

# Materials Advances

An open access journal publishing across the breadth of materials science

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## IN THIS ISSUE

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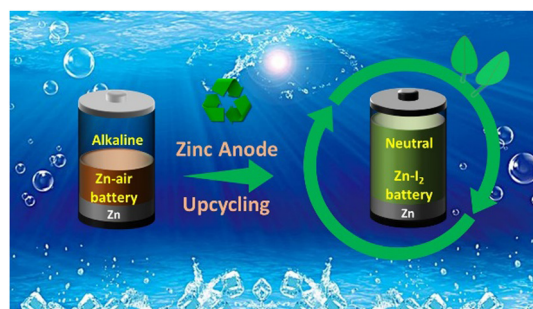
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2023, 4, 1637.

## COMMUNICATIONS

1623

### High-performance anodes for aqueous Zn–iodine batteries from spent Zn–air batteries

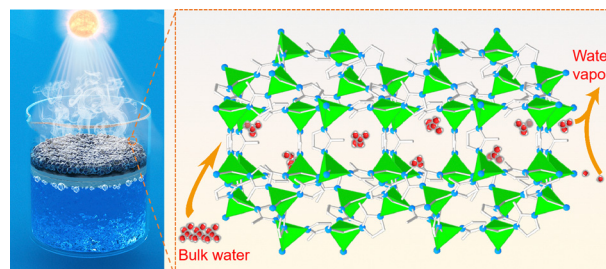
Xiaofeng Shan, Yanqing Fu,\* Dongdong Zhang, Pan Li, Weiyou Yang and Qiliang Wei\*



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### Composite membranes based on self-crosslinking polyelectrolyte-wrapped ZIF-8/CNT nanoparticles for solar steam evaporation

Yingying Zhu, Hongyu Lan, Panpan He, Xiangwei Zhu, Jiang Gong, Zhiyue Dong\* and Minghua Zeng\*



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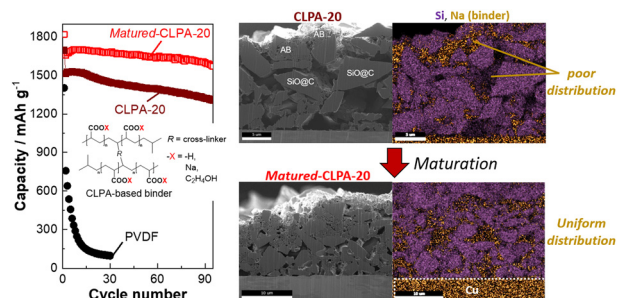


## PAPERS

1637

# High-performance SiO electrodes for lithium-ion batteries: merged effects of a new polyacrylate binder and an electrode-maturation process

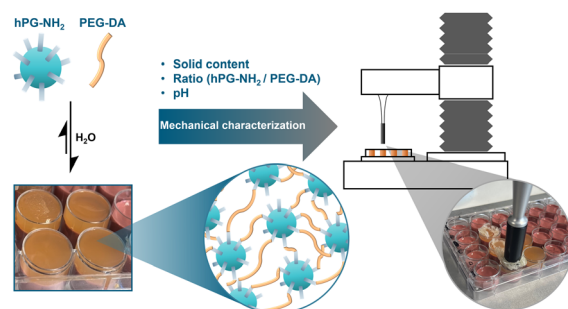
Shogo Yamazaki, Ryoichi Tatara, Hironori Mizuta, Kei Kawano, Satoshi Yasuno and Shinichi Komaba\*



1648

# Synthesis and characterization of a Schiff base crosslinked hydrogel based on hyperbranched polyglycerol

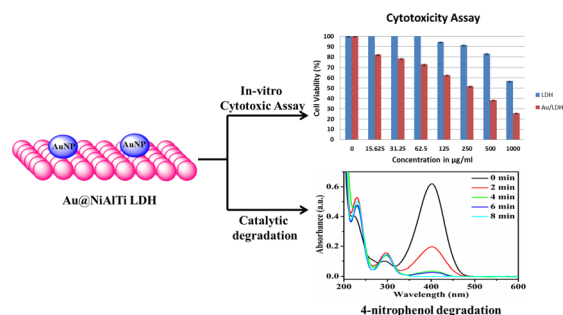
Kyriakos Karakyriazis, Vanessa Lührs, Sebastian Stößlein, Ingo Grunwald and Andreas Hartwig\*



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# Exploring the catalytic degradation of 4-nitrophenol and *in vitro* cytotoxicity of gold nanoparticle-doped NiAlTi LDH

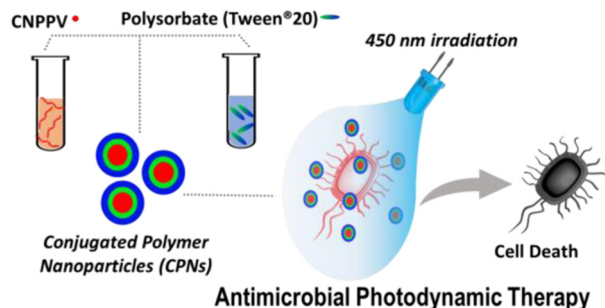
Garima Rathee, Heerak Chugh, Sahil Kohli, Rajesh K. Gaur and Ramesh Chandra\*



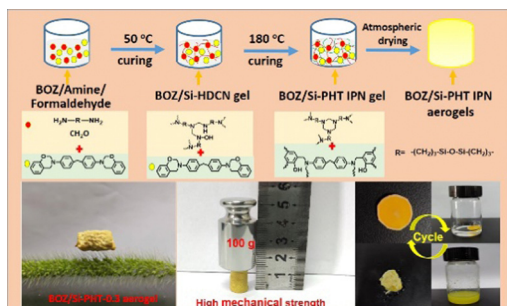
1664

# Conjugated polymer nanoparticles with tunable antibacterial photodynamic capability

Anderson R. L. Caires\*, Thalita H. N. Lima and Thais F. Abelha\*



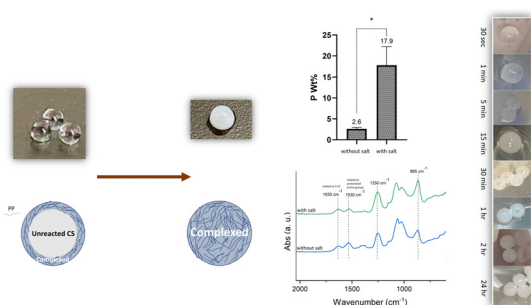
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### High mechanically enhanced and degradable polybenzoxazine/polyhexahydrotriazine IPN aerogels by atmospheric drying

Yi Xu,\* Xinyue Sun, Keqi Zhu, Shumin Xu, Changhui Liu, Shenghua Xiong and Chao Li\*

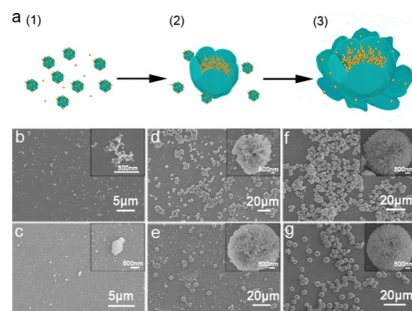
1678



### Macro bead formation based on polyelectrolyte complexation between long-chain polyphosphates and chitosan

Sajjad Fanaee and Mark Joseph Filiaggi\*

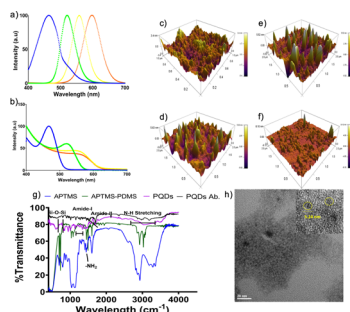
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### Luminescent protein-rare earth fluoride nanoflowers

Wenyu Wei, Manman He, Jianrui Ma, Yirui Fan, Peng Liu\* and Jianxi Xiao\*

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### Exploiting the UV excited size-dependent emission of PDMS-coated CdTe quantum dots for *in vitro* simultaneous multicolor imaging of HepG2 cellular organelles

Sulaxna Pandey and Dhananjay Bodas\*

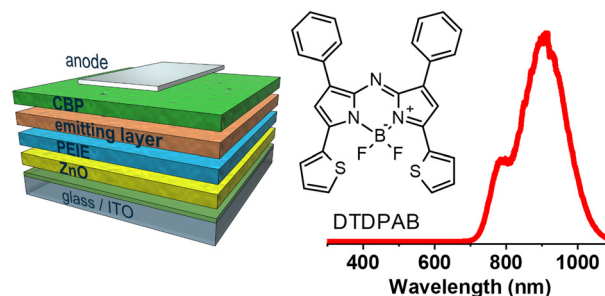




1702

## AZABODIPY aggregates as a promising electroluminescent material for sustainable NIR OLED applications

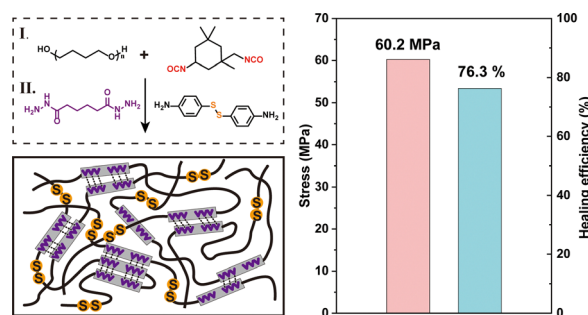
Wojciech Mróz,\* Benedetta Maria Squeo, Barbara Vercelli, Chiara Botta and Mariacecilia Pasini



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## Tough polyurethane elastomers with high strength and rapid healing ability

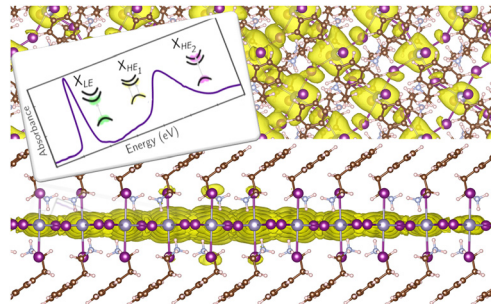
Chenghui Qiao, Xiurui Jian, Zhengguo Gao, Qingfu Ban,\* Xintao Zhang, Huimin Wang and Yaochen Zheng\*



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## Plurality of excitons in Ruddlesden–Popper metal halides and the role of the B-site metal cation

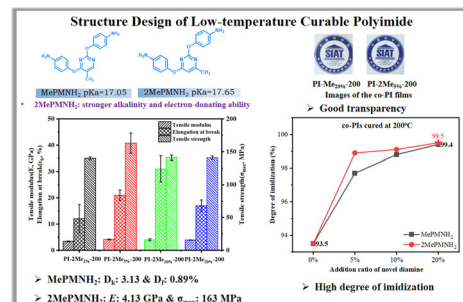
Giulia Folpini, Maurizia Palummo,\* Daniele Cortecchia, Luca Moretti, Giulio Cerullo, Annamaria Petrozza, Giacomo Giorgi\* and Ajay Ram Srimath Kandada\*



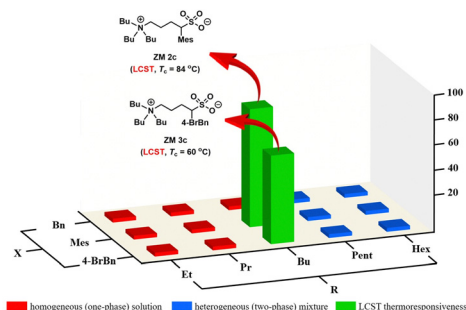
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## High-performance low temperature curable copolyimides *via* multidimensional modulation in alkaline environment and electronic effects of monomers

Xialei Lv, Shan Huang, Zimeng He, Jinhui Li,\* Siyao Qiu, Tao Wang, Yun Bai, Yao Zhang, Guoping Zhang\* and Rong Sun



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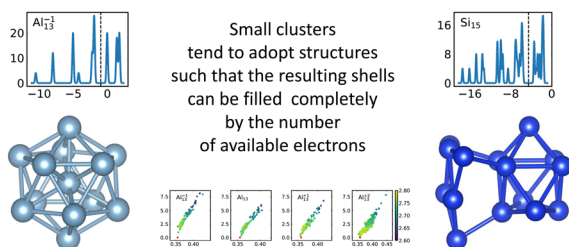


## Exploiting $\alpha$ -benzylated 1,4-butanedisulfonates to expedite the discovery of small-molecule, LCST-type sulfobetaine zwitterionic materials

Yen-Ho Chu,\* Pin-Hsuan Chen and Hsin-Heng Huang

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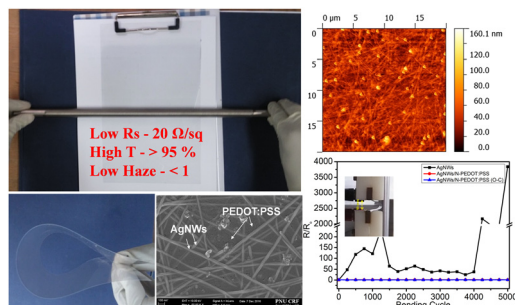
## Optimally matched cluster



## Principles of isomer stability in small clusters

Giuseppe Fisicaro,\* Bastian Schaefer, Jonas A. Finkler and Stefan Goedecker

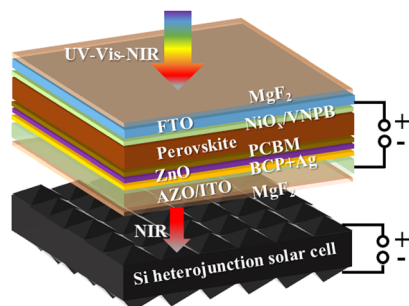
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## One-step fabrication of highly stable, durable, adhesion enhanced, flexible, transparent conducting films based on silver nanowires and neutralized PEDOT:PSS

Subramani Devaraju, Aruna Kumar Mohanty, Du-hyun Won and Hyun-jong Paik\*

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## Designed multi-layer buffer for high-performance semitransparent wide-bandgap perovskite solar cells

Junjie Lou, Jiangshan Feng,\* Yang Cao, Yucheng Liu, Yong Qin\* and Shengzhong (Frank) Liu\*

