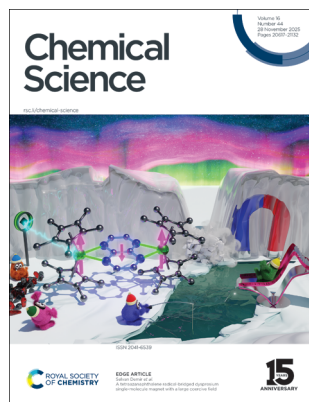


IN THIS ISSUE

ISSN 2041-6539 CODEN CSHCBM 16(44) 20617–21132 (2025)



Cover
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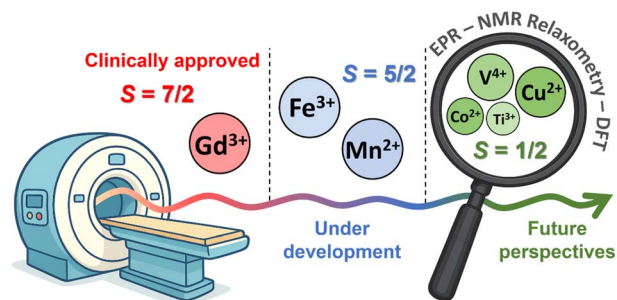
Inside cover
See Vinamr Jain, Michael T. Bergman, Carol K. Hall and Fengqi You, pp. 20823–20832. Image reproduced by permission of Fengqi You from *Chem. Sci.*, 2025, **16**, 20823.

PERSPECTIVES

20631

From electron spin to relaxivity: a multidisciplinary perspective on first-row transition metal-based MRI probes

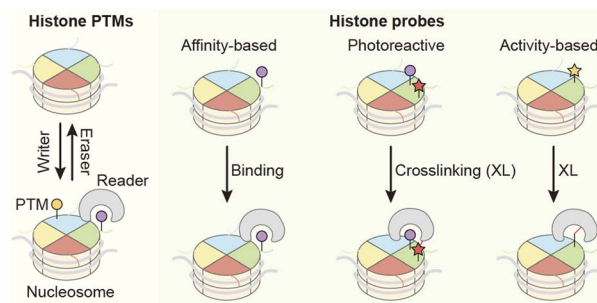
Enrico Salvadori, Valeria Lagostina, Marco Ricci, Fabio Carniato, Mauro Botta,* Carlos Platas-Iglesias* and Mario Chiesa*



20647

Histone probes for reader and eraser investigations

Jinyu Yang and Mingxuan Wu*



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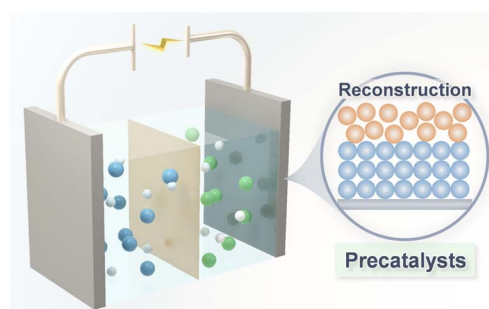
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20662

Reconstruction chemistry of electrocatalysts under working conditions

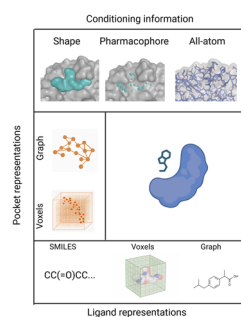
Hui Chen, Lina Wang, Muhan Na and Xiaoxin Zou*



20677

Incorporating targeted protein structure in deep learning methods for molecule generation in computational drug design

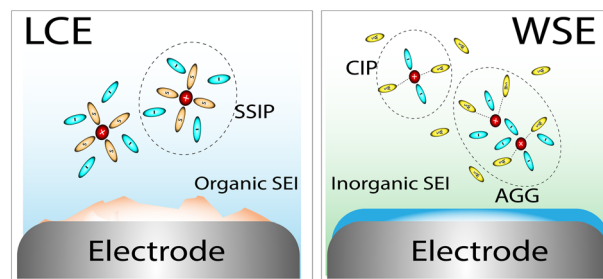
Lucy Vost, Yael Ziv and Charlotte M. Deane*



20694

Weakly solvating electrolytes: a solvation-centric paradigm for rechargeable metal batteries

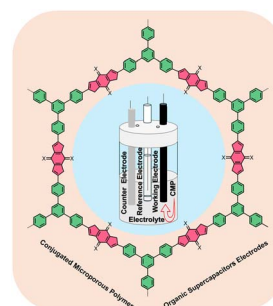
Mehdi Karbak, Kyungmin Yim, Ying Shirley Meng, Yuyan Shao and Wu Xu*



20718

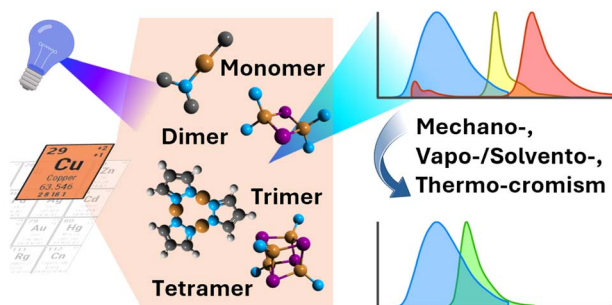
Conjugated microporous polymer electrodes for supercapacitors: recent progress, key challenges, and future directions

Mohammed G. Kotp, Mohamed Gamal Mohamed and Shiao-Wei Kuo*



REVIEWS

20755

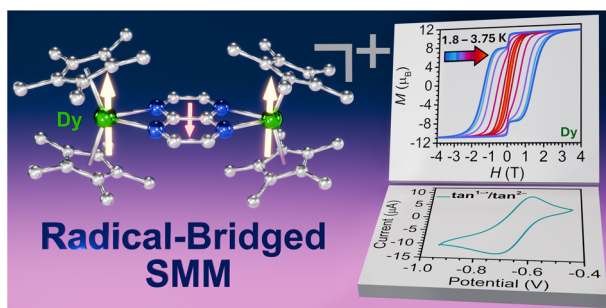


Recent advances in mono- and multi-nuclear photoluminescent Cu(I) complexes with nitrogen containing ligands and their stimuli responsiveness

Alessandra Forni, Daniele Malpicci,* Elena Lucenti, Luca Zecchinello, Alessia Colombo and Elena Cariati*

EDGE ARTICLES

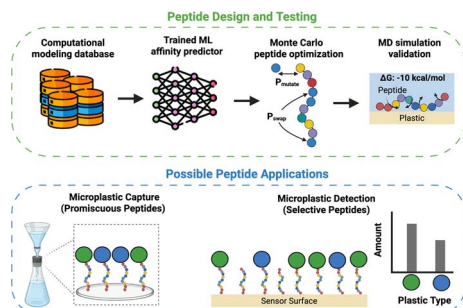
20806



A tetraazanaphthalene radical-bridged dysprosium single-molecule magnet with a large coercive field

Florian Benner, Saroshan Deshapriya and Selvan Demir*

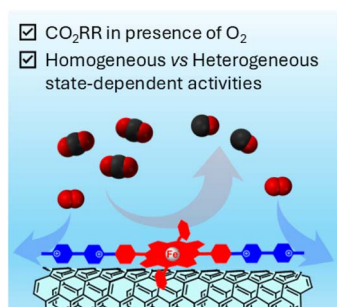
20823



AI-driven rational design of promiscuous and selective plastic-binding peptides

Vinamr Jain, Michael T. Bergman, Carol K. Hall and Fengqi You*

20833



Iron porphyrin flanked by viologen redox units for persistent carbon dioxide reduction in the presence of oxygen

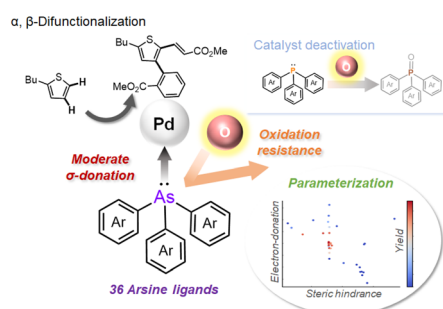
Haroon Rashid, Diana Drago, Atanu Rana, Serena DeBeer, Philipp Gotico,* Winfried Leibl and Ally Aukauloo*



20843

Structural effects of arsine ligands on C–H difunctionalization of thiophene

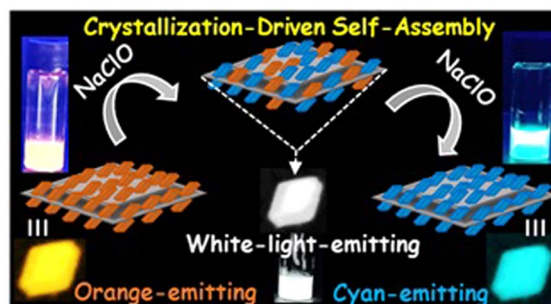
Akifumi Sumida, Kaisei Yamamoto, Takahiro Iwamoto, Kensuke Naka and Hiroaki Imoto*



20851

Crystallization-driven two-dimensional assemblies from a phenothiazine-conjugated poly(L-lactide): redox-responsive tunable emission, white-light harvesting and surface-enabled nanoparticle decoration

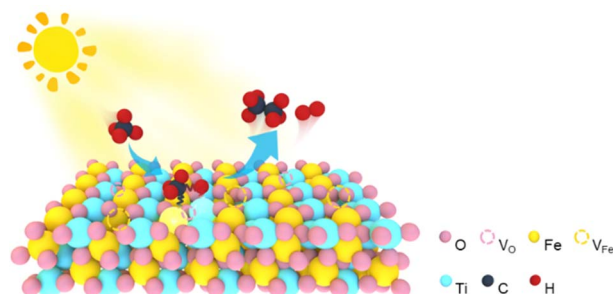
Chhandita Chakraborty and Anindita Das*



20865

Cooperative Fe–Ti dual-metal sites for highly efficient photocatalytic non-oxidative methane conversion

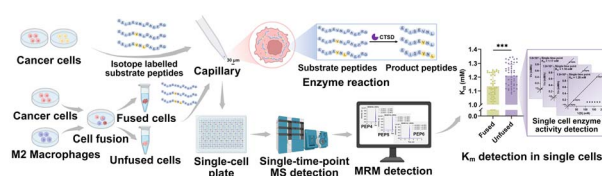
Qingyun Zhan, Xiaowei Mu,* Yuxiang Kong, Zhenlu Li, Le Liu, Yumeng Qian, Shuyan Song* and Lu Li*



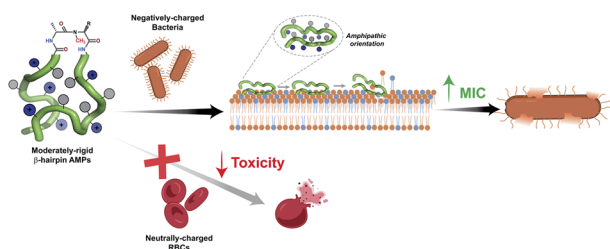
20875

Detection of single-cell enzyme activity by single-time-point stable isotope probing-mass spectrometry

Xianzhe Wu, Qingxi Ma, Haoran Chen, Chuhao Cheng, Jiapu Li, Feifei Xu* and Yun Chen*



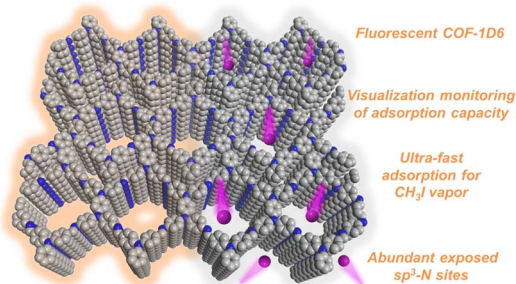
20884



Turn-engineering tunes the conformational rigidity of β -hairpin AMPs in achieving membrane selectivity and killing drug-resistant ESKAPE pathogens

Priyanka Lahiri, Swati Priyadarshini, Mahak Saini, Muskan Agrawal, Sk Abdul Mohid, Raju S. Rajmani, Vishnu S. M. Ammineni, Pritam Biswas, Aparna Asok, Amit K. Baidya, Anirban Bhunia, Govardhan Reddy, Ranjana Pathania and Jayanta Chatterjee*

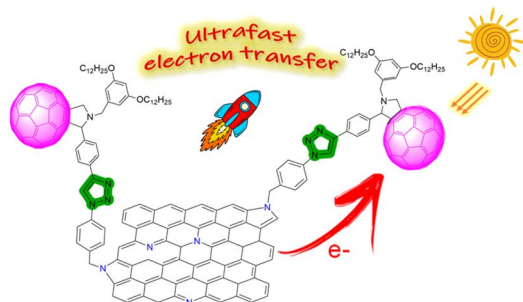
20895



One-dimensional fluorescent covalent organic frameworks rich in exposed $\text{sp}^3\text{-N}$ sites for ultra-fast iodine capture and visual monitoring

Ke Li and Bing Yan*

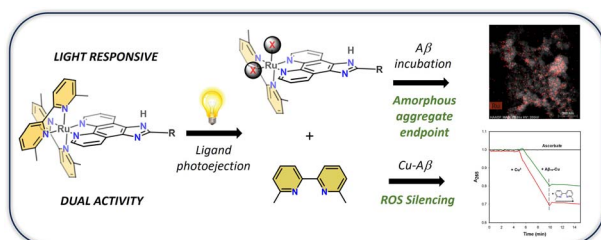
20906



Click-assembled N-graphene- C_{60} hybrids for ultrafast electron transfer

Luis M. Arellano, Habtom B. Gobeze, Youngwoo Jang, María J. Gómez-Escalonilla,* Paul A. Karr, Francis D'Souza* and Fernando Langa*

20914



Photoactivatable Ru(II) polypyridyl complexes as dual action modulators of amyloid-beta peptide aggregation and Cu redox cycling

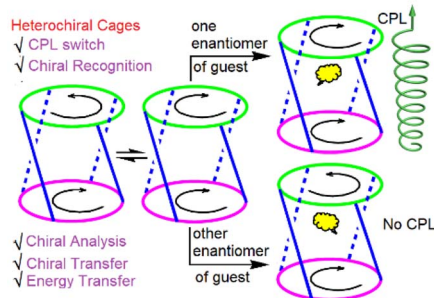
Grace Leech, Alfredo Lopez Acosta, Samyadeb Mahato, Patrick C. Barrett, Rachel O. Hodges, Sherri A. McFarland* and Tim Storr*



20924

CPL on/off switching by enantiomer encapsulation in TPE heterochiral molecular cages

Wei Yu, Ming Hu,* Xin Wen, Zhi-Rong Xu, Minghua Liu and Yan-Song Zheng*



20931

Unusual "mesoionic" N⁴S biscyclometallated iridium(III) polypyridine complexes as photosensitisers for photodynamic therapy and type II immunogenic cell death inducers

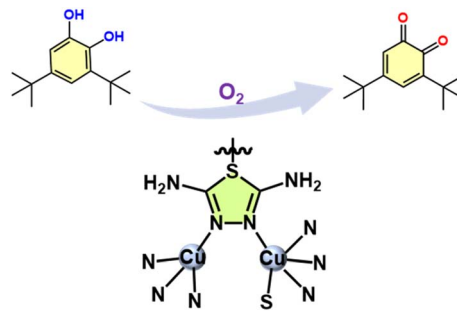
Justin Shum, Peter Kam-Keung Leung, Lili Huang, Lawrence Cho-Cheung Lee, Maryana Yarshova, Lin Cheng, Yi Pan, Michael Wai-Lun Chiang, Ken Shek-Man Yiu, Kai-Chung Lau, Ben Zhong Tang and Kenneth Kam-Wing Lo*



20942

Ligand-mediated asymmetric dicopper sites for robust catecholase-mimicking catalysis and selective sensing

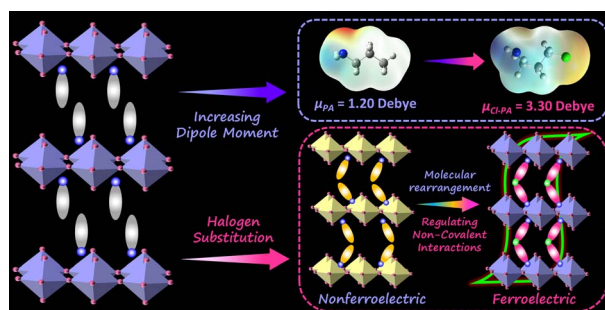
Bojin Li, Meng Yuan, Nannan Xia, Xun Hu* and Fei He*



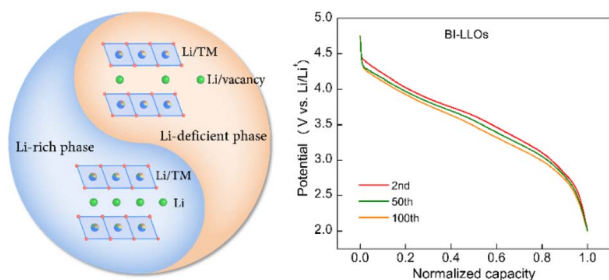
20948

Constructing a photoferroelectric semiconductor by regulating non-covalent interactions through halogen substitution

Yueyue He, Shufang Wu, Xiaofei Li, Qi Wang, Ruifang Zhao, Lin Pan, Chengbing Qin, Xian-Ming Zhang* and Dongying Fu*



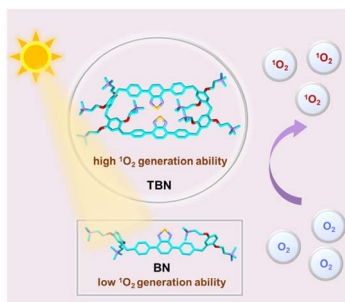
20959



Stabilizing the oxygen anionic redox chemistry using a Li-deficient and Li-rich biphasic structure for high-energy Li-ion batteries

Feng Li, Jiacheng Li, Peiyu Hou,* Zezhou Lin, Mohan Dong, Lin-Hui Wang,* Hongzhou Zhang* and Xijin Xu*

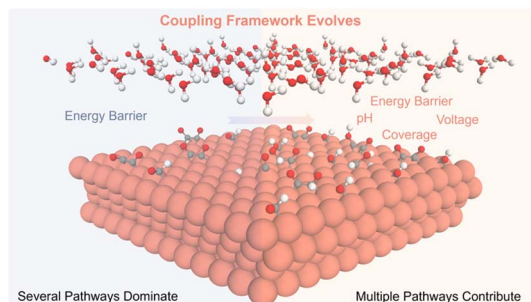
20968



Macrocycle formation-mediated augmentation in reactive oxygen species production

Ao Liu, Youtao Xin, Yong-Kang Zhu, Yuan-Hang Jin, Yue Yang, Hongzhu Chen, Meng-Hao Li, Xin-Yue Lou, Xin Wang,* Hui Gao* and Ying-Wei Yang*

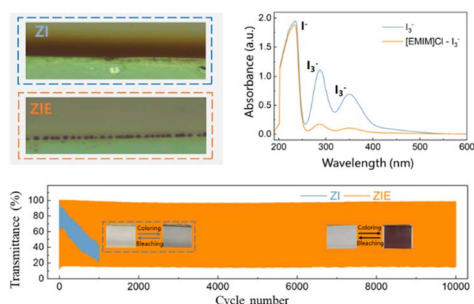
20978



Voltage- and pH-driven evolution of multi-pathway C–C coupling in CO₂ electroreduction on copper

Chengyi Zhang and Ziyun Wang*

20990



Ultra-stable aqueous electrochromism based on [EMIM]⁺/I₃⁻ coordination

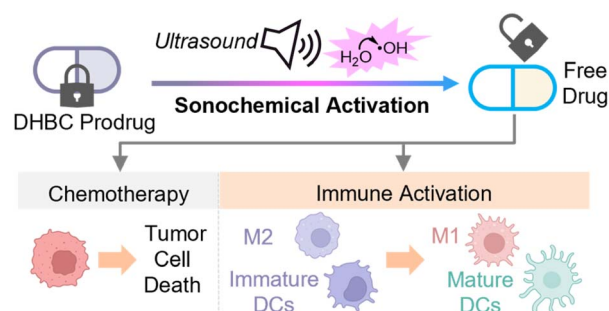
Fengjiao Meng, Junsen Zhong, Xiaoqian Tan, Jianbo Cheng, Bo Xiao,* Shengliang Zhang, Fuyi Jiang,* Wenbao Liu, Wei Liu and Litao Kang*



21000

Ultrasound-triggered prodrug activation via sonochemically induced cleavage of a 3,5-dihydroxybenzyl carbamate scaffold

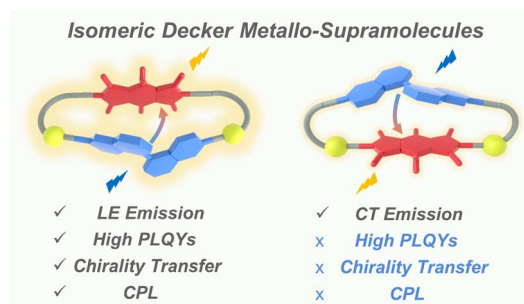
Xuancheng Fu, Bowen Xu, Hirusha Liyanage, Cijun Zhang, Warren F. Kincaid, Amber L. Ford, Luke G. Westbrook, Seth D. Brown, Tatum DeMarco, James L. Houglan, John M. Franck and Xiaoran Hu*



21010

Isomeric decker metallo-supramolecules with tunable luminescence and chiroptical properties

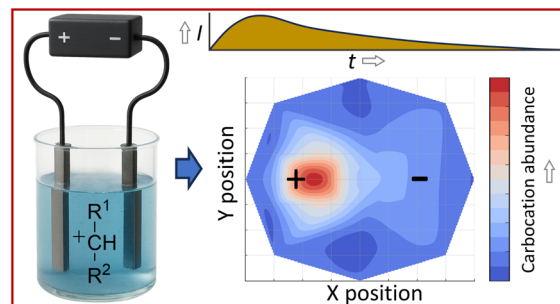
Ningxu Han, Jianjun Ma, Hao Yu, Junjuan Shi, Manman Dai, Ziteng Guo, Zinuo Gao, Houyu Zhang* and Ming Wang*



21020

Seeing the unseen: spatio-temporal visualization of reactive carbocation intermediates in electrolytic cells

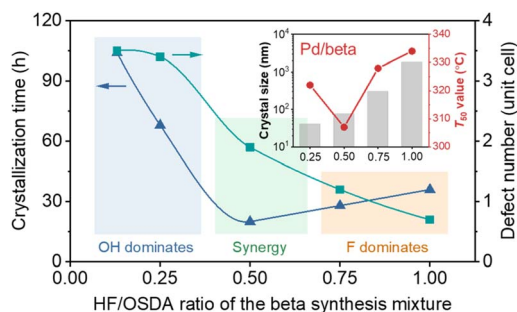
Abhijit Nandy, Barsha Pathak, Bikash Ranjan Isaac, Vijayamohanan Pillai* and Shibdas Banerjee*



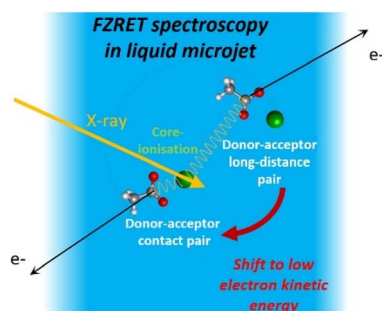
21028

Synergistic zeolite synthesis via a fluoride-deficient mixed approach

Xuechao Tan, Miguel A. Cambor and Suk Bong Hong*



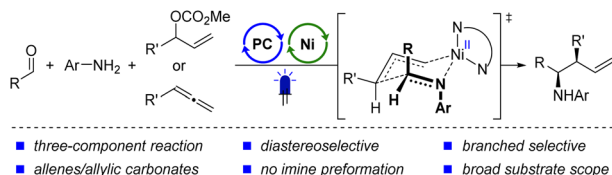
21041



Probing supramolecular structures in solution by resonant energy transfer in the X-ray range

Viola C. D'mello, Venkateswara Rao Mundlapati, Jeremy Donon, Valérie Brenner, Michel Mons, Denis Céolin* and Eric Gloaguen*

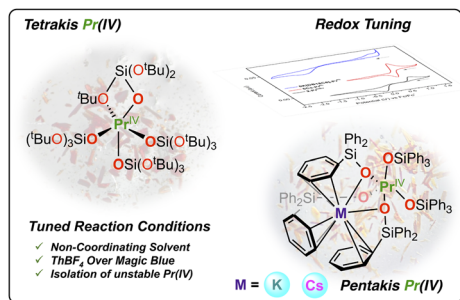
21047



Photocatalytic synthesis of homoallylic amines via nucleophilic addition of nickel allyl complexes to imines

Christoph Nopper, Niclas Müller, Beloslava Goycheva, Felix Himmelsbach, Felix Bauer and Bernhard Breit*

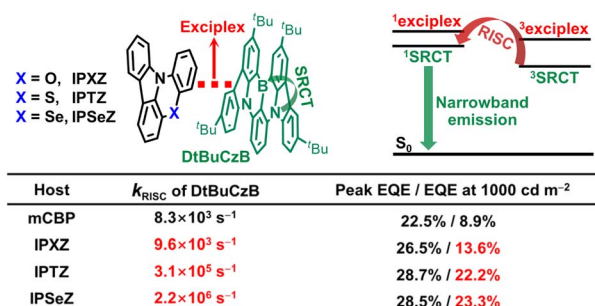
21056



Accessing homoleptic neutral and anionic five-coordinate Pr(IV) siloxide complexes

Pragati Pandey, Megan Keener, Thayalan Rajeshkumar, Rosario Scopelliti, Andrzej Sienkiewicz, Ivica Zivkovic, Laurent Maron* and Marinella Mazzanti*

21068



Over 260-fold enhancement of reverse intersystem crossing by a host-guest exciplex for a multiple resonance emitter toward efficient narrowband electroluminescence

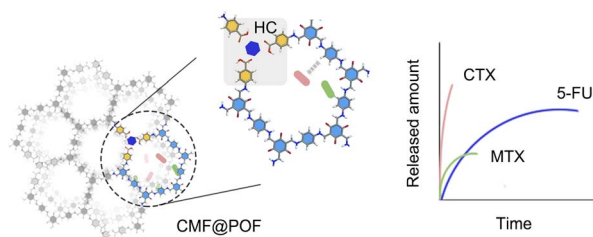
Zetian Wang, Ting Li, Yongjun Song, Dajun Zhuang, Sen Yang and Lei He*



21079

Integrating a hydrogen-bonded complex as a secondary building unit to construct a multivariate framework for programmable drug delivery

Xujiao Ma, Zhong Zhang, Xianghui Ruan, Jiarui Cao, Ye Yuan,* Yajie Yang,* Nan Gao* and Guangshan Zhu*

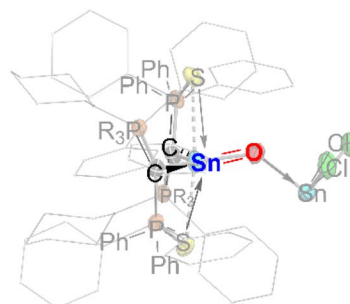


Multivariate Framework for Programmable Drug Delivery

21087

Isolation of a Lewis acid-base stabilized stannanone

Mike Jörges, Daniel Knyszczek, Manoj Kumar, Varre S. V. S. N. Swamy and Viktoria H. Gessner*

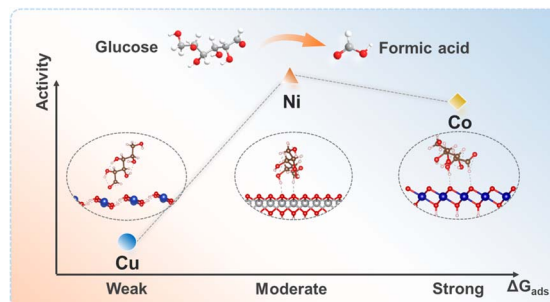


An isolable tin analogue of a ketone

21094

Adsorption-mediated efficient glucose electrooxidation on transition metal aerogels for biomass upgradation

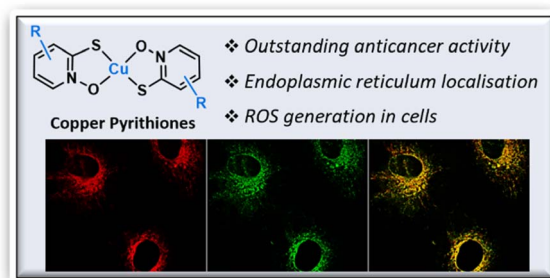
Haoxin Fan, Xiuming Bu, Ziqi Wan, Shougang Sun, Hengwei Lou, Xuemei Zhou, Jie Gao, JiaoJiao Miao, Jian Zhang, Wei Gao* and Dan Wen*



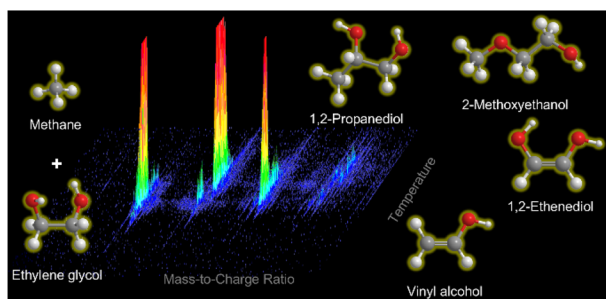
21104

Copper pyrithione complexes with endoplasmic reticulum localisation showing anticancer activity via ROS generation

Atreyee Mishra, Dominic J. Black, Thomas S. Bradford, Karrera Y. Djoko, Benjamin J. Hofmann, Jamie J. Hunter, Rianne M. Lord, Robert Pal, Harvey J. Smart, Tameryn Stringer and James W. Walton*



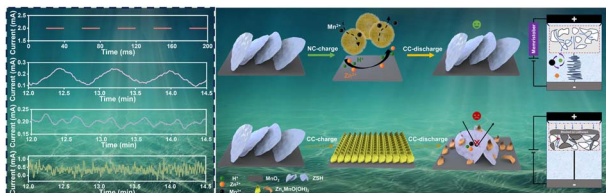
21111



Interstellar formation of 1,2-propanediol ($\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{OH}$) and 1,2-ethenediol (HOCHCHOH)—key precursors to sugars and sugar derivatives

Jia Wang, Chaojiang Zhang, André K. Eckhardt* and Ralf I. Kaiser*

21121



Nonlinear current stimulation unlocks high-performance Zn–Mn batteries via reversible phase transformation

Yang Song, Haidong Zhong, Tingting Hu, Jun Du, Changyuan Tao* and Qian Zhang*

