

# Chem Soc Rev

Chemical Society Reviews

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## IN THIS ISSUE

ISSN 0306-0012 CODEN CSRVBR 53(22) 10793-11252 (2024)



### Cover

See Frank Caruso, Jiajing Zhou *et al.*, pp. 10800–10826. Image reproduced by permission of Jiajing Zhou from *Chem. Soc. Rev.*, 2024, 53, 10800.



### Inside cover

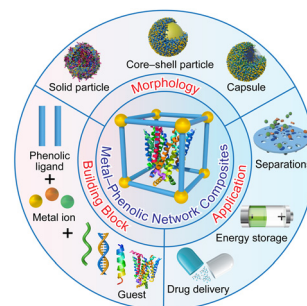
See Katharina Landfester, Shuai Jiang *et al.*, pp. 10827–10851. Image reproduced by permission of Max Planck Institute for Polymer Research from *Chem. Soc. Rev.*, 2024, 53, 10827.

## TUTORIAL REVIEWS

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### Metal–phenolic network composites: from fundamentals to applications

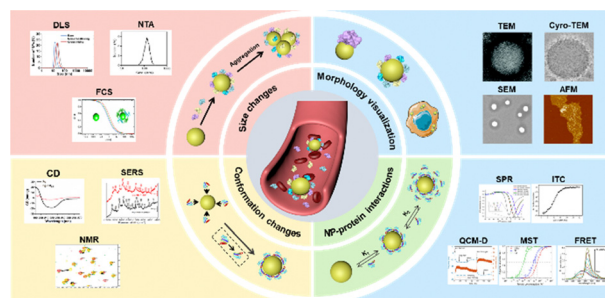
Zhixing Lin, Hai Liu, Joseph J. Richardson, Wanjun Xu, Jingqu Chen, Jiajing Zhou\* and Frank Caruso\*



10827

### In situ characterization techniques of protein corona around nanomaterials

Fangqin Fu, Daniel Crespy, Katharina Landfester\* and Shuai Jiang\*



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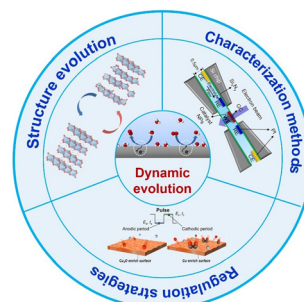
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## TUTORIAL REVIEWS

10852

**Dynamic evolution processes in electrocatalysis: structure evolution, characterization and regulation**

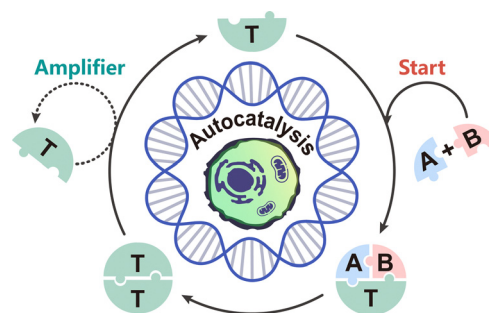
Chao Xie,\* Wei Chen, Yanyong Wang, Yahui Yang\* and Shuangyin Wang\*



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**Autocatalytic DNA circuitries**

Qiong Wu, Wei Xu, Jinhua Shang, Jiajing Li, Xiaoqing Liu, Fuan Wang\* and Jinghong Li\*

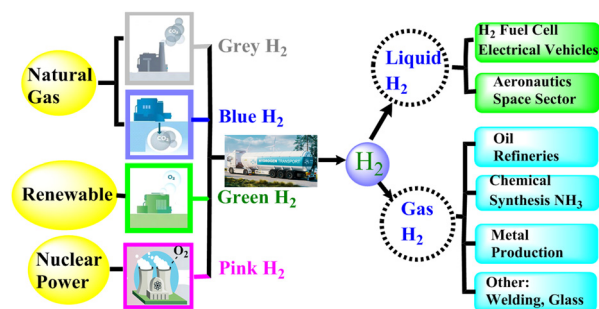


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**A comprehensive review on hydrogen production, storage, and applications**

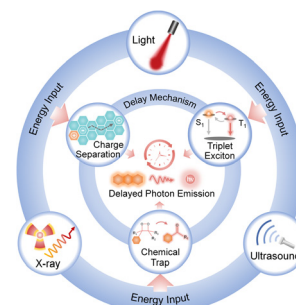
Chamila Gunathilake,\* Ibrahim Soliman, Dhruva Panthi, Peter Tandler, Omar Fatani, Noman Alias Ghulamullah, Dinesh Marasinghe, Mohamed Farhath, Terrence Madhujith, Kirt Conrad, Yanhai Du\* and Mietek Jaroniec\*



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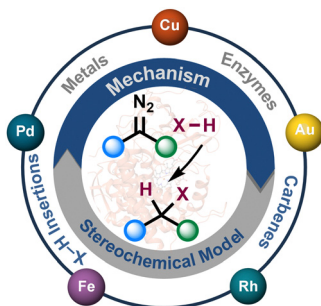
**Light/X-ray/ultrasound activated delayed photon emission of organic molecular probes for optical imaging: mechanisms, design strategies, and biomedical applications**

Rui Qu, Xiqun Jiang\* and Xu Zhen\*



## REVIEW ARTICLES

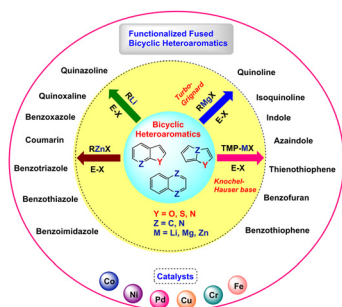
11004



### Mechanism and stereoselectivity in metal and enzyme catalyzed carbene insertion into X-H and C(sp<sup>2</sup>)-H bonds

Reena Balhara, Ritwika Chatterjee and Garima Jindal\*

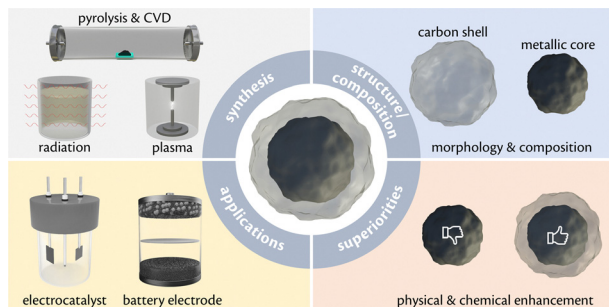
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### Recent synthetic strategies for the functionalization of fused bicyclic heteroaromatics using organo-Li, -Mg and -Zn reagents

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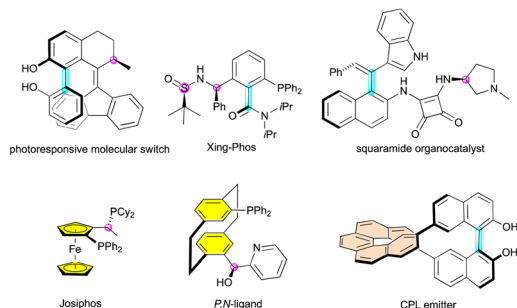
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### Carbon encapsulated nanoparticles: materials science and energy applications

Kun Guo,\* Lipiao Bao, Zhixin Yu and Xing Lu\*

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### Enantioselective synthesis of molecules with multiple stereogenic elements

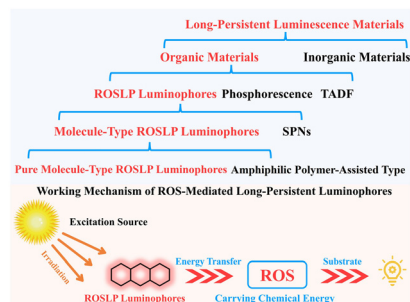
Arthur Gaucherand, Expédite Yen-Pon, Antoine Domain, Alix Bourhis, Jean Rodriguez and Damien Bonne\*



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## Reactive oxygen species-mediated organic long-persistent luminophores light up biomedicine: from two-component separated nano-systems to integrated uni-luminophores

Zhe Li,\* Hongwen Liu\* and Xiao-Bing Zhang\*



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## Emerging two-dimensional ferromagnetic semiconductors

Denan Kong, Chunli Zhu, Chunyu Zhao, Jijian Liu, Ping Wang, Xiangwei Huang,\* Shoujun Zheng,\* Dezhi Zheng, Ruibin Liu\* and Jiadong Zhou\*

