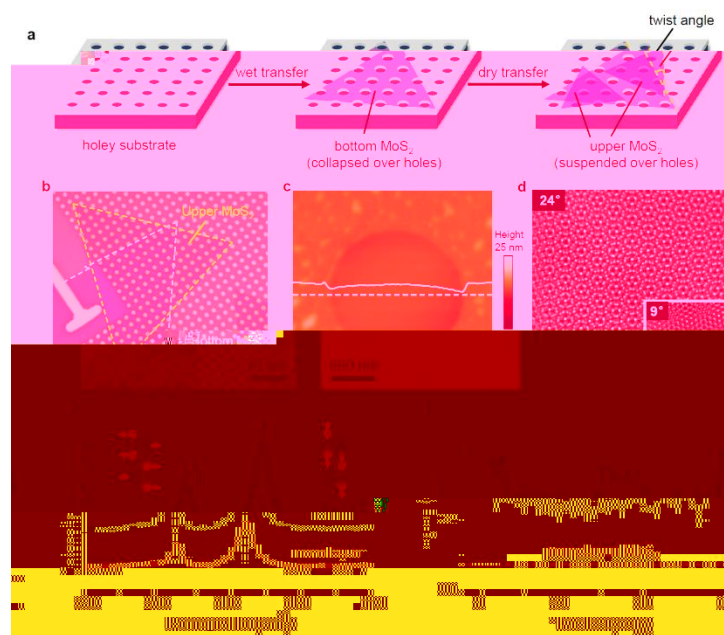
Isolated-Oxygen-Vacancy Hardening in Lead-Free
 Advanced Materials



bilayer MoS₂ by nanoindentation

MoS₂

Determining the interlayer shearing in twisted
Nature Communications



MoS₂

<https://www.nature.com/articles/s41467-022-31685-7>

2019

12

34.4%

500

10

500

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

IUMRS

2022 6

2021-2022

1991

IUMRS, International Union of Materials Research Societies

Fellow

7 1 Masaaki Yamada Fellow Adrien Badel Fellow
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60 Kenichi Ishikawa
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Fellow Takao Someya Fellow
Key Materials and Their Service Behaviors in Nuclear Energy
System

Naoto Sekimura

Takao Someya

Fellow

Fellow School of Engineering The University of Tokyo

1994

2003

2006

IGRDM

ICMST

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Andy Godfrey

Andy

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2023



62784560

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C201