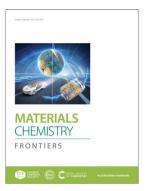
# **MATERIALS** CHEMISTRY

# **FRONTIERS**

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#### Inside cover

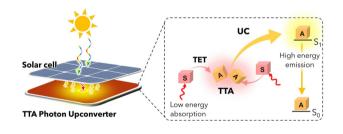
See Pankaj Bharmoria, Kasper Moth-Poulsen et al., pp. 2297-2315. Image reproduced by permission of Pankaj Bharmoria from Mater. Chem. Front., 2023, 7, 2297.

### **REVIEWS**

# 2297

# Triplet-triplet annihilation mediated photon upconversion solar energy systems

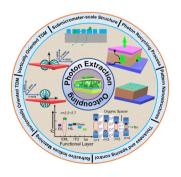
Lukas Naimovičius, Pankaj Bharmoria\* and Kasper Moth-Poulsen\*



#### 2316

Light outcoupling strategies in oriented perovskite light-emitting-diodes: recent trends, opportunities, and challenges toward innovation

Muhammad Imran Saleem, Rino Choi\* and Jeong-Hwan Lee\*



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### **REVIEWS**

### 2337

# Recent advances in electrochromic materials and devices for camouflage applications

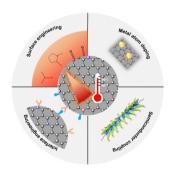
Haichang Fu, Ling Zhang, Yujie Dong, Cheng Zhang\* and Weijun Li\*



### 2359

# Tuning the photothermal properties of carbon dots in the deep-red to near-infrared wavelength regions for tumor therapy

Tesen Zhang, Jun Wu, Zikang Tang\* and Songnan Qu\*



# 2373

# Recent advances in two-dimensional MXenes for zinc-ion batteries

Yunfei Shen, Heng Lv and Long Chen\*

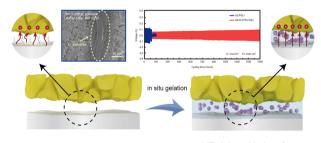


### **RESEARCH ARTICLES**

### 2405

# Fast and stable charge transfer at the lithiumsulfide (electrolyte) interface via an in situ solidified Li<sup>+</sup>-conductive interlayer

Ya-Hui Wang, Xu-Sheng Zhang, Cai-Cai Li, Hao Zeng, Zhe Chen, Liang Zhang, Jin-Chi Zheng, Yuan Luo, Sen Xin\* and Yu-Guo Guo

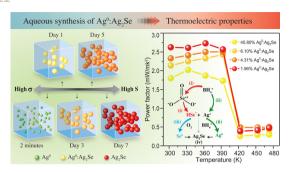


Unstable interface

LiF-rich stable interface

### RESEARCH ARTICLES

#### 2411



# Compositionally tuned hybridization of n-type Ag<sup>0</sup>: Ag<sub>2</sub>Se under ambient conditions towards excellent thermoelectric properties at room temperature

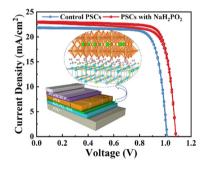
Si Yin Tee,\* Daniel Ponsford, Xian Yi Tan, Xiaobai Wang, Chee Leng Lay, Coryl Jing Jun Lee, Xi Ping Ni, Debbie Hwee Leng Seng, Warintorn Thitsartarn, Guijian Guan and Ming-Yong Han\*

#### 2419



# 3,4-Ethylenedithio thiophene donor for NIR-II fluorophores with improved quantum yields

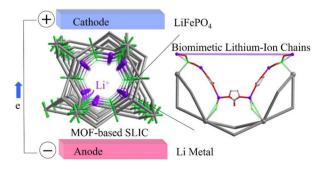
Chunchen Liu, Xinyuan Wang, Xingfu Zhu, Rui Ma, Qihui Lin\* and Yongye Liang\*



# Interlayer engineering via alkaline hypophosphates for efficient and air-stable perovskite solar cells

Jin Peng, Qiaofeng Wu, Hongming Hou, Taotao Hu, Yue Huang, Xudong Cai, Wenjie Luo, Xin Chen and Hua Yu\*

#### 2436



# Pseudo single lithium-ion conductors enabled by a metal-organic framework with biomimetic lithium-ion chains for lithium metal batteries

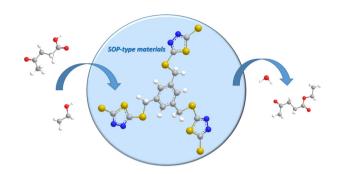
Jian-Qiang Shen, Ying-Li Song, Chun-Ting He, Chen Zhang, Xing Lu, Zhikai Qi, Yunfeng Lu\* and Xian-Ming Zhang\*

### **RESEARCH ARTICLES**

#### 2443

Sulfide organic polymers as novel and efficient metal-free heterogeneous Lewis acid catalysts for esterification reactions

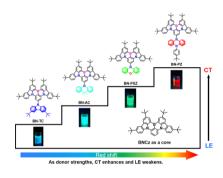
M. Melero, U. Díaz\* and F. X. Llabrés i Xamena\*



#### 2454

Red-shift emission and rapid up-conversion of B,N-containing electroluminescent materials *via* tuning intramolecular charge transfer

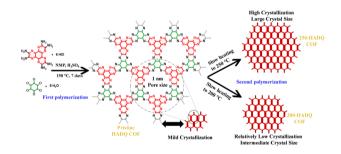
Yi-Hui He, Feng-Ming Xie,\* Hao-Ze Li, Kai Zhang, Yang Shen, Feng Ding, Cheng-Yuan Wang, Yan-Qing Li\* and Jian-Xin Tang\*



### 2464

Boosting the crystallinity of novel two-dimensional hexamine dipyrazino quinoxaline-based covalent organic frameworks for electrical double-layer supercapacitors

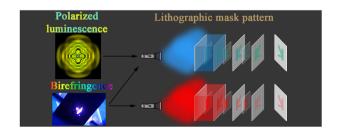
Rashid Iqbal,\* Muhammad Kashif Majeed, Arshad Hussain, Aziz Ahmad, Muhammad Ahmad, Bushra Jabar, Abdul Rehman Akbar, Sajjad Ali, Sajid Rauf and Adil Saleem\*



#### 2475

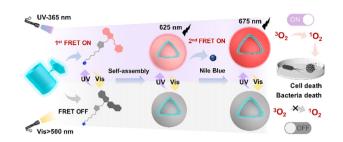
Birefringence and polarized luminescence of a manganese(II) chloride—triphenylphosphine oxide compound: application in LEDs and photolithography

Alexey Berezin



### **RESEARCH ARTICLES**

#### 2484



A novel photoswitchable AIE-active supramolecular photosensitizer with synergistic enhancement of ROS-generation ability constructed by a two-step sequential FRET process

Xueqi Tian, Shengke Li, Krishnasamy Velmurugan, Zhihang Bai, Qian Liu, Kaiya Wang, Minzan Zuo\* and Xiao-Yu Hu\*

### **CORRECTION**

#### 2493

Correction: Fluorescence resonance energy transfer enhanced photothermal and photodynamic antibacterial therapy post a single injection

Lei Xue, Qing Shen, Tian Zhang, Yibin Fan, Xiaogang Xu, Jinjun Shao,\* Dongliang Yang, Wenli Zhao, Xiaochen Dong\* and Xiaozhou Mou\*