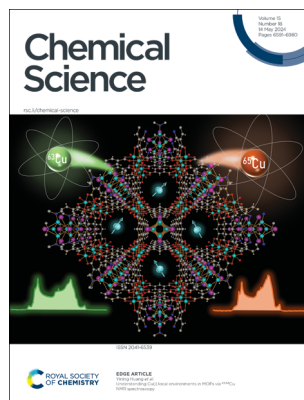


IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 15(18) 6591–6980 (2024)



Cover
See Yosuke Kageshima, Hiromasa Nishikiori *et al.*, pp. 6679–6689. Image reproduced by permission of Yosuke Kageshima and Hiromasa Nishikiori from *Chem. Sci.*, 2024, 15, 6679.



Inside cover
See Yining Huang *et al.*, pp. 6690–6706. Image reproduced by permission of Yining Huang from *Chem. Sci.*, 2024, 15, 6690.

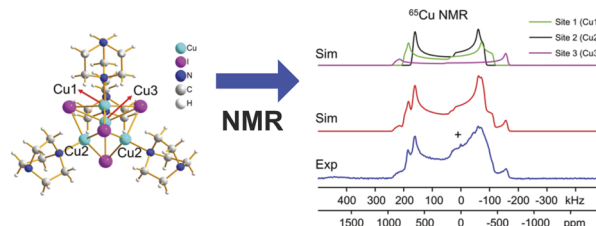
COMMENTARY

6604

A focus on applying $^{63/65}\text{Cu}$ solid-state NMR spectroscopy to characterize Cu MOFs

Zhenfeng Pang and Kong Ooi Tan*

Structure Determination using Solid-state $^{63/65}\text{Cu}$ NMR

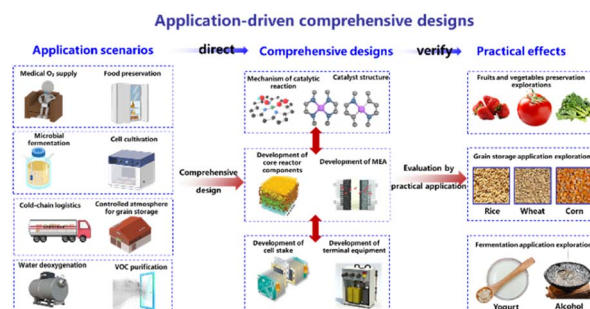


PERSPECTIVES

6608

New perspective crosslinking electrochemistry and other research fields: beyond electrochemical reactors

Yu Zhang and Yuen Wu*



Advance your career in science

with professional recognition that showcases
your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment
to attaining excellence in
your field

Gain the recognition you deserve

Achieve a professional
qualification that inspires
confidence and trust

Unlock your career potential

Apply for our professional
registers (RSci, RSciTech)
or chartered status
(CChem, CSci, CEnv)

Apply now

rsc.li/professional-development

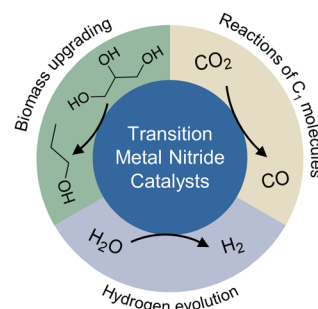


PERSPECTIVES

6622

Transition metal nitride catalysts for selective conversion of oxygen-containing molecules

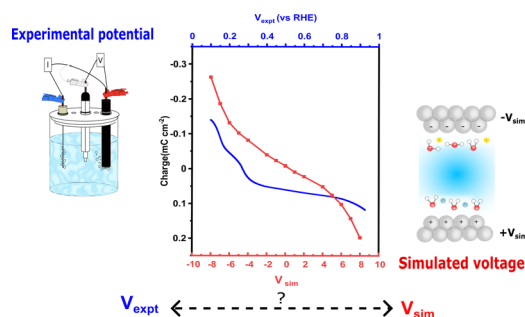
William N. Porter, Kevin K. Turaczy, Marcus Yu, Hansen Mou and Jingguang G. Chen*



6643

Understanding electrochemical interfaces through comparing experimental and computational charge density–potential curves

Nandita Mohandas, Sumit Bawari, Jani J. T. Shibuya, Soumya Ghosh, Jagannath Mondal, Tharangattu N. Narayanan and Angel Cuesta*

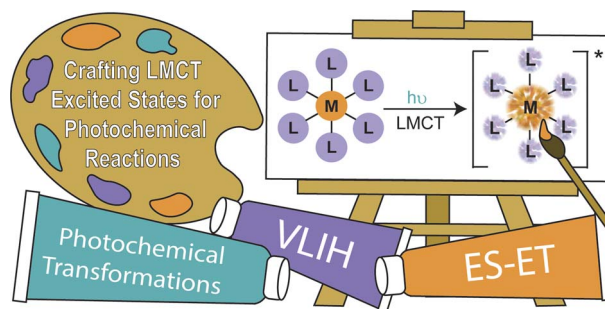


REVIEW

6661

A new era of LMCT: leveraging ligand-to-metal charge transfer excited states for photochemical reactions

Ann Marie May and Jillian L. Dempsey*

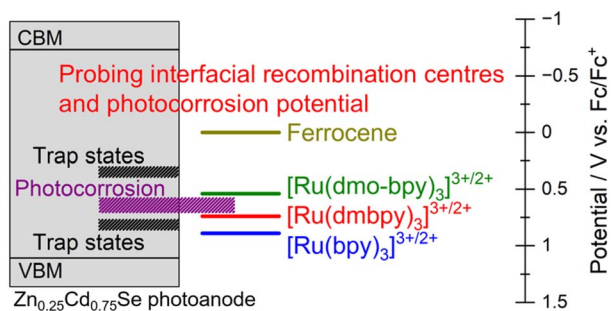


EDGE ARTICLES

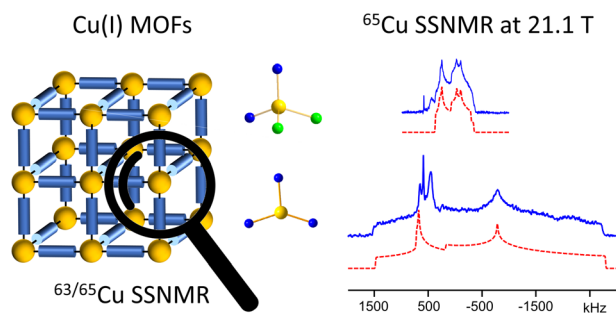
6679

Precise analyses of photoelectrochemical reactions on particulate Zn_{0.25}Cd_{0.75}Se photoanodes in nonaqueous electrolytes using Ru bipyridyl complexes as a probe

Yosuke Kageshima,* Hiroto Takano, Mika Nishizawa, Fumiaki Takagi, Hiromu Kumagai, Katsuya Teshima, Kazunari Domen and Hiromasa Nishikiori*



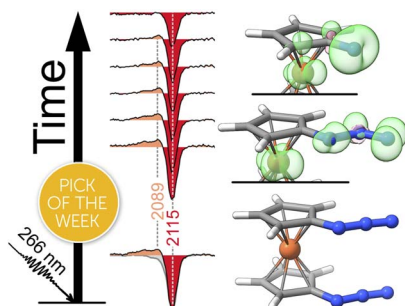
6690



Understanding Cu(I) local environments in MOFs via $^{63/65}\text{Cu}$ NMR spectroscopy

Wanli Zhang, Bryan E. G. Lucier, Victor V. Tersikh, Shoushun Chen and Yining Huang*

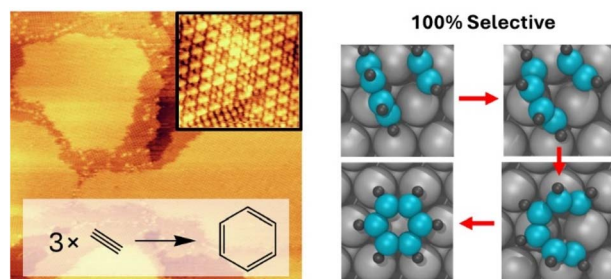
6707



Ultrafast photogeneration of a metal–organic nitrene from 1,1'-diazidoferrocene

Frederik Scherz, Markus Bauer, Luis I. Domenianni, Carolin Hoyer, Jonas Schmidt, Biprajit Sarkar,* Peter Vöhringer* and Vera Krewald*

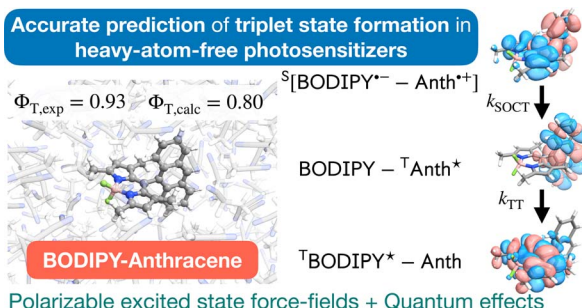
6716



100% selective cyclotrimerization of acetylene to benzene on Ag(111)

Volkan Çinar, Shengjie Zhang, Elizabeth E. Happel, Nipun T. S. K. Dewage, Matthew M. Montemore* and E. Charles H. Sykes*

6726



Unraveling the mechanisms of triplet state formation in a heavy-atom free photosensitizer

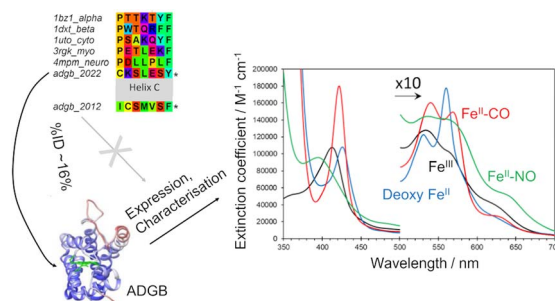
Thomas P. Fay* and David T. Limmer*



6738

The circularly permuted globin domain of androglobin exhibits atypical heme stabilization and nitric oxide interaction

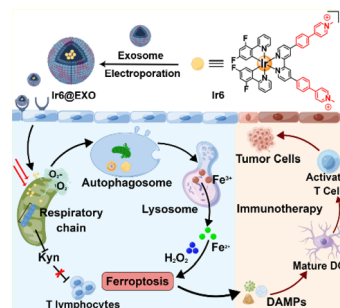
Brandon J. Reeder,* Giuseppe Deganutti, John Ukeri, Silvia Atanasio, Dimitri A. Svistunenko, Christopher Ronchetti, Juan Carlos Mobarec, Elizabeth Welbourn, Jeffrey Asaju, Marten H. Vos, Michael T. Wilson and Christopher A. Reynolds*



6752

An iridium(III)-based photosensitizer disrupting the mitochondrial respiratory chain induces ferritinophagy-mediated immunogenic cell death

Tao Feng, Zixin Tang, Johannes Karges, Jun Shu, Kai Xiong, Chengzhi Jin, Yu Chen, Gilles Gasser,* Liangnian Ji and Hui Chao*

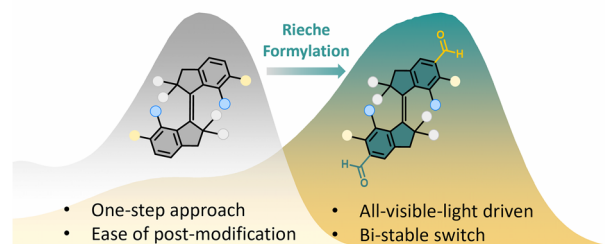


6763

All-visible-light-driven stiff-stilbene photoswitches

Fan Xu, Jinyu Sheng, Charlotte N. Stindt, Stefano Crespi, Wojciech Danowski, Michiel F. Hilbers, Wybren Jan Buma and Ben L. Feringa*

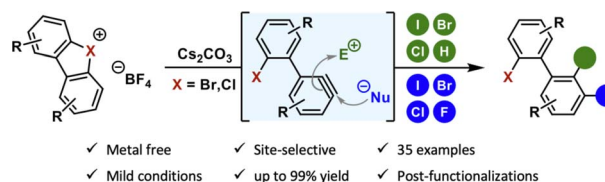
All-Visible-Light-Driven Stiff-stilbene Photoswitches



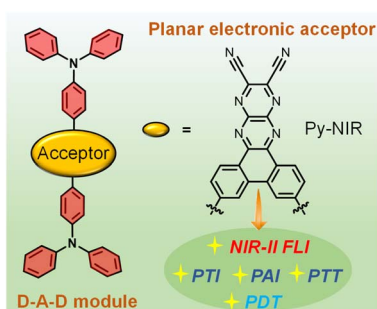
6770

Easy access to polyhalogenated biaryls: regioselective (di)halogenation of hypervalent bromines and chlorines

Daniel Carter Martos, Maxime de Abreu, Pascal Hauk, Philipp Fackler and Joanna Wencel-Delord*



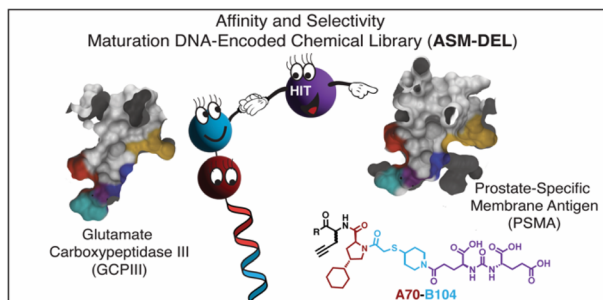
6777



A planar electronic acceptor motif contributing to NIR-II AIEgen with combined imaging and therapeutic applications

Ming Chen,^{*} Zhijun Zhang, Runfeng Lin, Junkai Liu, Meizhu Xie, Xiang He, Canze Zheng, Miaomiao Kang, Xue Li, Hai-Tao Feng, Jacky W. Y. Lam, Dong Wang^{*} and Ben Zhong Tang^{*}

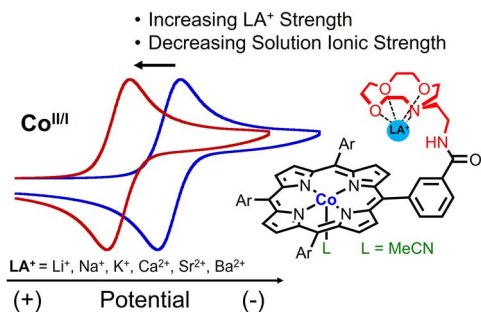
6789



DNA-encoded chemical libraries enable the discovery of potent PSMA-ligands with substantially reduced affinity towards the GCP III anti-target

Laura Lucaroni, Sebastian Oehler, Tony Georgiev, Marco Müller, Matilde Bocci, Roberto De Luca, Nicholas Favalli, Dario Neri, Samuele Cazzamalli^{*} and Luca Prati^{*}

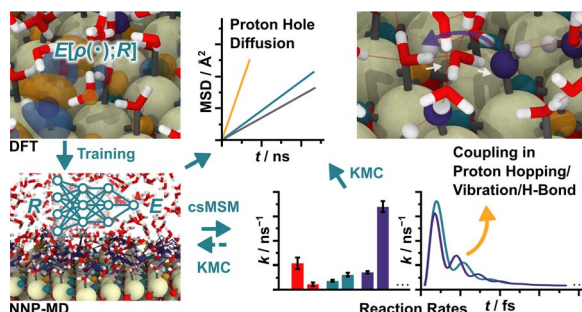
6800



Long-range electrostatic effects from intramolecular Lewis acid binding influence the redox properties of cobalt-porphyrin complexes

Jose L. Alvarez-Hernandez, Xiaowei Zhang, Kai Cui, Anthony P. Deziel, Sharon Hammes-Schiffer,^{*} Nilay Hazari,^{*} Nicole Piekut and Mingjiang Zhong^{*}

6816



Long-range proton and hydroxide ion transfer dynamics at the water/CeO₂ interface in the nanosecond regime: reactive molecular dynamics simulations and kinetic analysis

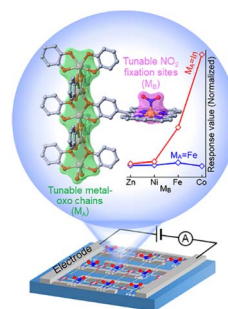
Taro Kobayashi, Tatsushi Ikeda^{*} and Akira Nakayama^{*}



6833

Regulating electron transfer and orbital interaction within metalloporphyrin-MOFs for highly sensitive NO₂ sensing

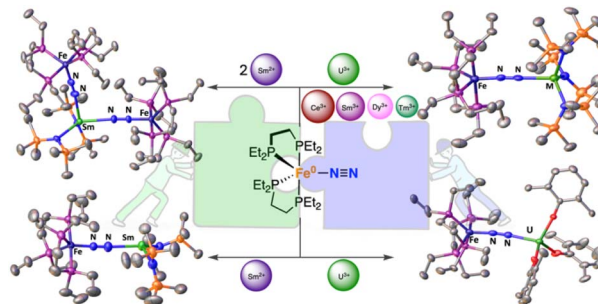
Er-Xia Chen, Liang He, Mei Qiu,* Yongfan Zhang, Yayong Sun, Wen-Hua Li, Jian-Ze Xiao, Jie Chen, Gang Xu* and Qipu Lin*



6842

Iron promoted end-on dinitrogen-bridging in heterobimetallic complexes of uranium and lanthanides

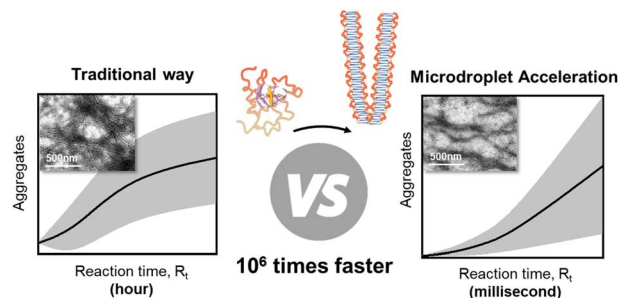
Nadir Jori, Juan J. Moreno, R. A. Keerthi Shivaram, Thayalan Rajeshkumar, Rosario Scopelliti, Laurent Maron,* Jesús Campos and Marinella Mazzanti*



6853

Accelerating protein aggregation and amyloid fibrillation for rapid inhibitor screening

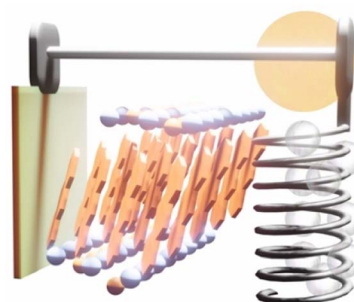
Jingjin Fan, Liwen Liang, Xiaoyu Zhou* and Zheng Ouyang*



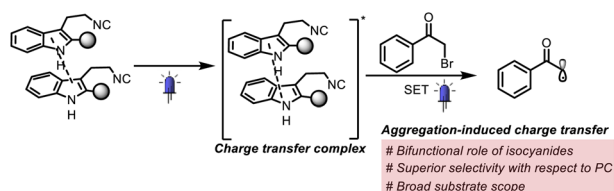
6860

An anthraquinone-based bismuth–iron metal–organic framework as an efficient photoanode in photoelectrochemical cells

Cai Shi, Miguel Gomez-Mendoza, Eloy Gómez de Oliveira, Miguel García-Tecedor, Mariam Barawi, Fátima Esteban-Betegón, Marta Liras, Enrique Gutiérrez-Puebla, Angeles Monge, Víctor A. de la Peña O'Shea* and Felipe Gándara*



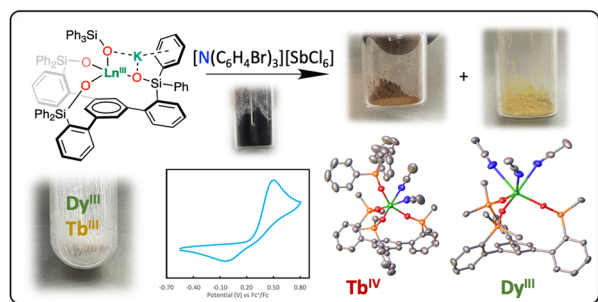
6867



Shining light on tryptamine-derived isocyanides: access to constrained spirocyclic scaffolds

Minghui Wu, Jordy M. Saya, Peiliang Han, Rajat Walia, Bapi Pradhan, Maarten Honing, Prabhat Ranjan* and Romano V. A. Orru*

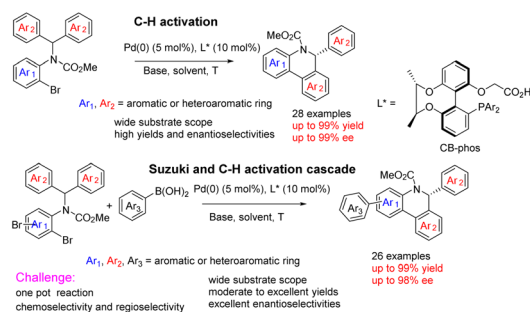
6874



Siloxide tripodal ligands as a scaffold for stabilizing lanthanides in the +4 oxidation state

Maxime Tricoire, Fang-Che Hsueh, Megan Keener, Thayalan Rajeshkumar, Rosario Scopelliti, Ivica Zivkovic, Laurent Maron and Marinella Mazzanti*

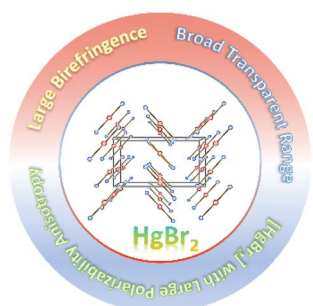
6884



Access to chiral dihydrophenanthridines via a palladium(0)-catalyzed Suzuki coupling and C-H arylation cascade reaction using new chiral-bridged biphenyl bifunctional ligands

Bin Chen, Bendu Pan, Xiaobo He, Long Jiang, Albert S. C. Chan and Liqin Qiu*

6891



HgBr₂: an easily growing wide-spectrum birefringent crystal

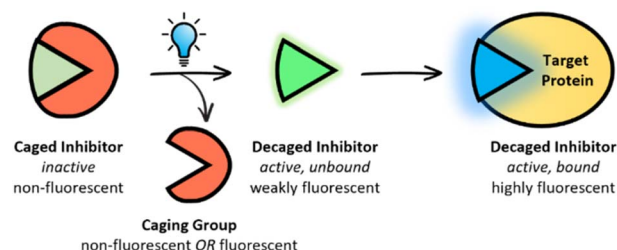
Ming-Shu Zhang, Wen-Dong Yao, Shao-Min Pei, Bin-Wen Liu,* Xiao-Ming Jiang and Guo-Cong Guo*



6897

All-photonic kinase inhibitors: light-controlled release-and-report inhibition

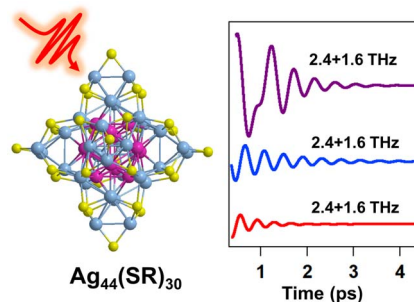
Cassandra L. Fleming, Carlos Benitez-Martin, Elin Bernson, Yongjin Xu, Linnea Kristenson, Tord Inghardt, Thomas Lundbäck, Fredrik B. Thorén, Morten Grøtli* and Joakim Andréasson*



6906

Robust vibrational coherence protected by a core-shell structure in silver nanoclusters

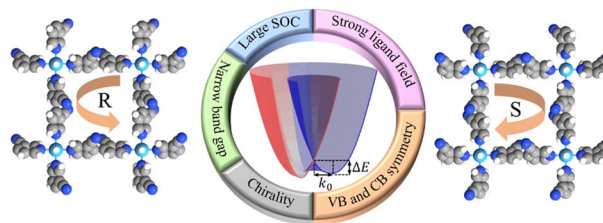
Jie Kong, Zhuoran Kuang, Wei Zhang, Yongbo Song,* Guo Yao, Chunfeng Zhang, He Wang, Yi Luo* and Meng Zhou*



6916

Obtaining giant Rashba–Dresselhaus spin splitting in two-dimensional chiral metal–organic frameworks

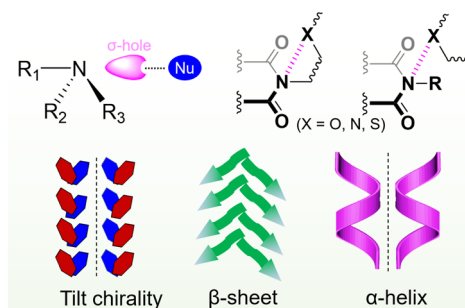
Shanshan Liu, Ke Xu,* Xingxing Li,* Qunxiang Li and Jinlong Yang



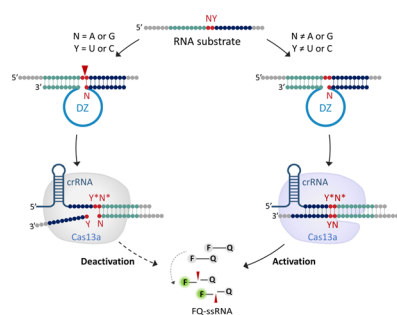
6924

Pnictogen bonding in imide derivatives for chiral folding and self-assembly

Zhuoer Wang, Zhaozhen Cao, Aiyu Hao and Pengyao Xing*



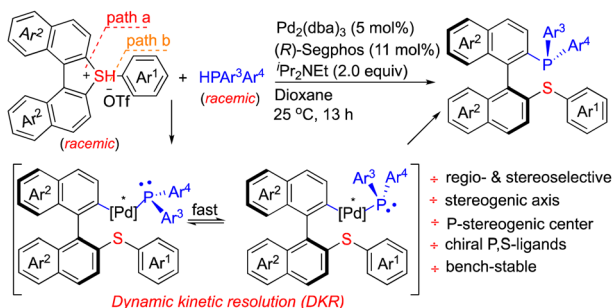
6934



A high-fidelity DNAzyme-assisted CRISPR/Cas13a system with single-nucleotide resolved specificity

Yunping Wu, Ruigang Jin, Yangyang Chang and Meng Liu*

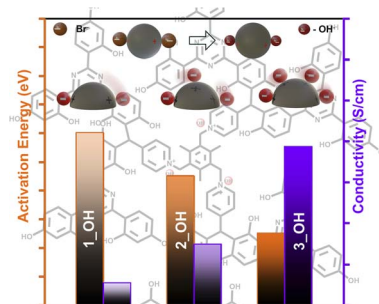
6943



Palladium-catalyzed regio- and stereo-selective phosphination of cyclic biarylsulfonium salts to access atropoisomeric phosphines

Jinghui Sun, Yifei Yan, Xuanxuan Chen, Zhiwei Huang and Yinhua Huang*

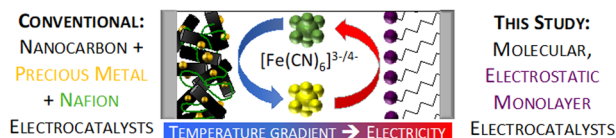
6949



Design enhancement in hydroxide ion conductivity of viologen-bakelite organic frameworks for a flexible rechargeable zinc-air battery

Deepak Rase, Narugopal Manna, Rinku Kushwaha, Chitvan Jain, Himan Dev Singh, Pragalb Shekhar, Piyush Singh, Yashraj Kumar Singh and Ramanathan Vaidhyanathan*

6958



Self-assembled monolayers for electrostatic electrocatalysis and enhanced electrode stability in thermogalvanic cells

Kristine Laws, Mark A. Buckingham and Leigh Aldous*



6965

The effect of ancillary ligands on hydrocarbon C–H bond functionalization by uranyl photocatalysts

Ryte Rutkauskaite, Xiaobin Zhang, Adam W. Woodward, Yanlin Liu, Gabriel Herrera, Jamie Purkis, Sean D. Woodall, Mark Sarsfield, Georg Schreckenbach, Louise S. Natrajan* and Polly L. Arnold*

