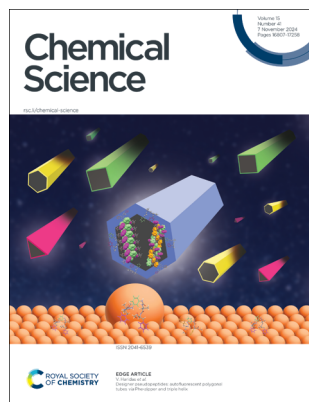
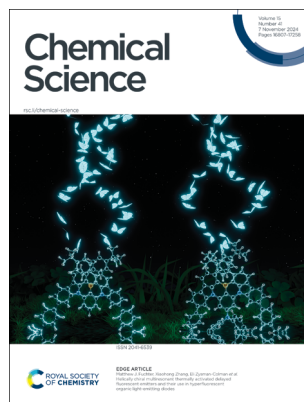


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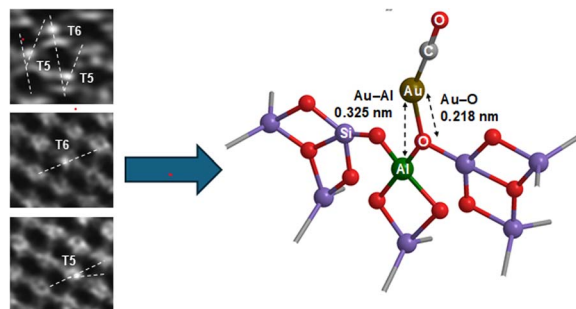
Inside cover
See Matthew J. Fuchter, Xiaohong Zhang, Eli Zysman-Colman *et al.*, pp. 16917–16927. Image reproduced by permission of Eli Zysman-Colman from *Chem. Sci.*, 2024, **15**, 16917. Image created by Ettore Crovini.

PERSPECTIVE

16821

Mononuclear metal complex catalysts on supports: foundations in organometallic and surface chemistry and insights into structure, reactivity, and catalysis

Bruce C. Gates

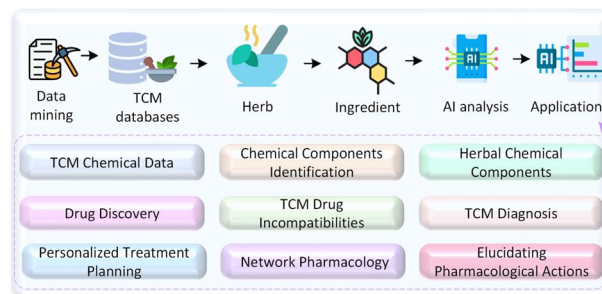


REVIEWS

16844

AI empowering traditional Chinese medicine?

Zhilin Song, Guanxing Chen and Calvin Yu-Chian Chen*



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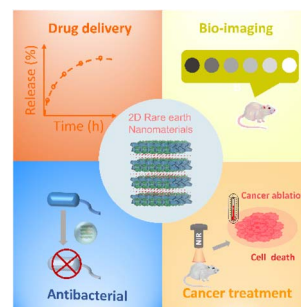
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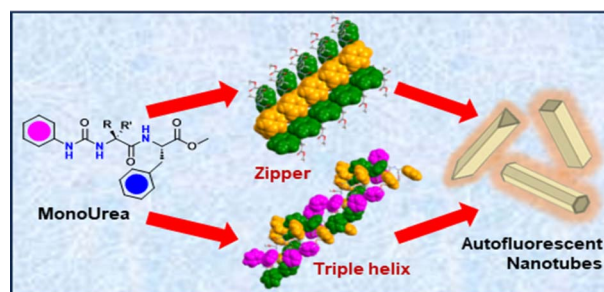
REVIEWS

16887

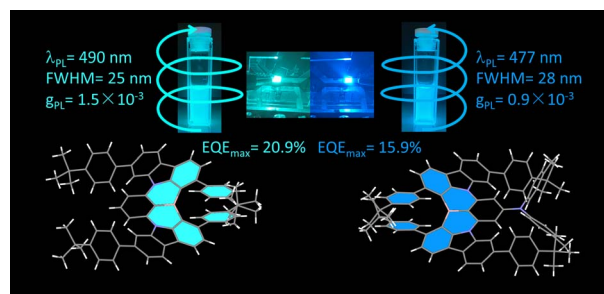
Two-dimensional nanomaterials based on rare earth elements for biomedical applicationsMingjun Bai, Hao Wan,^{*} Ying Zhang, Siqi Chen, Chunyin Lu, Xiaohu Liu,^{*} Gen Chen, Ning Zhang and Renzhi Ma^{*}

EDGE ARTICLES

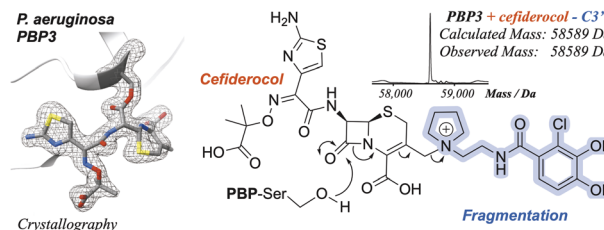
16908

Designer pseudopeptides: autofluorescent polygonal tubes via Phe-zipper and triple helixV. Haridas,^{*} Govind P. Maurya and Souvik Dutta

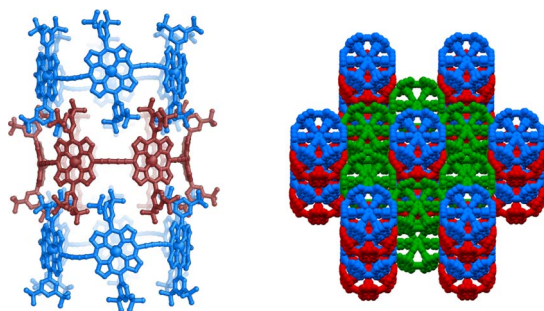
16917

Helically chiral multiresonant thermally activated delayed fluorescent emitters and their use in hyperfluorescent organic light-emitting diodesJingxiang Wang, Dongyang Chen, Juan Manuel Moreno-Naranjo, Francesco Zinna, Lucas Frédéric, David B. Cordes, Aidan P. McKay, Matthew J. Fuchter,^{*} Xiaohong Zhang^{*} and Eli Zysman-Colman^{*}

16928

Structural basis of *Pseudomonas aeruginosa* penicillin binding protein 3 inhibition by the siderophore-antibiotic cefiderocolHelen G. Smith, Shyam Basak, Victor Aniebok, Matthew J. Beech, Faisal M. Alshref, Mark D. Allen, Alistair J. M. Farley and Christopher J. Schofield^{*}

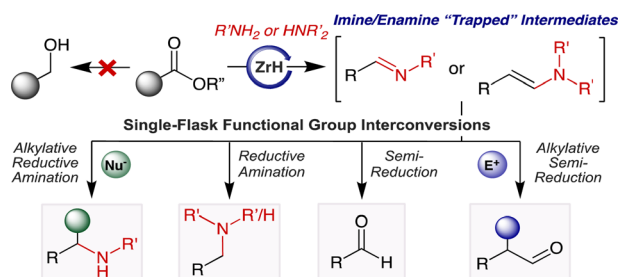
16938



Polymorphism and flexibility of six-porphyrin nanorings in the solid state

Wojciech Stawski* and Harry L. Anderson*

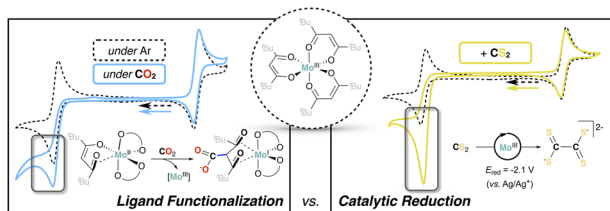
16947



Direct conversion of esters to imines/enamines and applications to polyester waste upcycling

Rebecca A. Kehner, Weiheng Huang and Liela Bayeh-Romero*

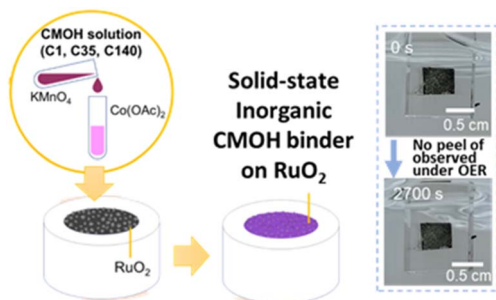
16954



Chemical and redox non-innocence in low-valent molybdenum β diketonate complexes: novel pathways for CO_2 and CS_2 activation

Fabio Masero and Victor Mougel*

16966



A robust inorganic binder against corrosion and peel-off stress in electrocatalysis

Joey Andrew A. Valinton, Meng-Yu Lin, Cheng-Han Tsai, Cheng-Te Tsai, Ming-Jia Chiu, Cheng-chau Chiu* and Chun-Hu Chen*



16977

Making an inverted Keggin ion lacunary

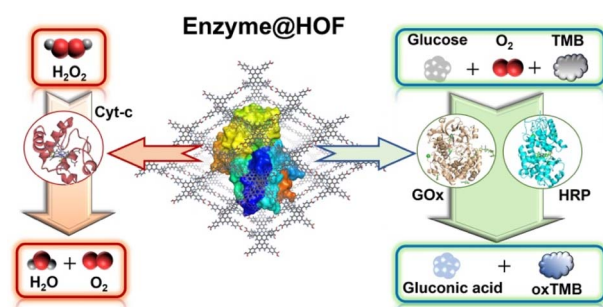
Lu-Lu Liu, Zi-Yu Xu, Peng Yi, Chao-Qin Chen, Zhong-Ling Lang* and Peng Yang*



16987

Facile and scale-up syntheses of high-performance enzyme@meso-HOF biocatalysts

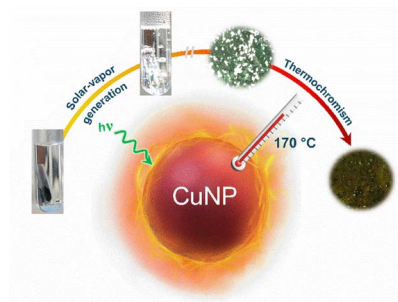
Zhengyi Di, Yu Qi, Xin-Xin Yu, Hai-Ruo Li, Meng-Xuan Zuo, Tian-Tian Ren, Cheng-Peng Li* and Yanli Zhao*



16997

Plasmon-powered chemistry with visible-light active copper nanoparticles

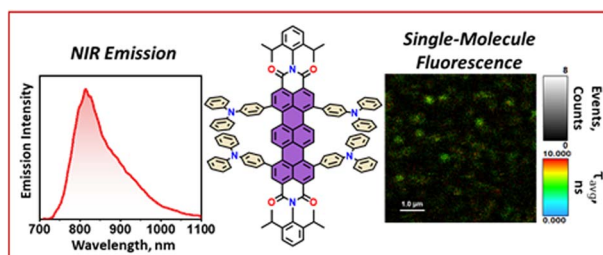
Shreya Tyagi, Radha Krishna Kashyap, Ankit Dhankhar and Pramod P. Pillai*



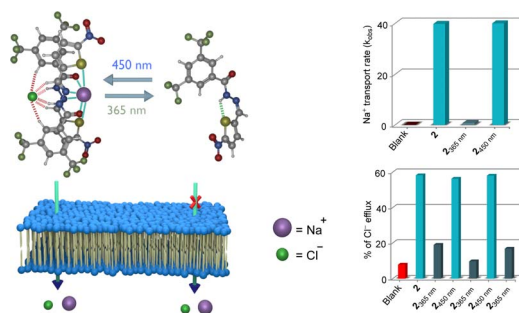
17007

Single-molecule detection of a terylenediimide-based near-infrared emitter

Suvarna Sujilkumar, Philip Daniel Maret, Kavya Vinod, Athira T. John and Mahesh Hariharan*



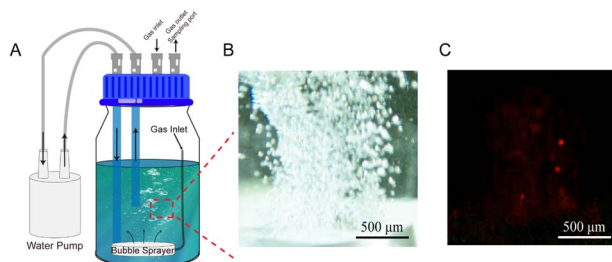
17017



Acylhydrazone-based reversibly photoswitchable ion pair transporter with OFF–ON cotransport activity

Sandip Chattopadhyay, Paras Wanjari and Pinaki Talukdar*

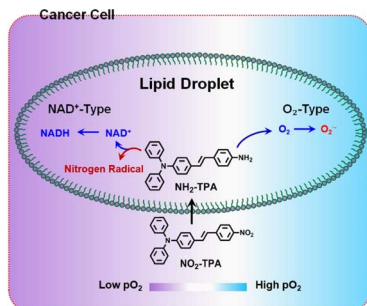
17026



Methane C(sp³)–H bond activation by water microbubbles

Juan Li, Jinheng Xu, Qingyuan Song, Xinxing Zhang,* Yu Xia* and Richard N. Zare*

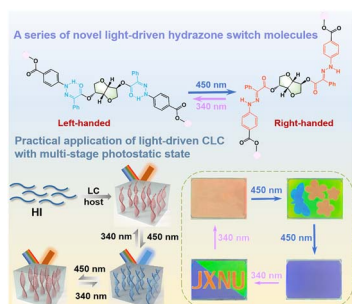
17032



Tumor oxygen microenvironment-tailored electron transfer-type photosensitizers for precise cancer therapy

Yiting Yang, Yafu Wang, Yang Liu, Kui Wang, Ge Wang, Yonggang Yang, Won Jun Jang, Tony D. James, Juyoung Yoon* and Hua Zhang*

17041



Dynamic handedness inversion of self-organized helical superstructures enabled by novel thermally stable light-driven chiral hydrazone switches

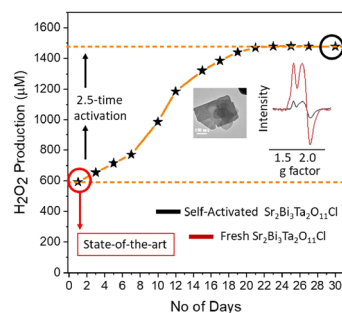
Jingyu Chen, Zichen Wang, Yuexin Yu, Jun Huang, Xinyu Chen, Tongji Du, Xinyue Song, Haiyang Yuan, Shuai Zhou, Xiang-Guo Hu, Xingping Zeng, Shengliang Zhong* and Ruochen Lan*



17049

A surface reconstruction route for increasingly improved photocatalytic H₂O₂ production using Sr₂Bi₃Ta₂O₁₁Cl

Maqsuma Banoo, Arjun Kumar Sah, Raj Sekhar Roy, Komalpreet Kaur, Bramhaiah Kommula, Dirtha Sanyal and Ujjal K. Gautam*



17058

Intermolecular sulfur atom transfer cascade enabled late-stage introduction of sulfilimines into peptides

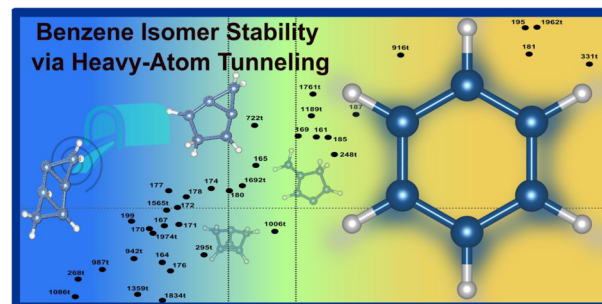
Zeyuan He, Yuyang Liu, Guangjun Bao, Yiping Li, Xiufang Zhao, Quan Zuo, Kai Li, Wangsheng Sun* and Rui Wang



17064

Heavy-atom tunnelling in benzene isomers: how many tricyclic species are truly stable?

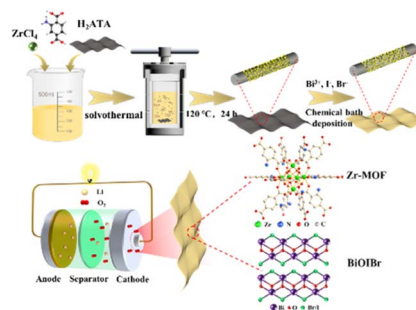
Sindy Julieth Rodríguez* and Sebastian Kozuch*



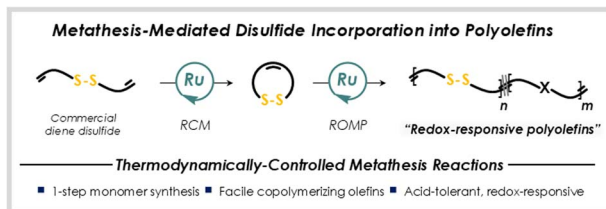
17073

Promoting oxygen electrode reaction kinetics in photo-assisted Li–O₂ batteries through heterostructure design and built-in electric field construction

Yinglei Tao, Tao Wang,* Xingyu Yu, Ke Gong, Hao Gong, Haixia Chen, Xiaoli Fan, Aidi Zhang, Xianli Huang, Kun Chang and Jianping He



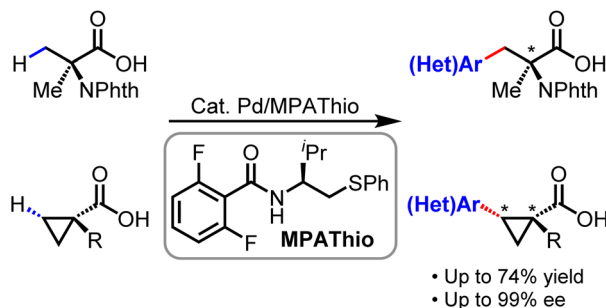
17084



Degradable polyolefins prepared by integration of disulfides into metathesis polymerizations with 3,6-dihydro-1,2-dithiine

Hong-Gyu Seong, Thomas P. Russell and Todd Emrick*

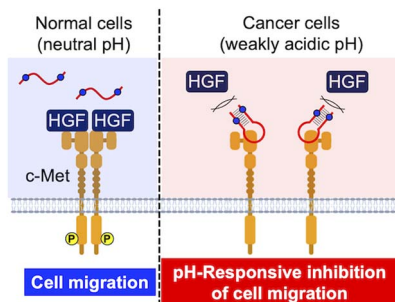
17092



Synthesis of chiral α -amino acids via Pd(II)-catalyzed enantioselective C–H arylation of α -aminoisobutyric acid

Zi-Yu Zhang, Tao Zhang, Yuxin Ouyang, Peng Lu, Jennifer X. Qiao and Jin-Quan Yu*

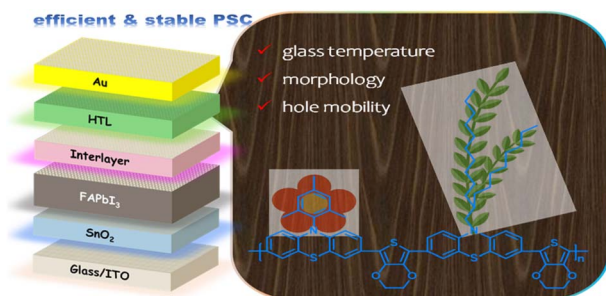
17097



Selective inhibition of cancer cell migration using a pH-responsive nucleobase-modified DNA aptamer

Yuyuan Chen, Kunihiko Morihira,* Yui Nemoto, Akito Ichimura, Ryosuke Ueki, Shinsuke Sando and Akimitsu Okamoto*

17103



An alternating copolymer of phenothiazine and ethylenedioxythiophene for perovskite solar cells: effects of flexible and rigid substituent alternation

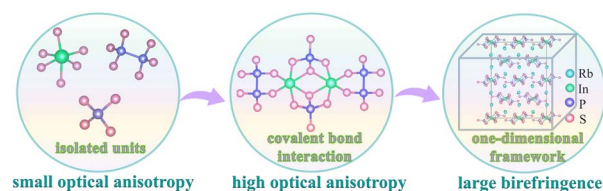
Bing Zhang, Yaohang Cai, Lifei He, Niansheng Xu,* Yi Yuan, Jing Zhang, Yuyan Zhang* and Peng Wang*



17114

Reconstructing nearly isotropic microstructures to construct a one-dimensional framework causing record birefringence in thiophosphates

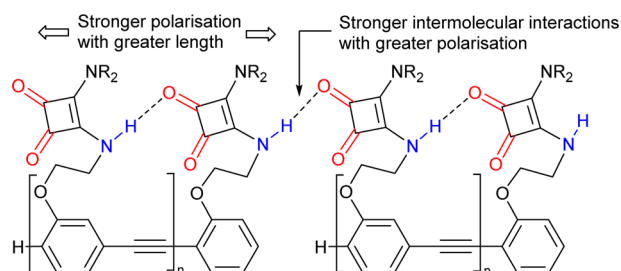
Lin-Tao Jiang, Xiao-Ming Jiang, Yu-Hang Fan, Bin-Wen Liu* and Guo-Cong Guo*



17120

Cooperative intra- and intermolecular hydrogen bonding in scaffolded squaramide arrays

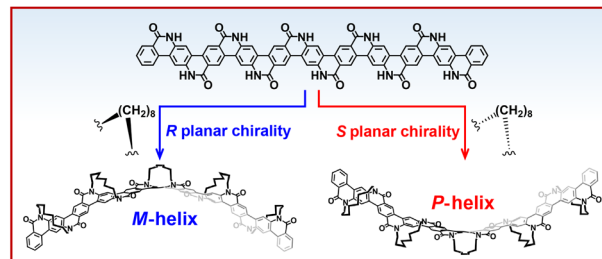
Luis Martínez-Crespo,* George F. S. Whitehead, Iñigo J. Vitórica-Yrezábal and Simon J. Webb*



17128

Tether-entangled conjugated helices

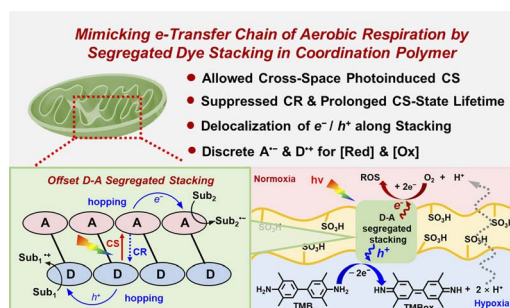
Ke Jin, Zuo Xiao,* Huidong Xie, Xingxing Shen,* Jizheng Wang, Xiangyu Chen, Zhijie Wang, Zujin Zhao, Keyou Yan, Yong Ding and Liming Ding*



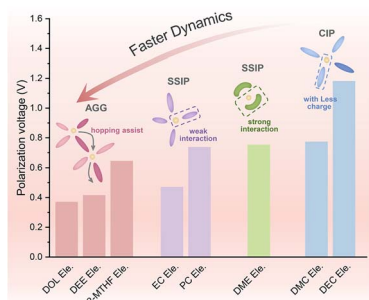
17150

Electron transport chain-inspired coordination polymers for macroscopic spatiotemporal scales of charge separation and transport in photocatalysis

Lin Ma, Tiexin Zhang,* Mochen Li, Xu Zhang, Lanqiao Li, Yusheng Shi, Rui Cai, Xueming Yang and Chunying Duan



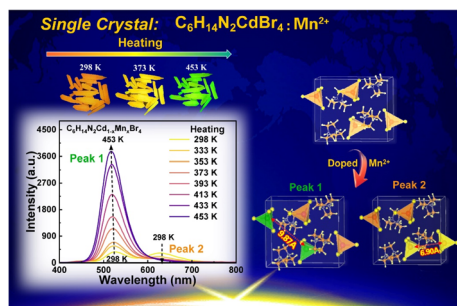
17161



Solvation structure dependent ion transport and desolvation mechanism for fast-charging Li-ion batteries

Zhenyu Fan, Jingwei Zhang, Lanqing Wu, Huaqing Yu, Jia Li, Kun Li and Qing Zhao*

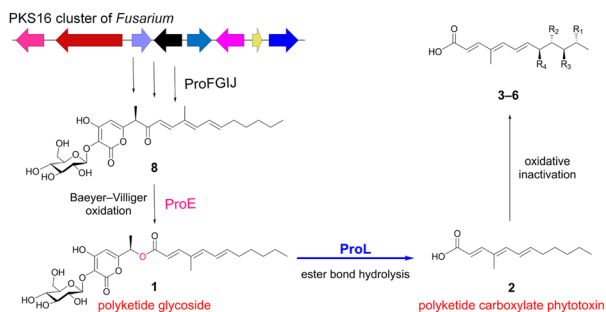
17173



Dual-emissive luminescence in OIHMH single crystals: tunable red-green emissions via Mn²⁺ doping and theoretical insights

Qianrong Jin, Rui Wu, Yuexiao Pan,* Yihong Ding, Hongzhou Lian, Jun Lin* and Liyi Li*

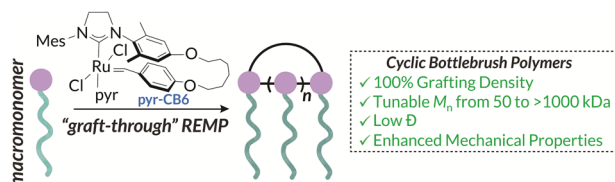
17183



Discovery of a polyketide carboxylate phytotoxin from a polyketide glycoside hybrid by β -glucosidase mediated ester bond hydrolysis

Xin Wang, De-Kun Kong, Hua-Ran Zhang and Yi Zou*

17193



A general synthesis of cyclic bottlebrush polymers with enhanced mechanical properties via graft-through ring expansion metathesis polymerization

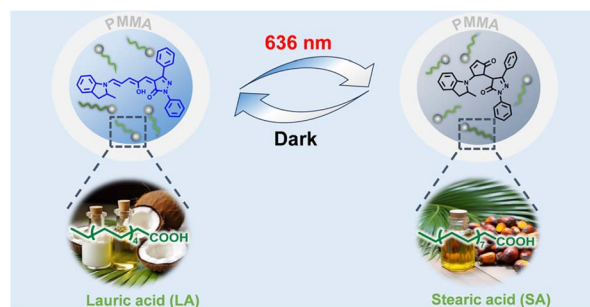
Matthew J. Elardo, Adelaide M. Levenson, Ana Paula Kitos Vasconcelos, Meredith N. Pomfret and Matthew R. Golder*



17200

A DASA displaying highly efficient and rapid reversible isomerization within sustainable nano/micro capsules: one step closer to sustainability

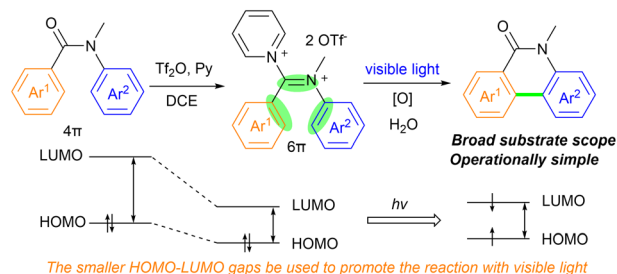
Baoshuo Liu, Xinnian Fan, Hao Ma, Yutong Xie, Haojun Fan, Qiang Yan and Jun Xiang*



17210

Visible light-induced Mallory reaction of tertiary benzanilides via iminium intermediates

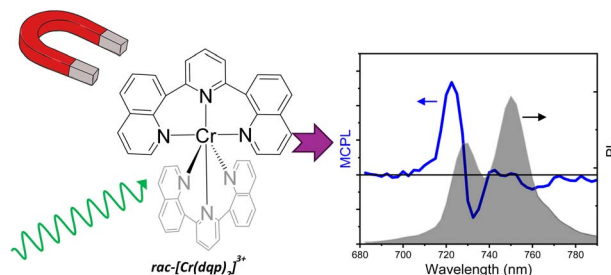
Xiaoqiang Ma, Si Wang, Zhanyong Tang, Jialin Huang, Tianhao Jia, Xingda Zhao and Depeng Zhao*



17217

Magnetic circularly polarized luminescence from spin-flip transitions in a molecular ruby

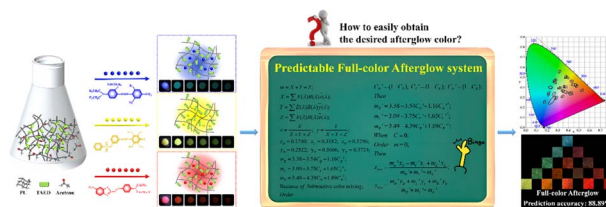
Alessio Gabbani, Maxime Poncet, Gennaro Pescitelli, Laura Carbonaro, J. Krzystek, Enrique Colacio, Claude Piguet, Francesco Pineider, Lorenzo Di Bari, Juan-Ramón Jiménez* and Francesco Zinna*



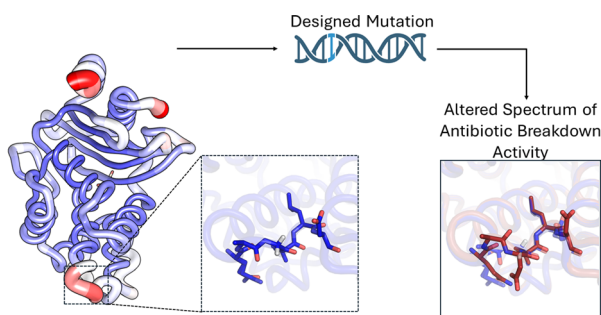
17224

Simplifying complexity: integrating color science for predictable full-color and on-demand persistent luminescence using industrial disperse dyes

Guowei Xiao, Xiaoyan Wang, Xiaoyu Fang, Jinmei Du, Yang Jiang, Dagang Miao, Dongpeng Yan* and Changhai Xu*



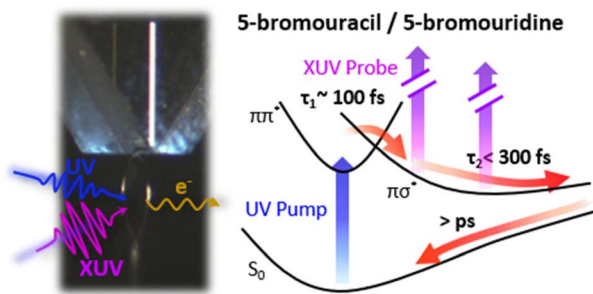
17232



Dynamical responses predict a distal site that modulates activity in an antibiotic resistance enzyme

Michael Beer, Ana Sofia F. Oliveira, Catherine L. Tooke, Philip Hinchliffe, Angie Tsz Yan Li, Balazs Balega, James Spencer* and Adrian J. Mulholland*

17245



Dynamics of photoexcited 5-bromouracil and 5-bromo-2'-deoxyuridine studied by extreme ultraviolet time-resolved photoelectron spectroscopy in liquid flat jets

Do Hyung Kang, Masafumi Koga, Neal Haldar and Daniel M. Neumark*

