# Special Issue on Challenges and Possibilities of Energy Storage

# **■ RESEARCH HIGHLIGHTS**

090201 g/C<sub>3</sub>N<sub>4</sub>-based photocatalysis

[1 page] Chao Zhao

090202 Reactive facet of carbon nitride single crystals

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### **■ NEWS AND VIEWS**

090401 A close step towards industrialized application of solar water splitting

[3 pages] Jun Liu, Zhijie Wang, and Yong Lei

## **■ EDITORIAL**

090101 Preface to the Special Issue on Challenges and Possibilities of Energy Storage

[1 page] Chao Zhao, Zhijie Wang, Dajun Shu, and Yong Lei

#### **■ REVIEWS**

091701	Optoelectronic and photocatalytic properties of I–III–VI QDs: Bridging between
	traditional and emerging new QDs

[13 pages] Yanhong Liu, Fenghua Li, Hui Huang, Baodong Mao, Yang Liu, and Zhenhui Kang

091702 Engineering the photoelectrochemical behaviors of ZnO for efficient solar water splitting

[13 pages] Mengmeng Ma, Yanbin Huang, Jun Liu, Kong Liu, Zhijie Wang, Chao Zhao, Shengchun Qu, and Zhanguo Wang

091703 Regulation of surface properties of photocatalysis material TiO<sub>2</sub> by strain engineering

[8 pages] Jian Zheng and Dajun Shu

091704 Recent progress in organic electrodes for zinc-ion batteries

[21 pages] Shuaifei Xu, Mingxuan Sun, Qian Wang, and Chengliang Wang

091705 Recent progress on nanostructured bimetallic electrocatalysts for water splitting

and electroreduction of carbon dioxide

[19 pages] Can Cui, Xiaosong Hu, and Liaoyong Wen

091706 Rational design of multinary copper chalcogenide nanocrystals for photocatalytic

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091707 Metal-organic framework composites for energy conversion and storage

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091708	Perylene diimide self-assembly: From electronic structural modulation to
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091709 Typical strategies to facilitate charge transfer for enhanced oxygen evolution reaction: Case studies on hematite

[15 pages] Aizhen Liao, Huichao He, Yong Zhou, and Zhigang Zou

# **■ ARTICLES**

092701 Highly-rough surface carbon nanofibers film as an effective interlayer for lithium-sulfur batteries

[6 pages] Hongfan Zhu, Mo Sha, Huaping Zhao, Yuting Nie, Xuhui Sun, and Yong Lei