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ISSN 2041-6539 CODEN CSHCBM 16(32) 14411–14824 (2025)



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Inside cover

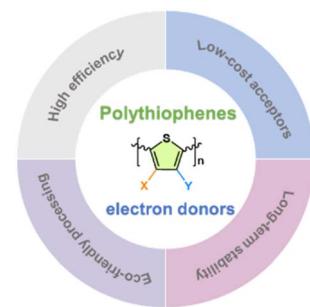
See Wen Chen, Tong Wang et al., pp. 14455–14467. Image reproduced by permission of Tong Wang and Wen Chen from *Chem. Sci.*, 2025, **16**, 14455. Artwork created by Xiao-Jia Liu.

PERSPECTIVE

14424

Polythiophenes as electron donors in organic solar cells

Xiyue Yuan, Jianglong Li, Wanting Deng, Xia Zhou and Chunhui Duan*

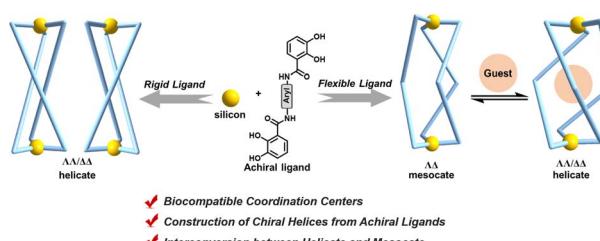


EDGE ARTICLES

14448

Construction of helicates based on six-coordinated silicon centres

Yu-Tao Guan, Heng Ji, Ju Yang, Sai-Sai Yu and Ming Liu*



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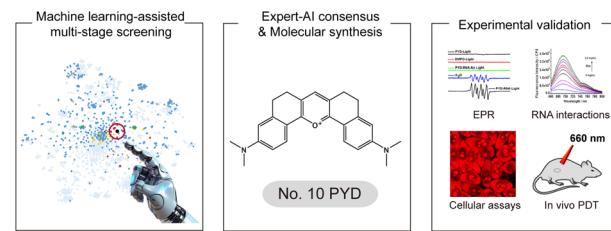
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EDGE ARTICLES

14455

Data-driven discovery of near-infrared type I photosensitizers for RNA-targeted tumor photodynamic therapy

Wen Chen,* Xiao-Qiong Mao, Xiao-Zhi Wang, Ya-Cong Liao, Xiao-Yue Yin, Hai-Long Wu, Tai-Yi Chen, Meng-Qing Liu, Tong Wang* and Ru-Qin Yu



14468

Understanding the strain effect in alkaline hydrogen oxidation reaction over well-defined Ru surfaces: insights into catalyst design

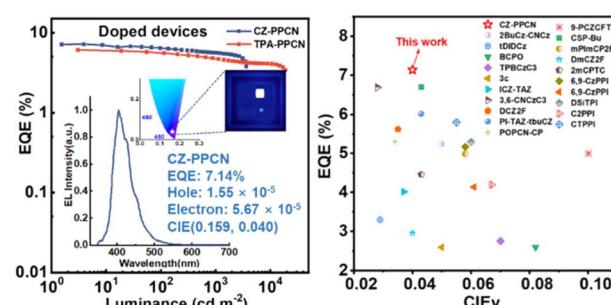
Zihan Guo, Yan Qiao, Mengfan Li, Zhenghe Gong, Jingwei Yu, Yanan Wang, Liang Zhao, Yang Li, Zehua Hu,* Yangfan Lu and Hongwen Huang*



14478

Efficient near-ultraviolet (NUV) electroluminescence based on a benzonitrile acceptor HLCT material with balanced carrier mobilities and high color purity

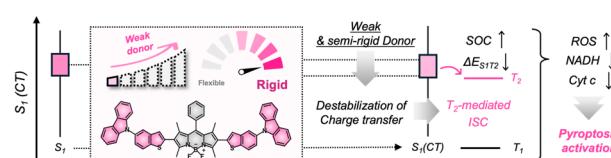
Li Zhang, Chenglin Ma, Xin Wang, Yannan Zhou, Jingru Song, Mizhen Sun, Qikun Sun, Shi-Tong Zhang, Wenjun Yang and Shanfeng Xue*



14485

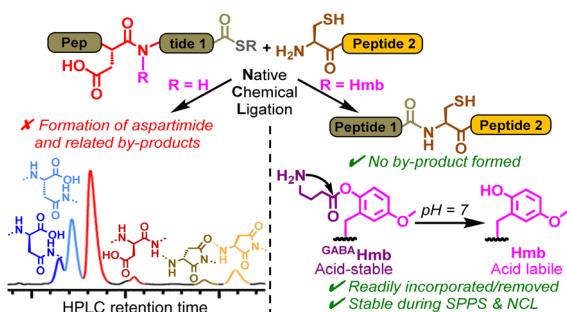
Breaking the heavy-atom paradigm: weak-donor engineered triplet harvesting in BODIPY photosensitizers for immunogenic pyroptosis therapy

Heeong Seok Kim, Hyeonji Rha, Mohammad Izadyar, Supphachok Chanmungkalakul, Haiqiao Huang, Yi Young Kang, Jae-Won Ka, Yunjie Xu,* Mingle Li,* Xiaogang Liu* and Jong Seung Kim*



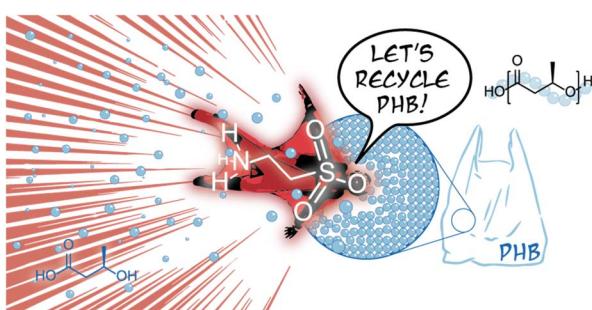
EDGE ARTICLES

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**Identification, occurrence and prevention of aspartimide-related byproducts in chemical protein synthesis**

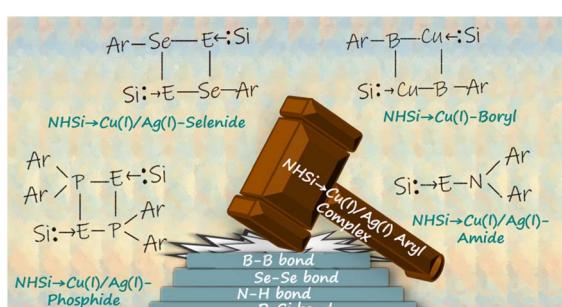
El Hadji Cisse and Vincent Augagne*

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**Selective chemical recycling of polyhydroxybutyrate into high-value hydroxy acid using the taurine organocatalyst**

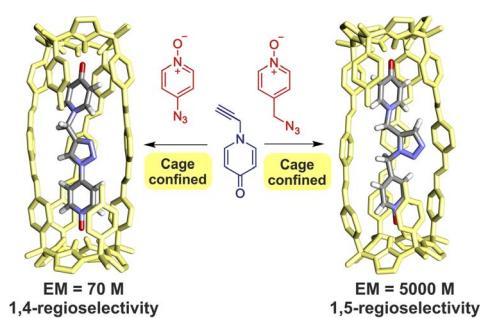
Elena Gabirondo, Ainhoa Maiz-Iginitz, Marta Ximenis, Katarzyna Świderek, Daniel Andrés-Sanz, Vicent Moliner, Luis Cabedo, Andrea H. Westlie, Eugene Y.-X. Chen, Daniel Alonso Cerrón-Infantes, Miriam M. Unterlass, Fernando López-Gallego, Agustín Etxeberria and Haritz Sardon*

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**Driving diverse bond functionalisation with *N*-heterocyclic silylene-coinage metal–aryl complexes**

Moushakhi Ghosh, Kumar Gaurav, Prakash Panwar, Rishukumar Panday, Srinu Tothadi and Shabana Khan*

14534

**Acceleration and regioselectivity switching in 1,3-dipolar cycloaddition reactions confined in a bis-cyclotriphosphazene cage**

Yifan Li, Gemma Aragay and Pablo Ballester*

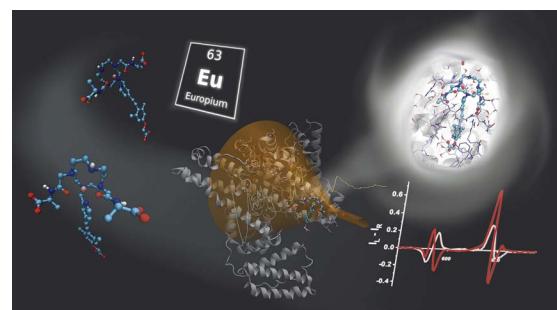


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Europium probe binding to serum albumin and α_1 -AGP, key importance of configuration, charge and size complementarity

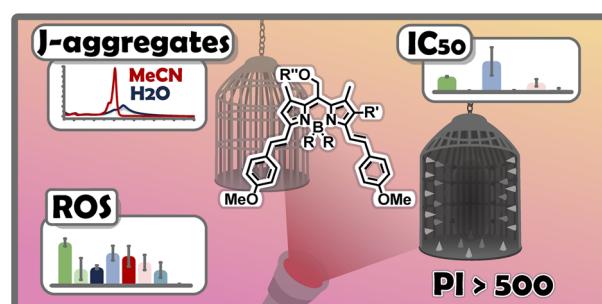
Huishan Li, Sally Lok-Wan Ng, Dominic J. Black, Wei Han, Robert Pal and David Parker*



14553

Phototoxicity of hydroxymethyl-BODIPYs: are photocages that innocent?

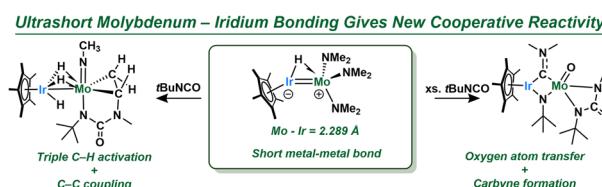
Kirill M. Kuznetsov, Pierre Mesdom, Kallol Purkait, Olivier Blacque, Arthur H. Winter,* Kevin Cariou* and Gilles Gasser*



14564

Synergistic C–H bond activation across molybdenum–iridium multiply bonded complexes: a cascade of transformations

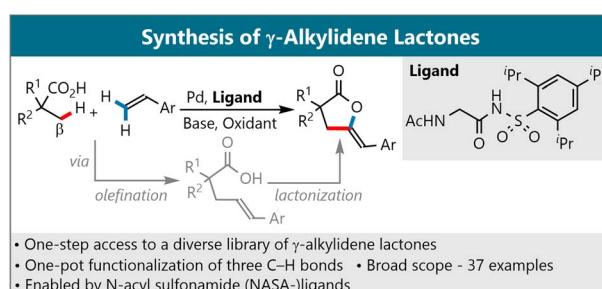
Zachary Dubrawski, Iker Del Rosal, Erwann Jeanneau, Laurent Maron, Chloé Thieuleux and Clément Camp*



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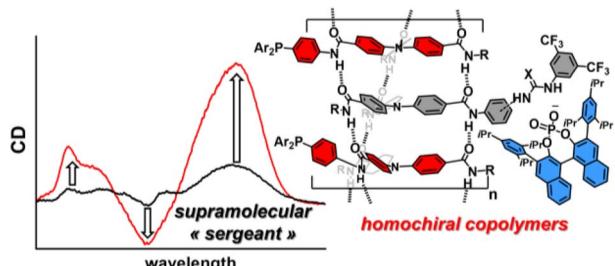
Synthesis of γ -alkylidene lactones via molecular stitching of carboxylic acids and olefins

Edis Crnovrsanin, Sourjya Mal and Manuel van Gemmeren*



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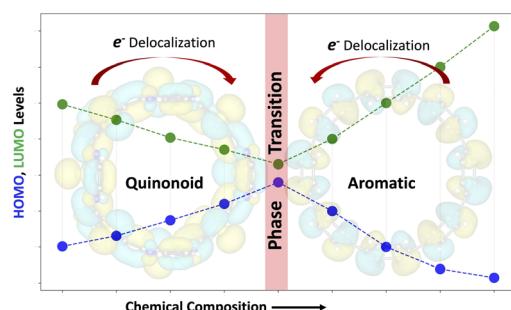
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Supramolecular "sergeants": *in situ* and multi-level induction of chirality in helical assemblies of triarylamine trisamide monomers

Antoine Perennes, Quentin Sallembien, Weiwei Fang, Stéphane Grass, Jérôme Lacour, Laurent Bouteiller and Matthieu Raynal*

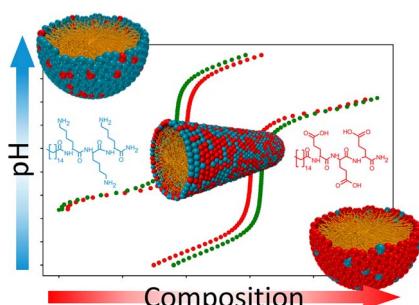
14595



Quinonoid radial π -conjugation

Rameswar Bhattacharjee,* John D. Tovar and Miklos Kertesz*

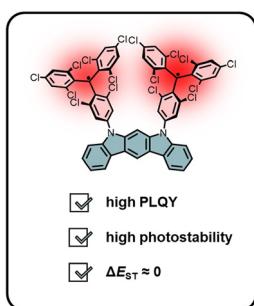
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Fine tuning the morphology of peptide amphiphile nanostructures *via* co-assembly

Maria Mercedes Fiora, Huihua Xing, Marilina Cathcart, Octavio Garate, Santiago Herrera, Agustín S. Picco, Gabriel Ybarra, Martin Conda-Sheridan* and Mario Tagliazucchi*

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Photostable triphenylmethyl-based diradicals with a degenerate singlet-triplet ground state and strong photoluminescence

Mona E. Arnold, Anika Lebzelter, Philipp Thielert, Rémi Blinder, Jonas Schmid, Julia Zolg, Emanuele Spatola, Fedor Jelezko, Max von Delius, Sabine Richert* and Alexander J. C. Kuehne*

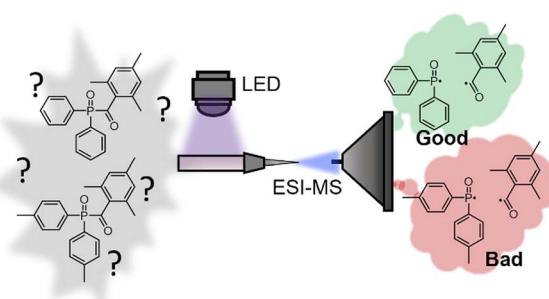


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Beyond absorption: online photoreactor mass spectrometry assessment of new acylphosphine oxide photoinitiators

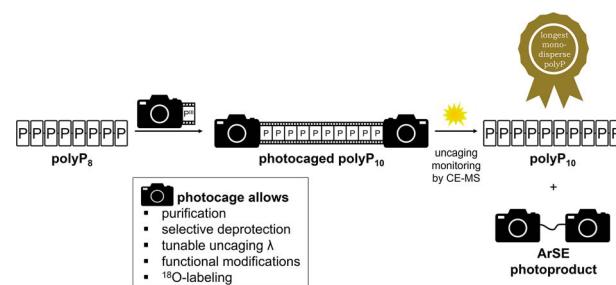
Maria Menti-Platten, Brett R. Burns, Oisin J. Shiels, Philip J. Barker,* Paul A. Keller* and Adam J. Trevitt*



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Synthesis of monodisperse inorganic polyphosphate polyP₁₀ via a photocaging strategy

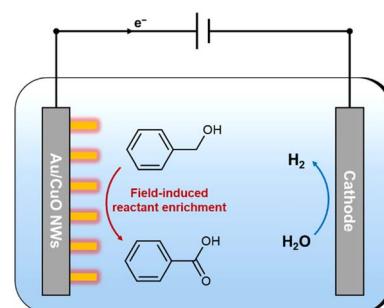
Sandra Moser, Gloria Hans, Jiahui Ma, Thomas Haas, Nikolaus Jork, Felix Bauer, Bernhard Breit and Henning J. Jessen*



14646

Field-induced reactant enrichment enhances benzyl alcohol electrooxidation coupled with hydrogen evolution

Yifan Yan, Lina Chen, Shaoyu Kang, Xiaofei Li, Claire Coulthard, Jianqin Tang, Chunping Chen, Zhenhua Li, Mingfei Shao* and Dermot O'Hare*

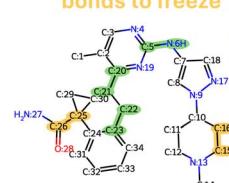


14655

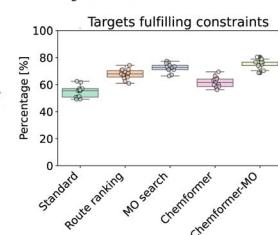
Human-guided synthesis planning via prompting

Annie M. Westerlund,* Lakshidhaa Saigiridharan and Samuel Genheden

Chemist selects bonds to break and bonds to freeze



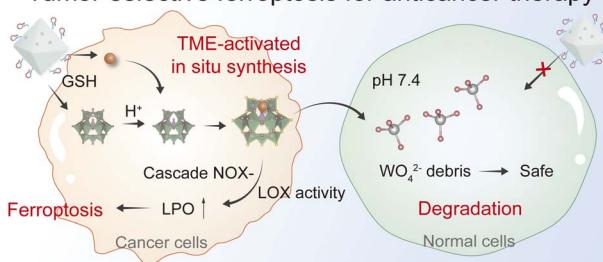
Retrosynthesis search guided by bond constraints



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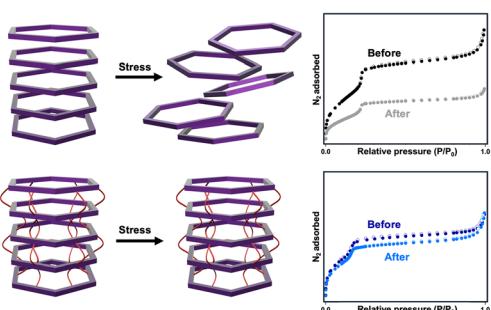
14668

Tumor-selective ferroptosis for anticancer therapy

Mimicking NADPH oxidase and lipoxygenase by using a biodegradable single-site catalyst *via* a cascade reaction to trigger tumor-specific ferroptosis

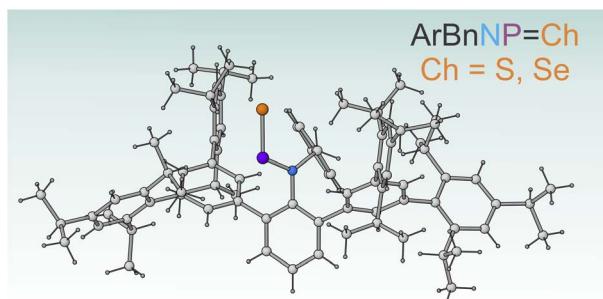
Xiyang Ge, Yiyian Yin, Xiaoni Wang, Xiang Li, Jin Ouyang and Na Na*

14681

2D-to-3D transformations of a covalent organic framework *via* post-synthetic crosslinking

Garrison A. Bauer and Mercedes K. Taylor*

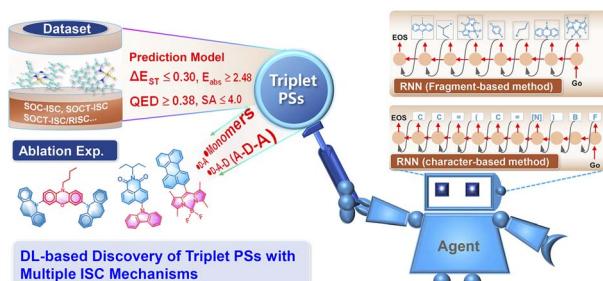
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Isolation of a phosphinidene sulfide and selenide

Chenyang Hu, Maren Pink and Jose M. Goicoechea*

14698



Effective generation of heavy-atom-free triplet photosensitizers containing multiple intersystem crossing mechanisms based on deep learning

Kepeng Chen, Xiaoting Zhang, Jike Wang, Dan Li, Tingjun Hou,* Wenbo Yang* and Yu Kang*

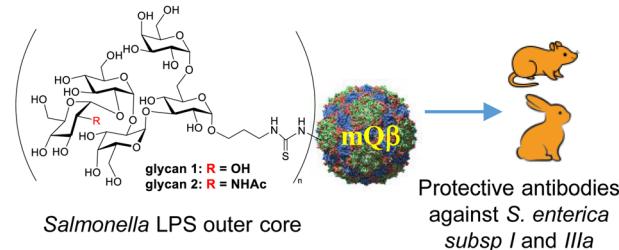


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Synthesis and immunological evaluation of the lipopolysaccharide outer core of *Salmonella* for potential broad-spectrum protection against multiple *Salmonella* serovars

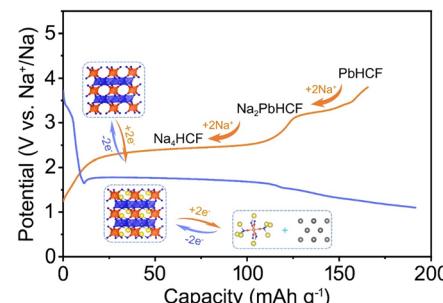
Xingling Pan, Ting-An Chen,
Fatemeh Shafiechaharberoud, Sharon M. Tennant,
Scott M. Baliban and Xuefei Huang*



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Synergistic intercalation–conversion reaction mechanism in Prussian blue analogue materials toward enhanced Na-storage

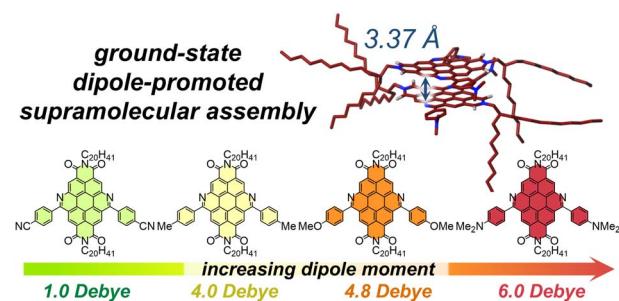
Na Liu, Xiaohan Wang, Jing Liu, Ningbo Liu
and Liubin Wang*



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Supramolecular polymerization of permanently dipolar perylene diimide-based diazacoronenes

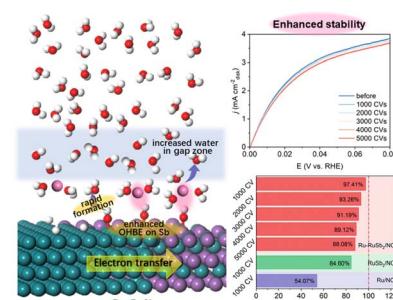
Ani. N. Davis, Colette M. Sullivan, Chengbin Fu,
Rupam Roy, A. M. Mahmudul Hasan, Kaitlin Slicker,
Haoyuan Li, Lea Nienhaus and Austin M. Evans*



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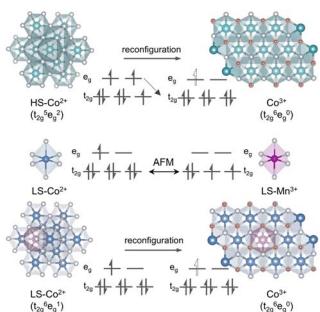
Interfacial engineering of Ru–RuSb₂ for enhanced activity and stability towards alkaline hydrogen oxidation reaction

Chaoyi Yang, Zihao Dai, Jianchao Yue and Wei Luo*



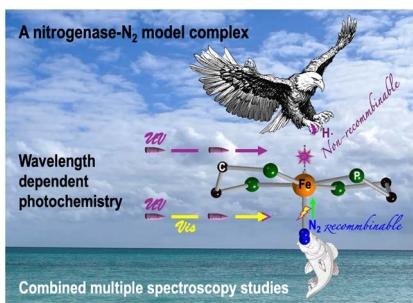
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**Spin polarization induced rapid reconstruction of transition metal oxide for efficient water electrolysis**

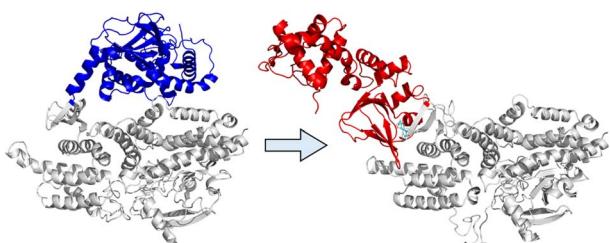
Zi-Qiang Chen, Wei-Jie Cai, Hui-Jian Zhang, Kang Xiao, Bolong Huang* and Zhao-Qing Liu*

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**Wavelength dependent photochemistry of an iron dinitrogen hydride complex *via* multiple spectroscopies – competing ejection of axial ligands**

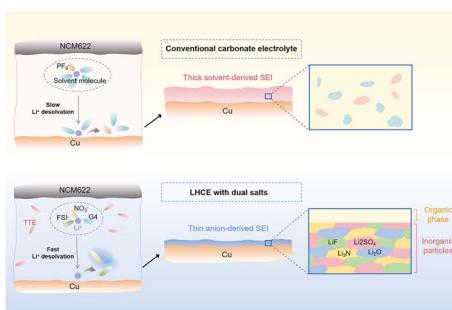
Weibing Dong, Hongxin Wang,* Saeed Kamali, David R. Tyler, Yisong Guo, Lifen Yan, Chantal G. Balesdent, Justin L. Crossland, David A. Case, Yoshitaka Yoda, Jiyong Zhao and Stephen P. Cramer*

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**Elucidation of the mechanism of partial activation of EPAC1 allosteric modulators by Markov state modelling**

Adele Hardie, Frederick G. Powell, Silvia Lovera, Stephen J. Yarwood, Graeme Barker and Julien Michel*

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**Regulating the donor number of solvents for long-cycle anode-free lithium metal batteries**

Yining Zhao, Shaopeng Li, Lingtong Zhu, Yahui Li, Shu Xu, Hui Dou and Xiaogang Zhang*

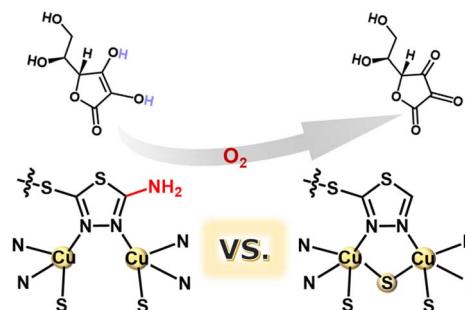


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Amino-induced cleavage of the electron-communicating S-bridge to unlock mixed-valence copper for potent oxidase-like catalysis and selective sensing

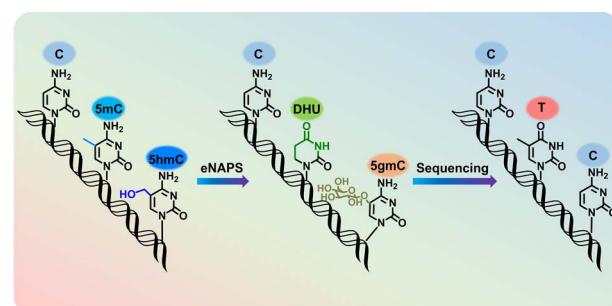
Bojin Li, Nannan Xia, Chaofeng Huang,* Xun Hu* and Fei He*



14800

Direct sequencing of DNA 5-methylcytosine by engineered dioxygenase NTET-assisted eNAPS

Shan Zhang, Neng-Bin Xie, Li Zeng, Fang-Yin Gang, Yao-Hua Gu, Min Wang, Xia Guo, Tong-Tong Ji, Jun Xiong* and Bi-Feng Yuan*



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Photosensitized diradical rearrangement of alkenyl oxime ethers towards amino-featured oxiranes: reaction, mechanism, and structural prediction

Tu-Ming Liu, Lin-Yuan Zhu, Min-Hao Qi, Si-Jia Li, Xiao-Jian Wang, Jia-Rui Xu and Bing Han*

