

IN THIS ISSUE

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Cover

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Inside cover

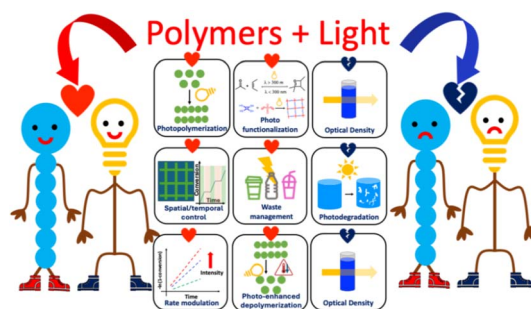
See Felipe A. Garcés-Pineda, J. R. Galán-Mascarós *et al.*, pp. 5475–5482. Image reproduced by permission of Felipe Andrés Garcés-Pineda from *Chem. Sci.*, 2025, **16**, 5475.

PERSPECTIVE

5326

Polymers and light: a love–hate relationship

M. A. Sachini N. Weerasinghe, Tochukwu Nwoko and Dominik Konkolewicz*

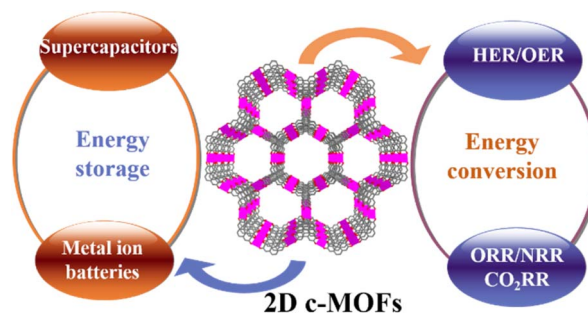


REVIEWS

5353

Two-dimensional conjugated metal–organic frameworks for electrochemical energy conversion and storage

Xiao Li, Xi Su, Tan Su,* Long Chen* and Zhongmin Su*



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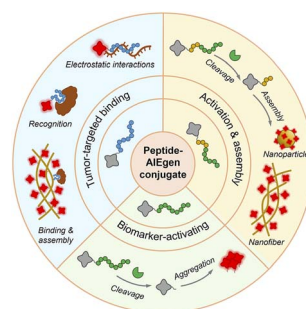
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Activatable peptide–AIEgen conjugates for cancer imaging

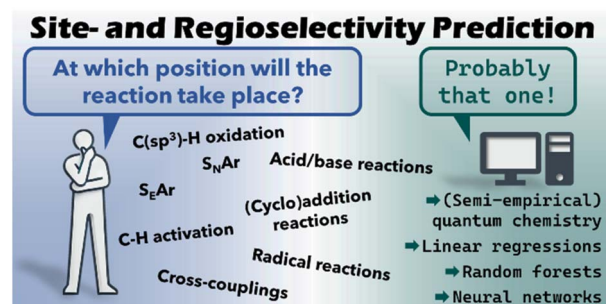
Sisi Zhou, Xianbao Sun* and Gaolin Liang*



5383

Computational tools for the prediction of site- and regioselectivity of organic reactions

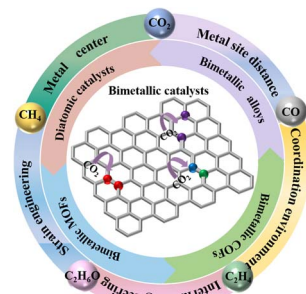
Lukas M. Sigmund,* Michele Assante, Magnus J. Johansson, Per-Ola Norrby, Kjell Jorner* and Mikhail Kabeshov*



5413

Bimetallic effects in carbon dioxide electroreduction

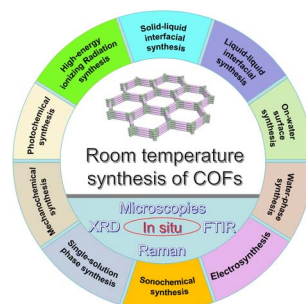
Anaer Husile, Zhenlu Wang* and Jingqi Guan*



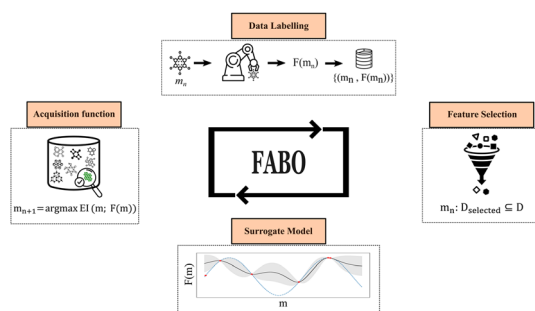
5447

Recent advances in room-temperature synthesis of covalent organic frameworks

Dongchuang Wu,* Ning Gu, Junru Yao, Yang Cao, Lun Wang, Imran Shakir, Youyi Sun* and Yuxi Xu*



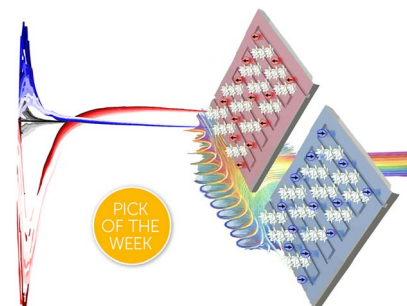
5464



Adaptive representation of molecules and materials in Bayesian optimization

Mahyar Rajabi-Kochi, Negareh Mahboubi, Aseem Partap Singh Gill and Seyed Mohamad Moosavi*

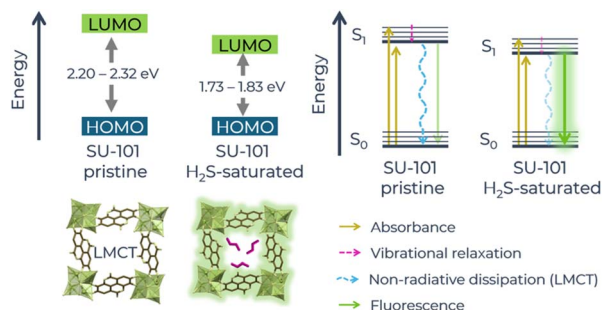
5475



Operando evidence on the chirality-enhanced oxygen evolution reaction in intrinsically chiral electrocatalysts

Felipe A. Garcés-Pineda,* Jiahao Yu, Camilo A. Mesa, Sergi Plana-Ruiz, Daniel Ruano, Yunchang Liang, Magalí Lingenfelder, Sixto Giménez and J. R. Galán-Mascarós*

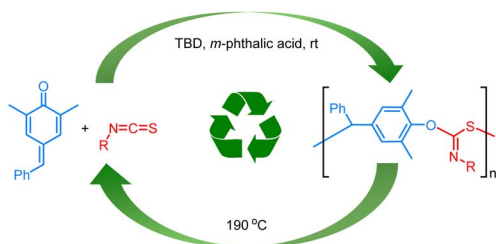
5483



Formation of polysulfides as a smart strategy to selectively detect H₂S in a Bi(III)-based MOF material

Valeria B. López-Cervantes, Juan L. Obeso, J. Gabriel Flores, Aída Gutiérrez-Alejandre, Raul A. Marquez, José Antonio de los Reyes, Catalina V. Flores, N. S. Portillo-Vélez, Pablo Marín-Rosas, Christian A. Celaya, Eduardo González-Zamora, Diego Solís-Ibarra,* Ricardo A. Peralta* and Ilich A. Ibarra*

5493



- ✓ Simple conditions
- ✓ High molar mass
- ✓ High recyclability
- ✓ Controlled polymerization
- ✓ Perfect alternating structure

Facile synthesis of recyclable polythioimidocarbonates via aromatization-driven alternating copolymerization of *para*-quinone methide and isothiocyanates

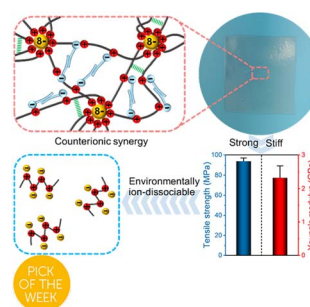
Wen-Dao Chu,* Si-Yu Dan, Jie Zhan, Bo Chen, Ji Xian, Chun-Mei Wang, Quan-Zhong Liu, Jincai Wu* and Chun-An Fan*



5503

Environmentally ion-dissociable high-performance supramolecular polyelectrolyte plastics

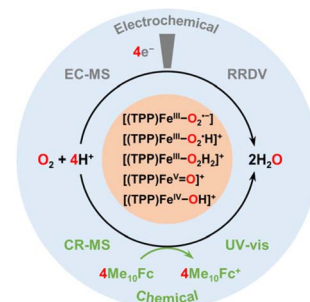
Zhi Dong, Jiang Wu, Anhong Liu, Zan Hua* and Guangming Liu*



5512

In situ uncovering the catalytic cycle of electrochemical and chemical oxygen reduction mediated by an iron porphyrin

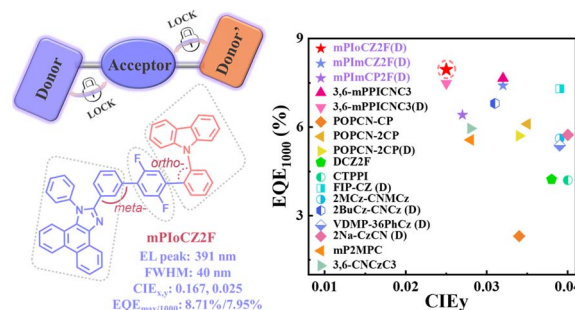
Xianhao Zhang, Jirui Zhan, Haonan Qin, Jintao Deng, Junjie Liu, Meixian Li, Rui Cao* and Yuanhua Shao*



5518

Intramolecular-locking modification enables efficient asymmetric donor-acceptor-donor' type ultraviolet emitters for high-performance OLEDs with reduced efficiency roll-off and high color purity

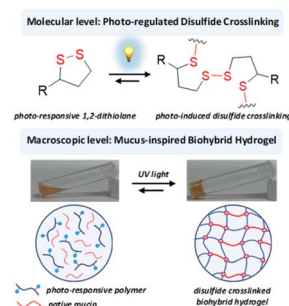
Shengnan Wang, Rui Zhang, Runjie Ding, Hao Huang, Haoyuan Qi, Yuchao Liu, Shian Ying,* Dongge Ma* and Shouke Yan*



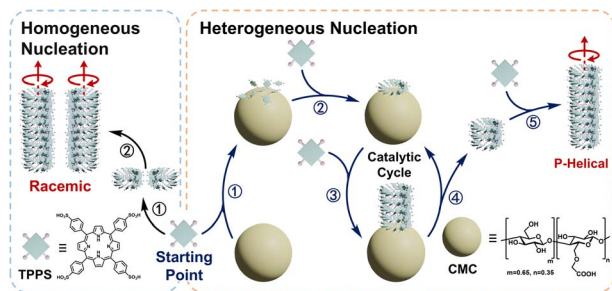
5528

Photo-regulated disulfide crosslinking: a versatile approach to construct mucus-inspired hydrogels

Rui Chen,* Krishnendu Das, Jun Feng, Boonya Thongrom and Rainer Haag*



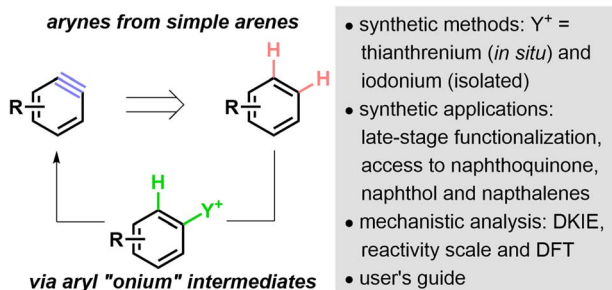
5538



Heterogeneously catalyzed supramolecular polymerization: essential roles of nucleation and fragmentation-induced autocatalysis in chiral transfer

Peichen Shi, Ganyu Chen,* Qiang Chen, Huiting Wu, Suixu Li, Xiaoyu Cao,* Liulin Yang* and Zhongqun Tian*

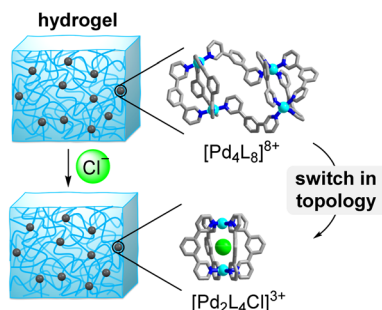
5547



Access to arynes from arenes via net dehydrogenation: scope, synthetic applications and mechanistic analysis

Riley A. Roberts, Bryan E. Metzger, Nicole Javalay, Theresa M. McCormick* and David R. Stuart*

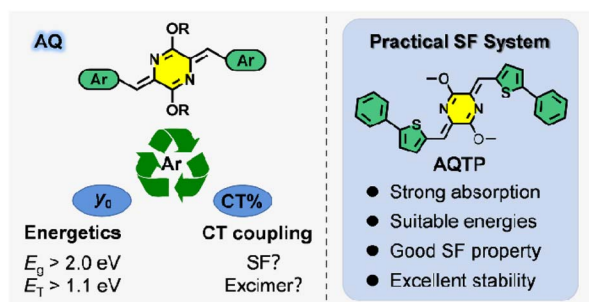
5559



Palladium-based coordination cages as dynamic crosslinks in acrylamide hydrogels

Chaolei Hu, Damien W. Chen, Sylvain Sudan and Kay Severin*

5565



Multiple effects of aromatic substituents on excited-state properties and singlet fission process in azaquinodimethane systems

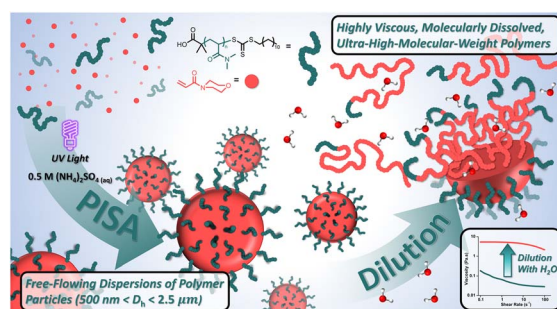
Zhenxiang Zhao, Senhao Wang, Xiaomei Shi, Hongbing Fu and Long Wang*



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Ultra-high molecular weight polymer synthesis via aqueous dispersion polymerization

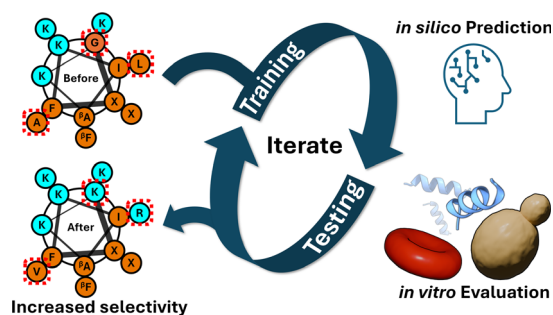
Cabell B. Eades, Kaden C. Stevens, Danyella E. Cabrera, Micayla K. Vereb, Megan E. Lott, Jared I. Bowman and Brent S. Sumerlin*



5579

Machine learning-driven discovery of highly selective antifungal peptides containing non-canonical β -amino acids

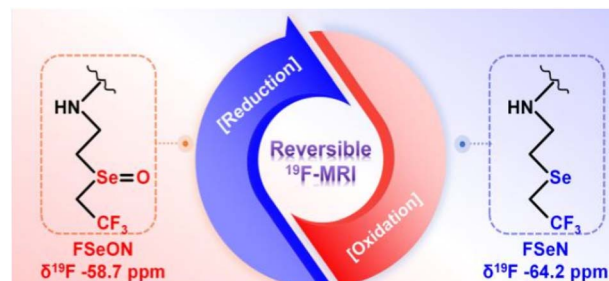
Douglas H. Chang, Joshua D. Richardson, Myung-Ryul Lee, David M. Lynn,* Sean P. Palecek* and Reid C. Van Lehn*



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Reversible redox ^{19}F magnetic resonance imaging nanoprobes for monitoring the redox state *in vivo*

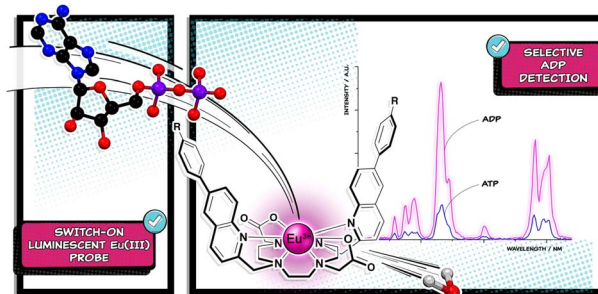
Xiaoyao Xiong, Sijia Li, Yumin Li, Suying Xu, Chang Guo* and Leyu Wang*



5602

A switch-on luminescent europium(III) probe for selective and time-resolved detection of adenosine diphosphate (ADP)

Samantha E. Bodman, Patrycja Stachelek, Umatur Rehman, Felix Plasser, Robert Pal and Stephen J. Butler*



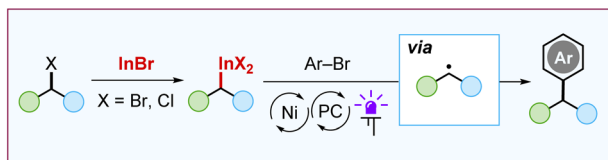
5613



Effect of size, charge, and spin state on Hückel and Baird aromaticity in [N]annulenes

Louis Van Nyvel, Mercedes Alonso* and Miquel Solà*

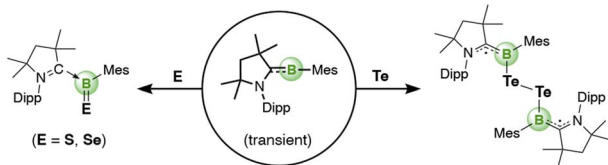
5623



Unlocking the reactivity of the C–In bond: alkyl indium reagents as a source of radicals under photocatalytic conditions

Anton A. Gladkov, Vitalij V. Levin, Demian Y. Chebokarov and Alexander D. Dilman*

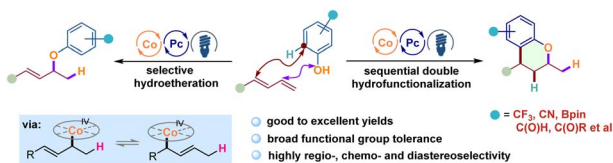
5632



Harnessing transient CAAC-stabilized mesitylborylenes for chalcogen activation

Maximilian Michel, Lukas Endres, Felipe Fantuzzi, Ivo Krummenacher and Holger Braunschweig*

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A photo- and cobalt-catalyzed highly selective and divergent hydrofunctionalization of 1,3-dienes with phenols

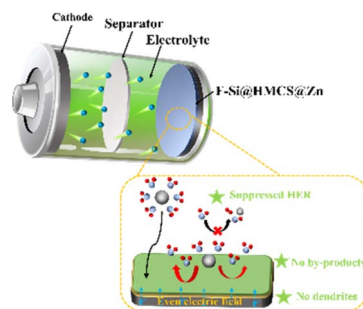
Yue Wang, Junhao Miao, Honglin Dong, Dongliang Zhang, Bei Chen, Meihui Guan, Ge Zhang* and Qian Zhang



5651

Innovative synergistic control of electric fields and Zn²⁺ dynamics for revolutionizing zinc metal battery stability

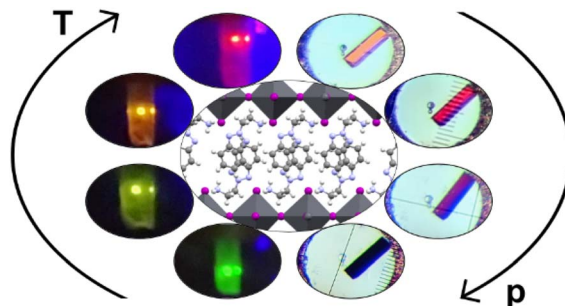
Shengqiang Zhang, Chengxin Liu, Yangyang Wang, Ao Xu, Chunxia Chen and Xiaojie Liu*



5662

Structural rigidity, thermochromism and piezochromism of layered hybrid perovskites containing an interdigitated organic bilayer

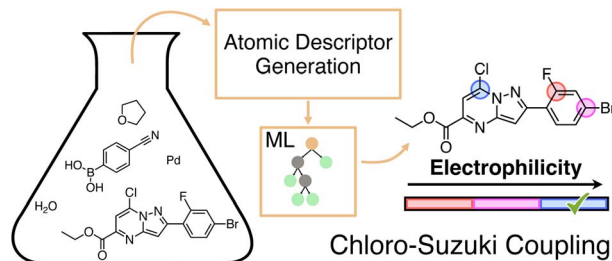
Arthur Maufort, Melissa Van Landeghem, Maxime Deutsch, Peter Banks, Paola La Magna, Kristof Van Hecke, Jesús Cerdá, Laurence Lutsen, Dirk Vanderzande, Claudio Quarti, David Beljonne, Sébastien Pillet, Koen Vandewal and Wouter T. M. Van Gompel*



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Atom-based machine learning for estimating nucleophilicity and electrophilicity with applications to retrosynthesis and chemical stability

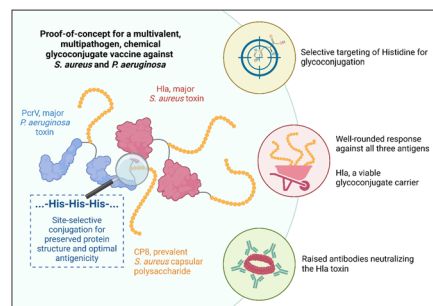
Nicolai Ree, Jan M. Wollschläger, Andreas H. Göller* and Jan H. Jensen*



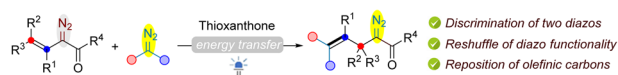
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Multimeric, multivalent fusion carrier proteins for site-selective glycoconjugate vaccines simultaneously targeting *Staphylococcus aureus* and *Pseudomonas aeruginosa*

Charlotte Sorieul, Bartal Mikladal, Dung-Yeh Wu, Barbara Brogioni, Cinzia Giovani, Giusy Adamo, Giacomo Romagnoli, Immaculada Margarit Y Ros, Jeroen Codée, Maria R. Romano, Filippo Carboni* and Roberto Adamo*



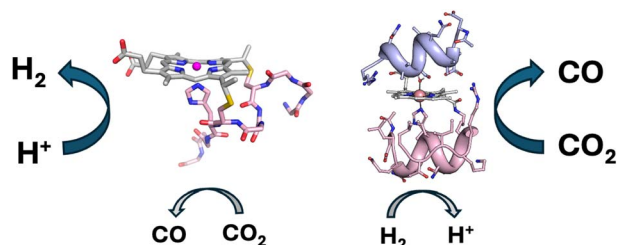
5701



Blue light-induced diazo cross-coupling: synthesis of allyldiazo compounds through reshuffling of functionalities

Jiabao Tian, Jiahao Ling, Yanan Wang and Lei Zhou*

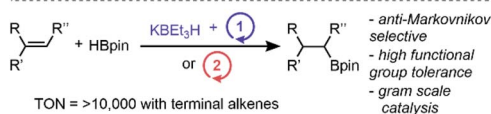
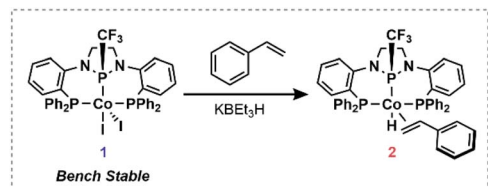
5707



Electrocatalytic CO₂ reduction by a cobalt porphyrin mini-enzyme

Alison A. Salamatian, Jose L. Alvarez-Hernandez, Karishma B. Ramesh, Linda Leone, Angela Lombardi and Kara L. Bren*

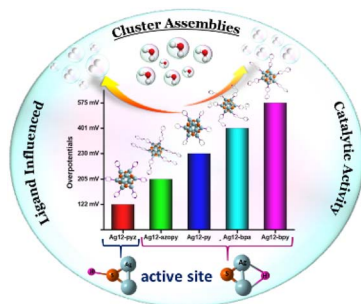
5717



Efficient and selective hydroboration of alkenes catalyzed by an air-stable (PP^{CF₃}P)CoI₂ precatalyst

Matthew C. Fitzsimmons, Maria C. Seith, Curtis E. Moore and Christine M. Thomas*

5726



Linker driven site-specific catalysis in atomically precise silver cluster assemblies

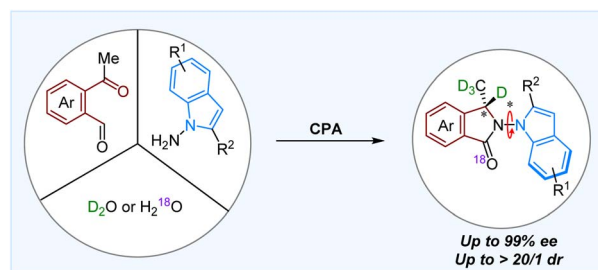
Priyanka Chandrashekar, Arun Karmakar, Ravari Kandy Aparna, Laddi Singh, Pradip Kumar Mondal, Subrata Kundu,* Kalishankar Bhattacharyya* and Sukhendu Mandal*



5735

Atroposelective [4+1] annulation for the synthesis of isotopic isoindolinones bearing both central and axial chirality

Jun Gu, Li-Hong Zhang, Hong-Feng Zhuang and Ying He*



5745

Bipyridine covalent organic framework aerogel for highly selective recovery of palladium in wastewater

Yang Liu, Weikang Guo, Jiale Liu, Haijuan Tao, Juan Yang, Qin Shuai, Yusuke Yamauchi, Brian Yuliarto, Yusuke Asakura* and Lijin Huang*

