

IN THIS ISSUE

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Cover
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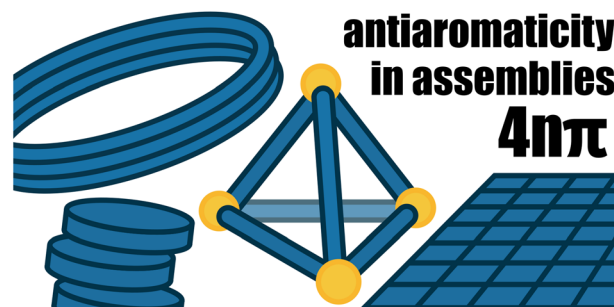
Inside cover
See Hugh O'Neill, Anne-Frances Miller *et al.*, pp. 18796–18817. Image reproduced by permission of Phoenix Pleasant (Graphic Artist); Oak Ridge National Laboratory (ORNL) from *Chem. Sci.*, 2024, 15, 18796.

PERSPECTIVES

18677

Antiaromaticity in molecular assemblies and materials

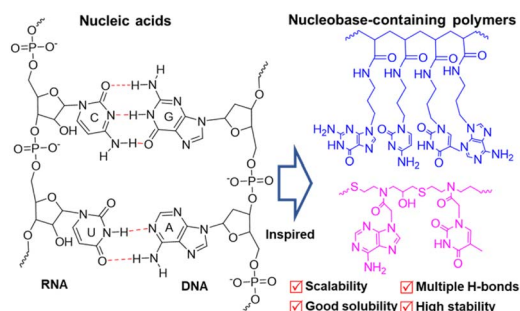
Roy Lavendomme* and Masahiro Yamashina*



18698

Bioinspired and biomimetic nucleobase-containing polymers: the effect of selective multiple hydrogen bonds

Nan Yao, Jiang Wu, Guangming Liu* and Zan Hua*



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Fundamental questions
Elemental answers

REVIEWS

18715

Lateral nanoarchitectonics from nano to life: ongoing challenges in interfacial chemical science

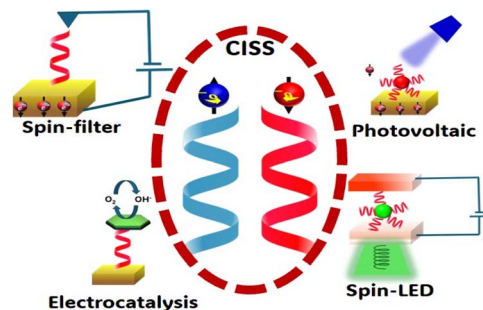
Jingwen Song, Anna Jancik-Prochazkova, Kohsaku Kawakami and Katsuhiko Ariga*



18751

The chirality-induced spin selectivity effect in asymmetric spin transport: from solution to device applications

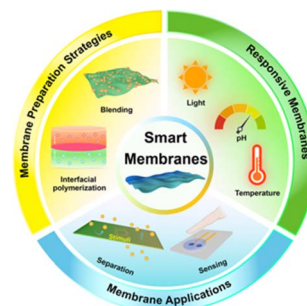
Ritu Gupta, Anujit Balo, Rabia Garg, Amit Kumar Mondal,* Koyel Banerjee Ghosh* and Prakash Chandra Mondal*



18772

Smart membranes for separation and sensing

Xin Liu, Gengwu Zhang, Khozama Bader Al Mohawes and Niveen M. Khashab*

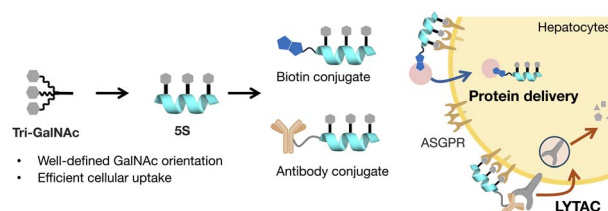


EDGE ARTICLES

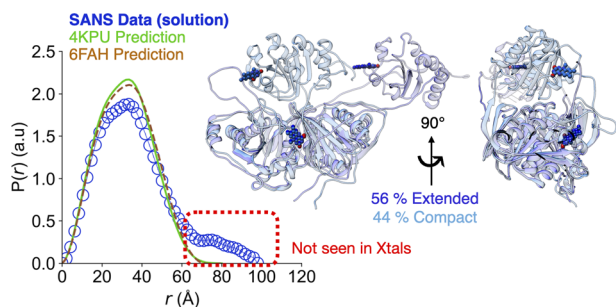
18789

Strategic design of GalNAc-helical peptide ligands for efficient liver targeting

Takahito Ito, Nobumichi Ohoka, Michihiko Aoyama, Takashi Nishikaze, Takashi Misawa, Takao Inoue, Akiko Ishii-Watabe and Yosuke Demizu*



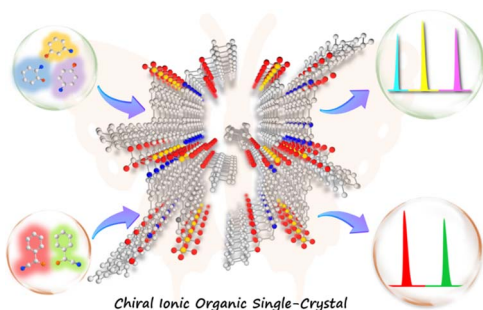
18796



Extended conformations of bifurcating electron transfer flavoprotein constitute up to half the population, possibly mediating conformational change

Sharique A. Khan, Alan Hicks, Wellington C. Leite, James Byrnes, Biswajit Gorai, Maria-Andrea Mroginski, Hugh O'Neill* and Anne-Frances Miller*

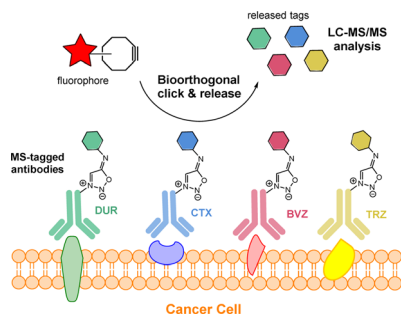
18818



Chiral ionic organic single-crystal and its exfoliated two-dimensional nanosheets with enhanced enantioselectivity

Huifeng Liu, Yongrui He, Jia Chen,* Xiaoqing Qu, Jing He, Xuwei Chen,* Jianhua Wang and Hongdeng Qiu*

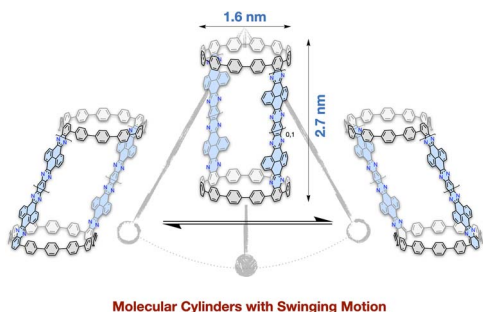
18825



A cancer immunoprofiling strategy using mass spectrometry coupled with bioorthogonal cleavage

Maxime Ribéraud, Estelle Porret, Alain Pruvost, Frédéric Theodoro, Anvi Laëtita Nguyen, Simon Specklin, Dimitri Kereselidze, Caroline Denis, Benoit Jégo, Peggy Barbe, Mathilde Keck, Timothée D'Anfray, Bertrand Kuhnast, Davide Audisio, Charles Truillet* and Frédéric Taran*

18832



Molecular cylinders with donor-acceptor structure and swinging motion

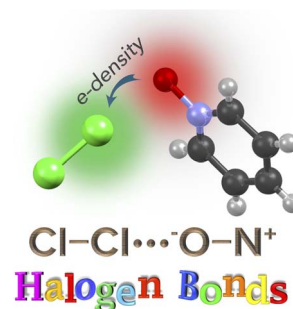
Ke Li, Satoshi Yoshida, Ryo Yakushiji, Xingchi Liu, Chang Ge, Zhuofan Xu, Yong Ni, Xiaonan Ma, Jishan Wu, Sota Sato* and Zhe Sun*



18840

Dichlorine–pyridine *N*-oxide halogen-bonded complexes

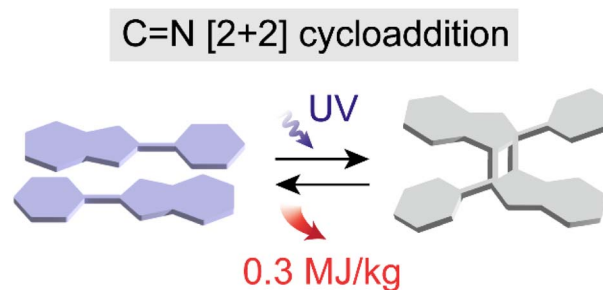
Niklas Limberg, J. Mikko Rautiainen, Jan Lundell, Sebastian Riedel,* Kari Rissanen* and Rakesh Puttreddy*



18846

Large and long-term photon energy storage in diazetidines via [2+2] photocycloaddition

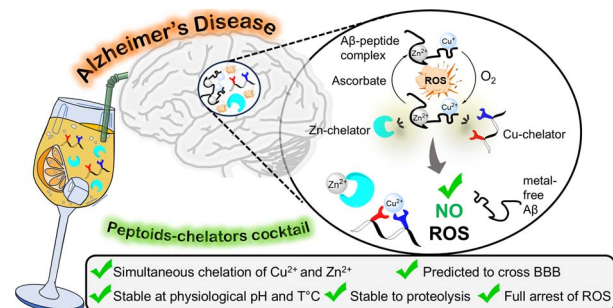
Han P. Q. Nguyen, Anurag Mukherjee, Junichi Usuba, Joshua Wan and Grace G. D. Han*



18855

A cocktail of Cu^{2+} - and Zn^{2+} -peptoid-based chelators can stop ROS formation for Alzheimer's disease therapy

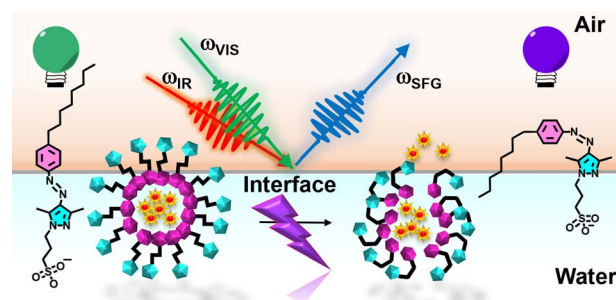
Anastasia E. Behar and Galia Maayan*



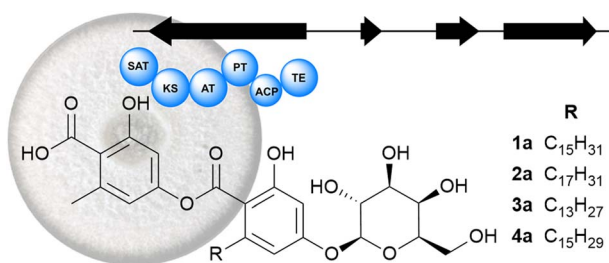
18865

Photo-induced drug release at interfaces with arylazopyrazoles

Ipsita Pani, Michael Hardt, Dana Glikman and Björn Braunschweig*



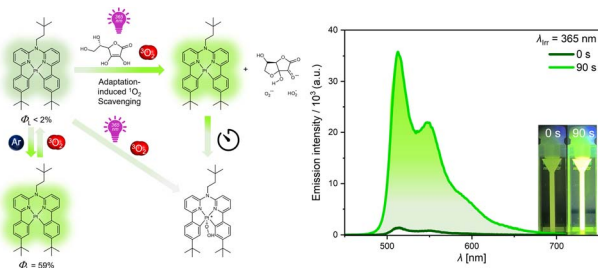
18872



The aquastatin biosynthetic gene cluster encodes a versatile polyketide synthase capable of synthesising heteromeric depsides with diverse alkyl side chains

Nicolau Sbaraini,* Andrew Crombie, John A. Kalaitzis, Daniel Vuong, Joe Bracegirdle, Fraser Windsor, Ashli Lau, Rachel Chen, Yu Pei Tan, Alastair Lacey, Ernest Lacey, Andrew M. Piggott* and Yit-Heng Chooi*

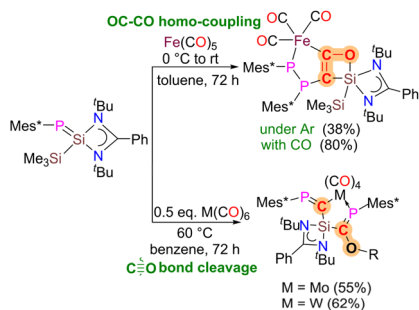
18881



Adaptive photoluminescence through a bioinspired antioxidative mechanism

Tobias Rex, Sebastian Baumert, Alexander Hepp, Gustavo Fernández* and Cristian A. Strassert*

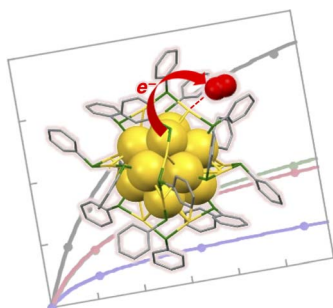
18888



Phosphasilene mediated CO activation and deoxygenative homo coupling of CO molecules in reactions with metal carbonyls

Zohreh Hendi, Renuka Pradhan, Katharina Rachuy, Soheil Mahmoudi, Madhusudan K. Pandey, Saroj Kumar Kushvaha, Regine Herbst-Irmer, Upakarasamy Lourderaj,* Dietmar Stalke* and Herbert W. Roesky*

18896



Quantitative analysis of air-oxidation reactions of thiolate-protected gold nanoclusters

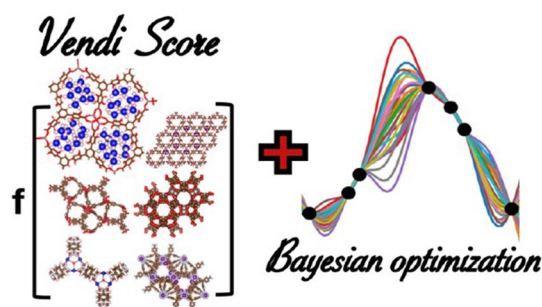
Wataru Suzuki, Ryo Takahata, Yoshiyuki Mizuhata, Norihiro Tokitoh, Songlin Xue and Toshiharu Teranishi*



18903

Diversity-driven, efficient exploration of a MOF design space to optimize MOF properties

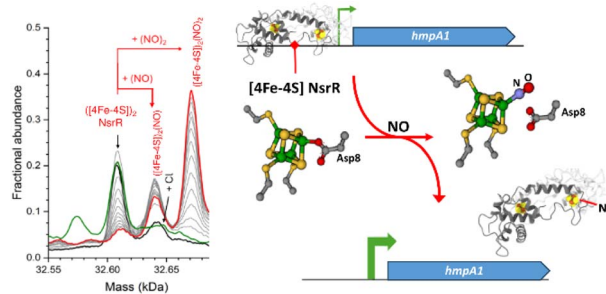
Tsung-Wei Liu, Quan Nguyen, Adji Bouso Dieng* and Diego A. Gómez-Gualdrón*



18920

Binding of a single nitric oxide molecule is sufficient to disrupt DNA binding of the nitrosative stress regulator NsrR

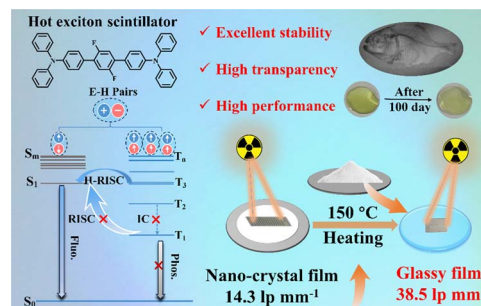
Jason C. Crack* and Nick E. Le Brun*



18933

A hot exciton organic glassy scintillator for high-resolution X-ray imaging

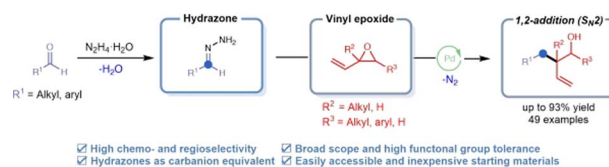
Xi Yang, Jingru Chen, Yang Zhang, Yiming Di, Guozhen Zhang, Songhua Chen,* Hongming Chen* and Mei-Jin Lin*



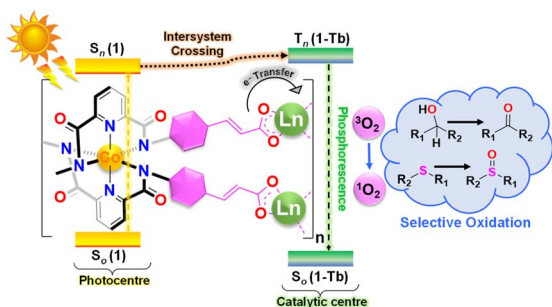
18943

Palladium-catalysed Tsuji–Trost-type vinyl epoxide cross-coupling with umpolung hydrazones

Evan F. W. Chen and Chao-Jun Li*



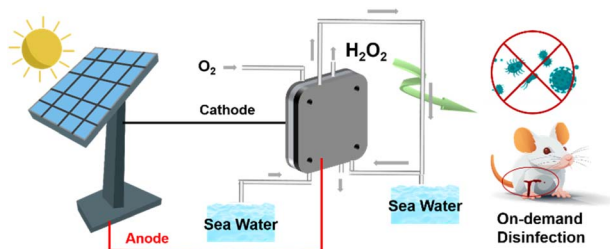
18952



Visible light mediated photocatalysis by lanthanide metal–organic frameworks: enhanced specificity and mechanistic insights

Ruchika Gupta, Aashish, Upma, Shubhangi Majumdar, Prमित K. Chowdhury and Rajeev Gupta*

18969



Photovoltaic-driven stable electrosynthesis of H₂O₂ in simulated seawater and its disinfection application

Yichan Wen, Youyou Feng, Jing Wei,* Ting Zhang, Chengcheng Cai, Jiayi Sun, Xufang Qian* and Yixin Zhao*

18977



• under air • minimal solvent • low dispersity • recyclable catalyst

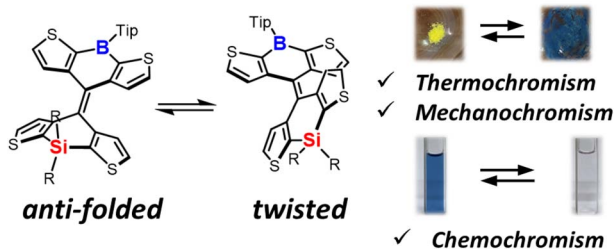
Mechanoredox Cationic RAFT Polymerization

Mechanically induced cationic reversible addition–fragmentation chain transfer polymerization of vinyl ethers

Longfei Zhang, Xiuyang Zou, Chengqiang Ding and Zhao Wang*

18985

Boron/Silicon Hybrid BAEs



Controlling the thermodynamic stability of conformational isomers of bistricyclic aromatic enes by introducing boron and silicon atoms

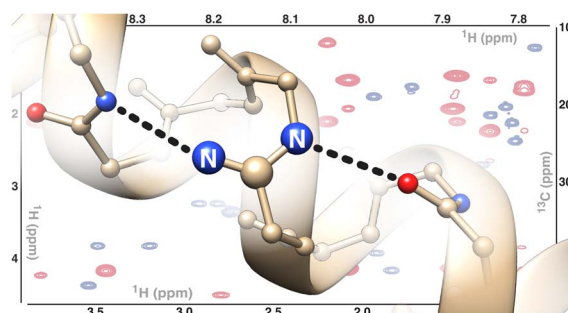
Kohei Yamada, Yohei Adachi* and Joji Ohshita*



18992

Hydrogen-bonding behavior of amidines in helical structure

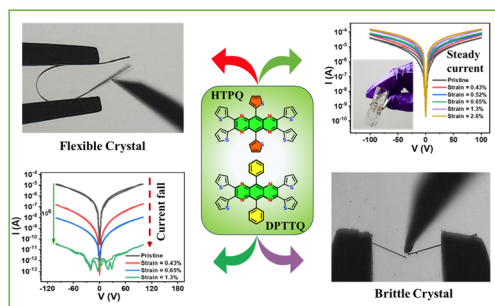
Emily A. O'Brien, Jeffrey A. Purslow, Brendan J. Wall and Brett VanVeller*



19000

Pyrazinoquinoxaline derivatives for flexible electronic devices: effect of the mechanical properties of the crystals on device durability

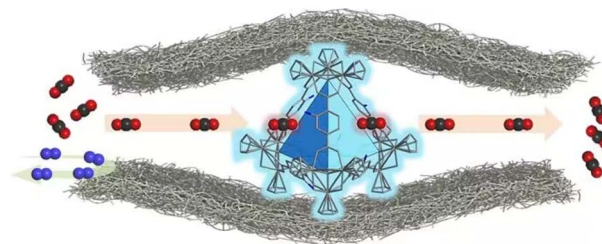
Jasmine Bezboruah, Kanha Ram Khator, Sayantan Gayen, Devendra Mayurdhwaj Sanke, Biplab Mahapatra, Anshuman Sahoo, Amlandeep Nayak, C. Malla Reddy,* Satyaprasad P. Senanayak* and Sanjio S. Zade*



19013

Synthesis of highly soluble zirconium organic cages by iodine substitution toward a CO₂/N₂ separation membrane

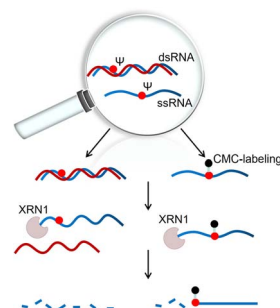
Junchao Dong, Dongxu Gai, Guocai Cha, Qinhe Pan, Jia Liu, Xiaoqin Zou* and Guangshan Zhu*



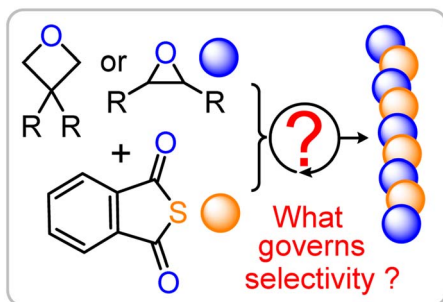
19022

Exonuclease-assisted enrichment and base resolution analysis of pseudouridine in single-stranded RNA

Xin Fang, Ziang Lu, Yafen Wang, Ruiqi Zhao, Jing Mo, Wei Yang, Mei Sun, Xiang Zhou and Xiaocheng Weng*



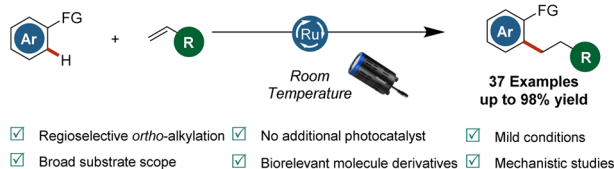
19029



Monomer centred selectivity guidelines for sulfurated ring-opening copolymerisations

Merlin R. Stühler, Marie Kreische, Christoph Fornacon-Wood, Susanne M. Rupf, Robert Langer and Alex J. Plajer*

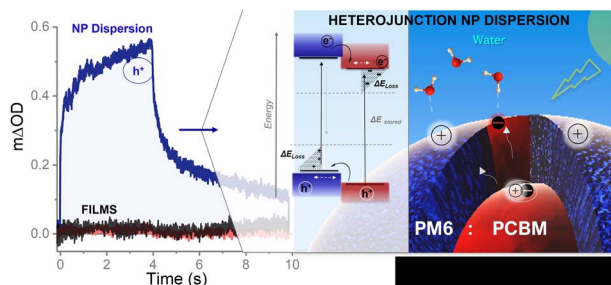
19037



Visible light-induced ruthenium(II)-catalyzed hydroarylation of unactivated olefins

Sven Trienes, Stéphane Golling, Matthew H. Gieuw, Marco Di Matteo and Lutz Ackermann*

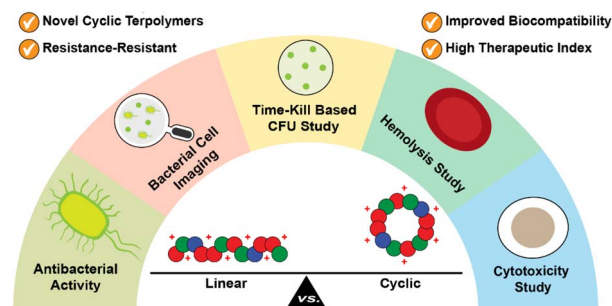
19044



Impact of water solvation on the charge carrier dynamics of organic heterojunction photocatalyst nanoparticle dispersions

Soranyel Gonzalez-Carrero,* Jan Kosco, Teng Fei, Iain McCulloch* and James R. Durrant*

19057



Effect of cyclic topology *versus* linear terpolymers on antibacterial activity and biocompatibility: antimicrobial peptide avatars

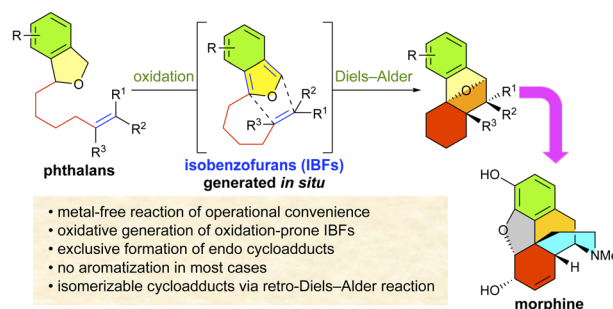
Md Aquib, Wenting Yang, Luofeng Yu, Vinod Kumar Kannaujiya, Yuhao Zhang, Peng Li, Andrew Whittaker, Changkui Fu* and Cyrille Boyer*



19070

Oxidative generation of isobenzofurans from phthalans: application to the formal synthesis of (\pm)-morphine

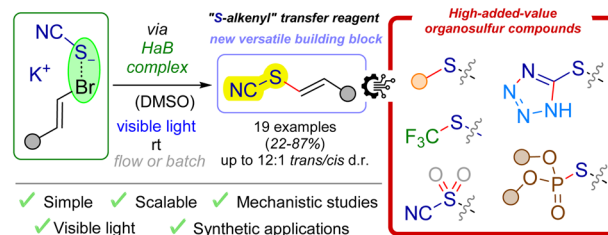
Mirai Kage, Hiroyuki Yamakoshi, Manami Tabata, Eisaku Ohashi, Kimihiro Noguchi, Takeshi Watanabe, Manato Uchida, Minetatsu Takada, Kazutada Ikeuchi and Seiichi Nakamura*



19077

Visible-light-driven synthesis of alkenyl thiocyanates: novel building blocks for assembly of diverse sulfur-containing molecules

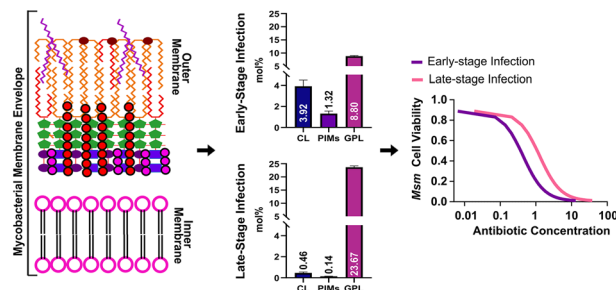
Helena F. Piedra and Manuel Plaza*



19084

Decoding the role of mycobacterial lipid remodelling and membrane dynamics in antibiotic tolerance

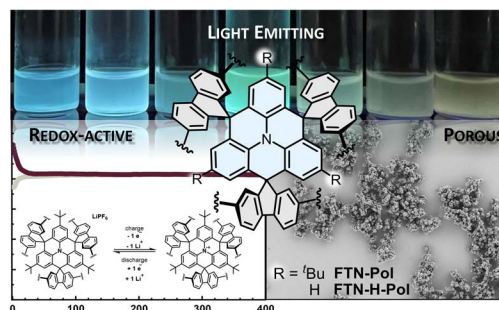
Anjana P. Menon, Tzong-Hsien Lee, Marie-Isabel Aguilar* and Shobhna Kapoor*



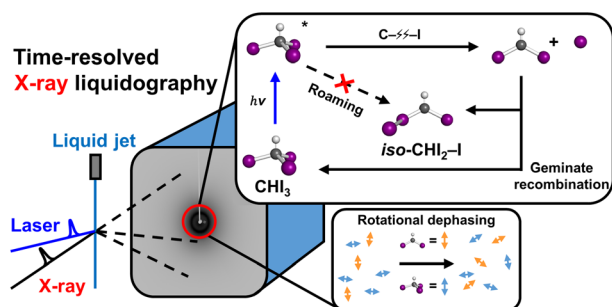
19094

Redox-active, photoluminescent porous polymers based on spirofluorene-bridged *N*-heterotriangulenes and their feasibility as organic cathode materials

Angelina Jocić, Tom Wickenhäuser, Sebastian Lindenthal, Wen-Shan Zhang, Jana Zaumseil, Rasmus Schröder, Rüdiger Klingeler and Milan Kivala*



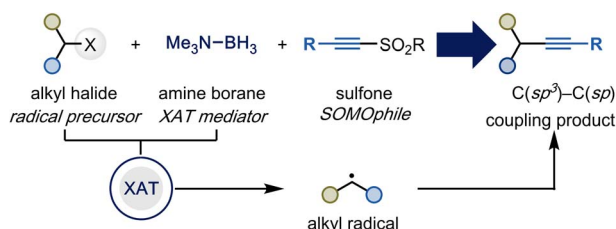
19104



The carbon–iodine bond cleavage and isomerization of iodoform visualized with femtosecond X-ray liquidography

Yongjun Cha, Hosung Ki, Donghwan Im, Yunbeom Lee, Seonggon Lee, Jungmin Kim, Jae Hyuk Lee, Jeongho Kim and Hyotcherl Ihee*

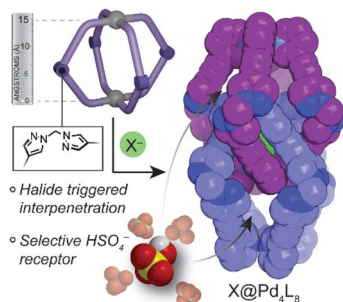
19113



Boryl radical-mediated halogen-atom transfer (XAT) enables the Sonogashira-like alkylation of alkyl halides

Javier Corpas, Maialen Alonso and Daniele Leonori*

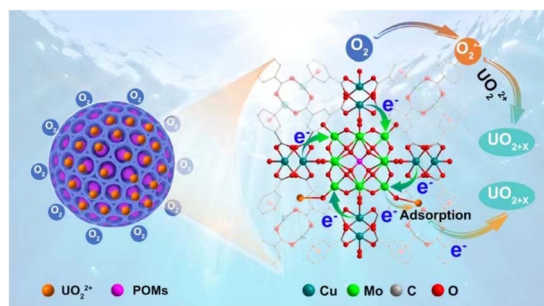
19119



Halide-triggered assembly and selective bisulfate recognition in a quadruply interlocked coordination cage

Jemma I. Virtue, Steven Tsoukatos, Martin R. Johnston and Witold M. Bloch*

19126



Polyoxometalate-encapsulated metal–organic frameworks for photocatalytic uranium isolation

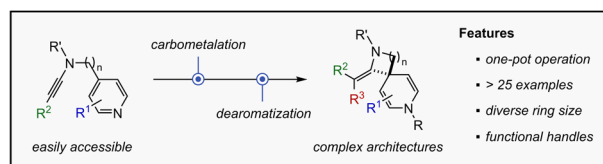
Zhimin Dong, Dongling Zeng, Zifan Li, Junjie Chen, Youqun Wang, Xiaohong Cao, Guoping Yang,* Zhibin Zhang,* Yunhai Liu and Feng Yang*



19136

Dearomative spirocyclization of ynamides

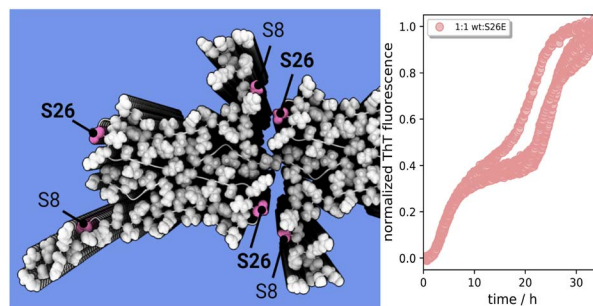
Mohamed Agbaria, Nwar Egbaria and Zackaria Nairoukh*



19142

Serine phosphorylation mimics of A β form distinct, non-cross-seeding fibril morphs

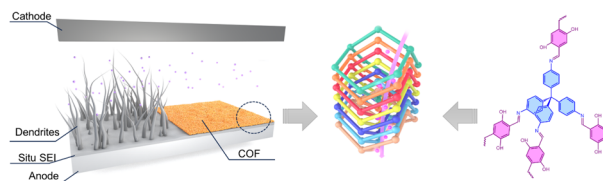
Kalyani Sanagavarapu,* Georg Meisl, Veronica Lattanzi, Katja Bernfur, Birgitta Frohm, Ulf Olsson, Tuomas P. J. Knowles, Anders Malmendal and Sara Linse*



19160

Three-dimensional covalent organic framework-based artificial interphase layer endows lithium metal anodes with high stability

Kaiyang Zheng, Zhengyang Gou, Cen Zhang, Yuqiang Zhang, Yaying Dou, Shaojie Liu,* Yongheng Zhang and Yantao Zhang*



CORRECTIONS

19168

Correction: Catalytic generation of *ortho*-quinone dimethides via donor/donor rhodium carbenes

Mingchun Gao, Jose M. Ruiz, Emily Jimenez, Anna Lo, Croix J. Laconsay, James C. Fettinger, Dean J. Tantillo and Jared T. Shaw*



CORRECTIONS

19169

Correction: Second-shell modulation on porphyrin-like Pt single atom catalysts for boosting oxygen reduction reaction

Tayyaba Najam, Syed Shoaib Ahmad Shah, Hanqing Yin, Xin Xiao, Shamraiz Talib, Qianqian Ji, Yonggui Deng, Muhammad Sufyan Javed, Jie Hu, Ruo Zhao, Aijun Du, Xingke Cai* and Qiang Xu*

