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ISSN 2041-6539 CODEN CSHCBM 15(42) 17259–17704 (2024)



Cover

See Héctor Vázquez, Shintaro Fujii et al., pp. 17328–17336.
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Inside cover

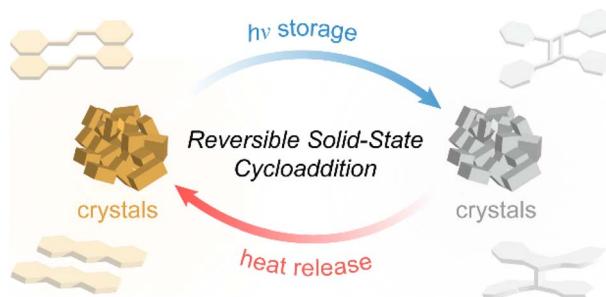
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Joshua A. Kritzer et al.,
pp. 17337–17347. Image
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PERSPECTIVES

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Emerging solid-state cycloaddition chemistry for molecular solar thermal energy storage

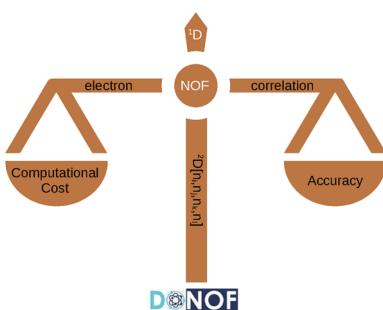
Cijil Raju, Han P. Q. Nguyen and Grace G. D. Han*



17284

Exploring the potential of natural orbital functionals

Mario Piris*





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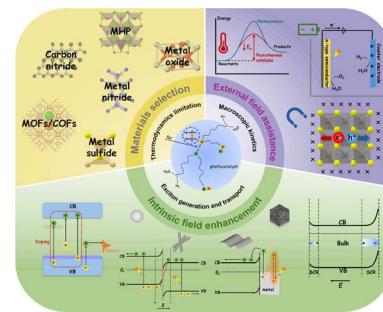


REVIEW

17292

Photocatalytic overall water splitting endowed by modulation of internal and external energy fields

Wenhai Zhao, Haijun Chen, Jinqiang Zhang, Paul J. Low and Hongqi Sun*

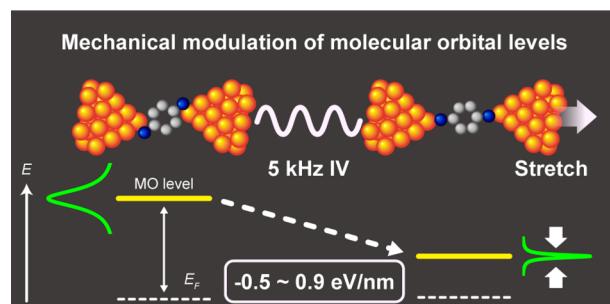


EDGE ARTICLES

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Resolving molecular frontier orbitals in molecular junctions with kHz resolution

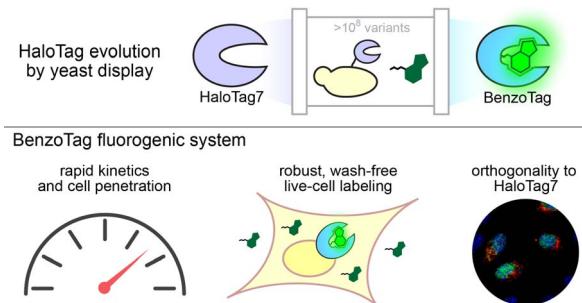
Yuji Isshiki, Enrique Montes, Tomoaki Nishino, Héctor Vázquez* and Shintaro Fujii*



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Multiplexed no-wash cellular imaging using BenzoTag, an evolved self-labeling protein

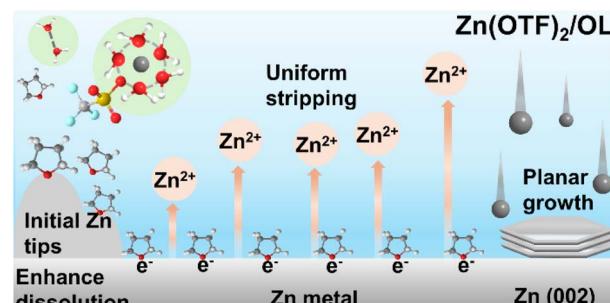
Bryan J. Lampkin,* Benjamin J. Goldberg and Joshua A. Kritzer*



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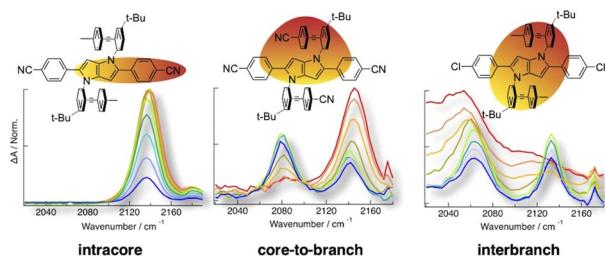
An electron-losing regulation strategy for stripping modulation towards a highly reversible Zn anode

Xinyi Wang, Liyang Liu, Zewei Hu, Chao Han, Xun Xu, Shixue Dou and Weijie Li*



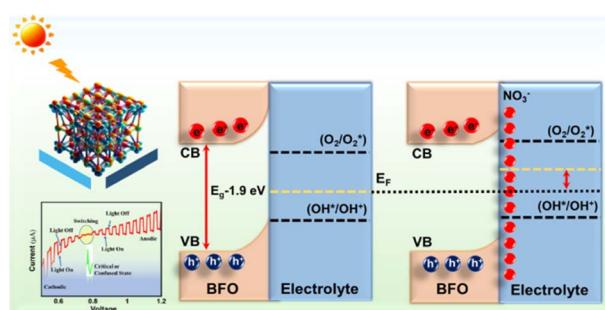
EDGE ARTICLES

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**Structural and solvent modulation of symmetry-breaking charge-transfer pathways in molecular triads**

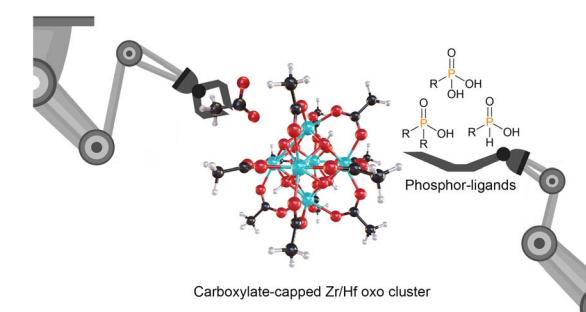
Chinju Govind, Evangelos Balanikas, Gana Sanil, Daniel T. Gryko and Eric Vauthey*

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**A changeable critical state for a switchable photocurrent direction via the photo-electrochemical photocurrent polarity switching effect in BiFeO_3 nanoparticulate films**

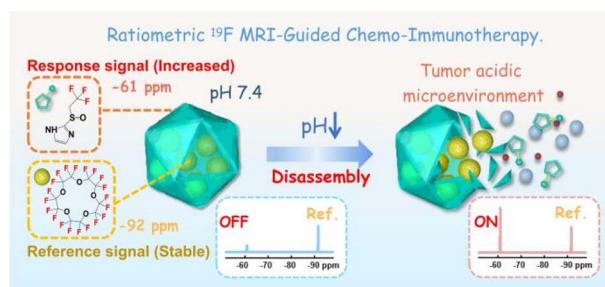
Ajay, Jyoti Saroha and Pravin Popinand Ingole*

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**Visualization of drug release in a chemo-immunotherapy nanoparticle via ratiometric ^{19}F magnetic resonance imaging**

Fanqi Liu, Xindi Li, Yumin Li, Suying Xu, Chang Guo* and Leyu Wang*

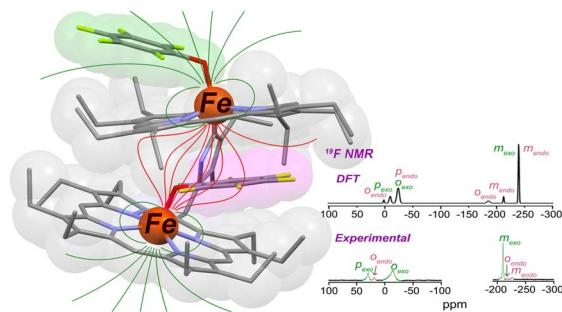


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Probing substrate binding inside a paramagnetic cavity: a NMR spectroscopy toolbox for combined experimental and theoretical investigation

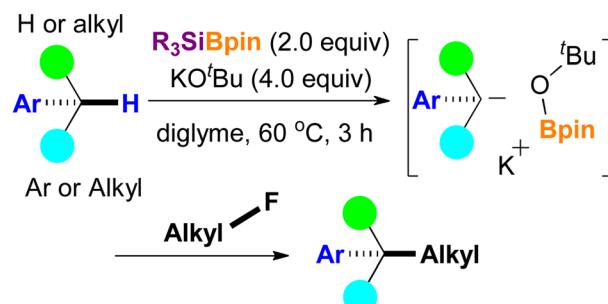
Sabyasachi Sarkar, Chang-Quan Wu, Santanu Manna, Deepannita Samanta, Peter P.-Y. Chen* and Sankar Prasad Rath*



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A silylboronate-mediated strategy for cross-coupling of alkyl fluorides with aryl alkanes: mechanistic insights and scope expansion

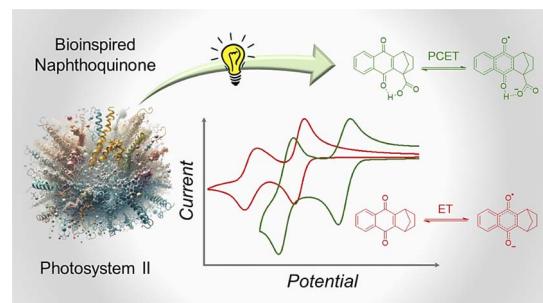
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The role of an intramolecular hydrogen bond in the redox properties of carboxylic acid naphthoquinones

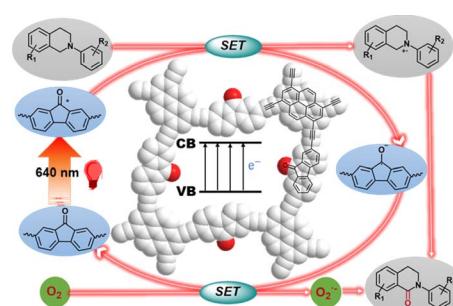
Walter D. Guerra, Emmanuel Odella, Kai Cui, Maxim Secor, Rodrigo E. Dominguez, Edwin J. Gonzalez, Thomas A. Moore, Sharon Hammes-Schiffer* and Ana L. Moore*



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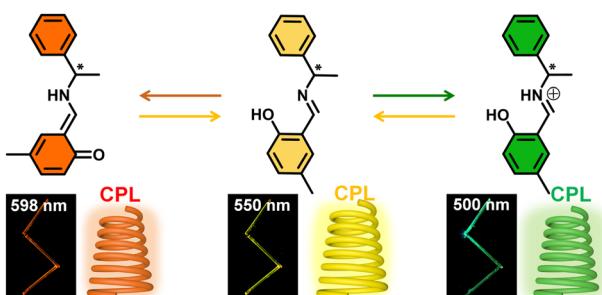
Ketone-functionalized conjugated organic polymers boost red-light-driven molecular oxygen-mediated oxygenation

Hao Zhang,* Tingting Yuan, Nursaya Zhumabay, Zhipeng Ruan,* Hai Qian* and Magnus Rueping*



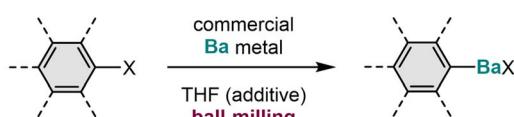
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**Flexible organic crystals with multi-stimuli-responsive CPL for broadband multicolor optical waveguides**

Xiuhong Pan, Linfeng Lan and Hongyu Zhang*

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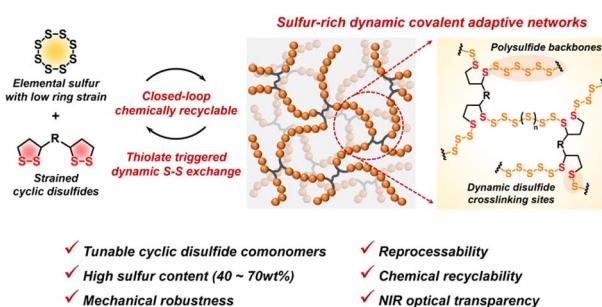
Mechanochemical generation of organobarium nucleophiles

- commercial Ba metal can be used
- simple synthetic procedures
- rapid development of new reactions with organobariums

Mechanochemical generation of aryl barium nucleophiles from unactivated barium metal

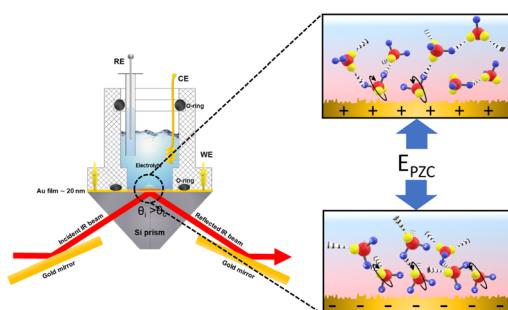
Koji Kubota,* Sota Kawamura, Julong Jiang, Satoshi Maeda and Hajime Ito*

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**Closed-loop chemically recyclable covalent adaptive networks derived from elementary sulfur**

Chen-Yu Shi, Xiao-Ping Zhang, Qi Zhang, Meng Chen, He Tian and Da-Hui Qu*

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**Water at electrode–electrolyte interfaces: combining HOD vibrational spectra with *ab initio*-molecular dynamics simulations**

Pavithra Gunasekaran, Xianglong Du, Andrew Burley, Jiabo Le, Jun Cheng and Angel Cuesta*

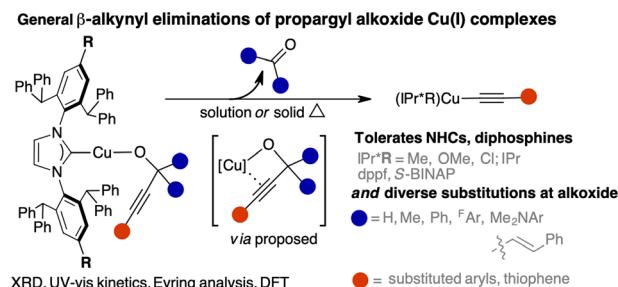


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Direct observation of β -alkynyl eliminations from unstrained propargylic alkoxide Cu(I) complexes by C–C bond cleavage

Ba L. Tran,* Jack T. Fuller, III, Jeremy D. Erickson, Bojana Ginovska* and Simone Raugei*



17490

Bromine radical release from a nickel-complex facilitates the activation of alkyl boronic acids: a boron selective Suzuki–Miyaura cross coupling

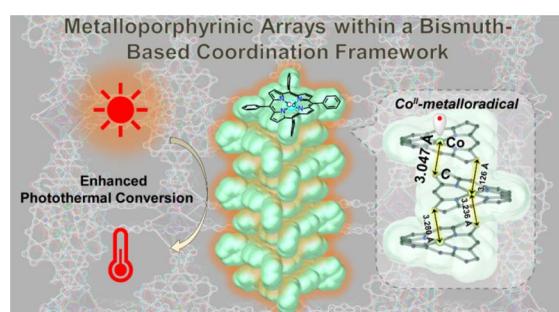
Monica Oliva, Serena Pillitteri, Johannes Schörgenhummer, Riku Saito, Erik V. Van der Eycken and Upendra K. Sharma*



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Boosting photothermal conversion through array aggregation of metalloporphyrins in bismuth-based coordination frameworks

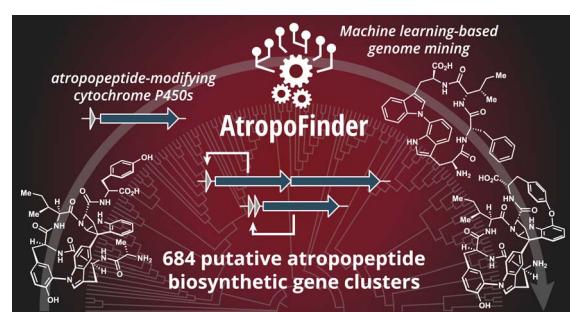
Liang He, Jing He, Er-Xia Chen* and Qipu Lin*



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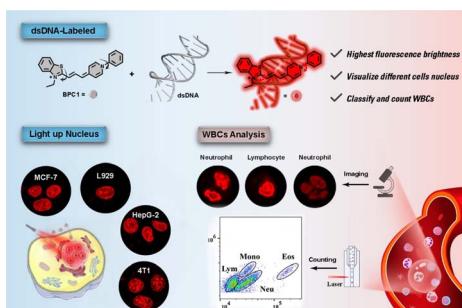
Exploration, expansion and definition of the atropopeptide family of ribosomally synthesized and posttranslationally modified peptides

Friederike Biermann, Bin Tan, Milena Breitenbach, Yuya Kakumu, Pakjira Nanudorn, Yoana Dimitrova, Allison S. Walker, Reiko Ueoka and Eric J. N. Helfrich*



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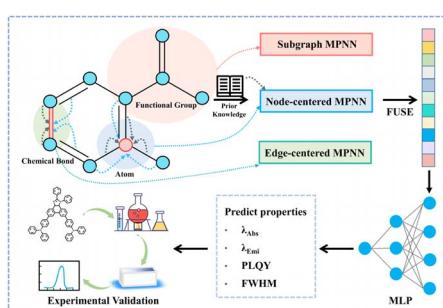
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Next-generation red ultra-bright fluorescent dyes for nuclear imaging and peripheral blood leukocytes sorting

Zipeng Li, Zheng Liu, Ding Yu, Qichao Yao, Wanying Ma, Changyu Zhang, Jiangli Fan* and Xiaojun Peng

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Enhancing chemistry-intuitive feature learning to improve prediction performance of optical properties

Ming Sun, Caixia Fu, Haoming Su, Ruyue Xiao, Chaojie Shi, Zhiyun Lu* and Xuemei Pu*

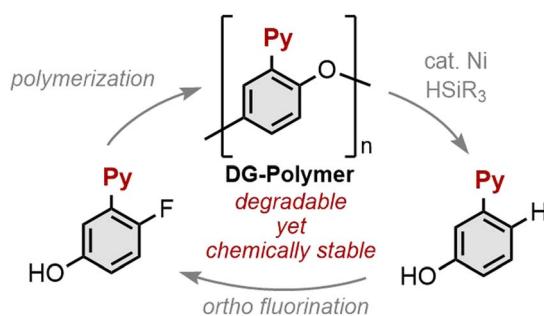
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Metal–organic frameworks with two different-sized aromatic ring-confined nanotrap for benchmark natural gas upgrade

Shu-Yi Li, Ying-Ying Xue, Jia-Wen Wang, Hai-Peng Li, Jiao Lei, Hong-Juan Lv, Xianhui Bu,* Peng Zhang, Ying Wang, Wen-Yu Yuan and Quan-Guo Zhai*

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Controlled degradation of chemically stable poly(aryl ethers) via directing group-assisted catalysis

Satoshi Ogawa, Hiroki Morita, Yu-I. Hsu, Hiroshi Uyama* and Mamoru Tobisu*

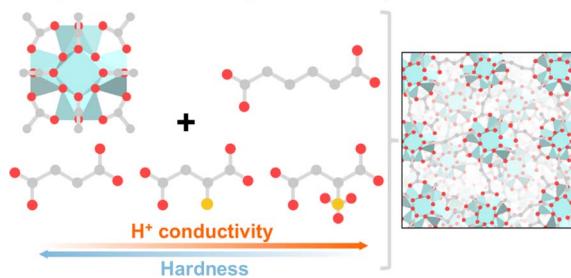


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Systematic design and functionalisation of amorphous zirconium metal–organic frameworks

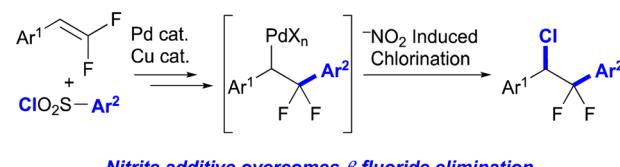
Nattapol Ma,* Soracha Kosasang, Jennifer Theissen, Nick Gys, Tom Hauffman, Ken-ichi Otake, Satoshi Horike and Rob Ameloot*

Systematic design of amorphous MOFs

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Palladium and copper co-catalyzed chloro-arylation of gem-difluorostyrenes – use of a nitrite additive to suppress β -F elimination

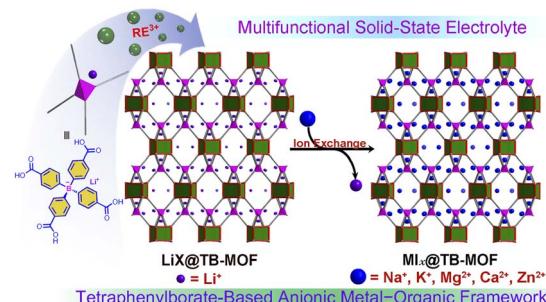
Andrew J. Intelli, Coriantumr Z. Wayment, Ryan T. Lee, Kedong Yuan and Ryan A. Altman*



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A tetraphenylborate-based anionic metal–organic framework as a versatile solid electrolyte for fast Li^+ , Na^+ , K^+ , Mg^{2+} , Ca^{2+} , and Zn^{2+} transportation

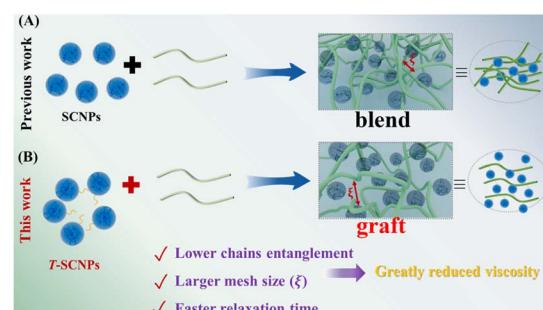
Qingchun Xia,* Kaixin Han, Xuxiao Ma, Pengtao Qiu,* Zhiyong Li and Xuenian Chen*



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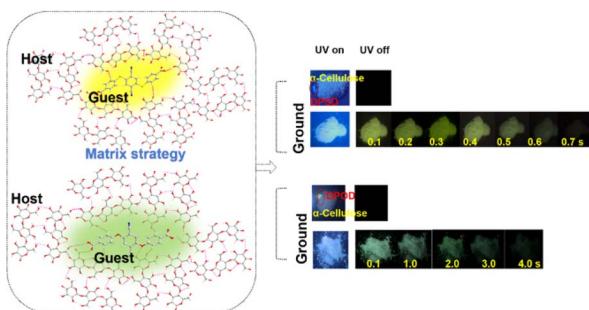
Preparation of superstructured comb polymers based on tadpole-shaped single-chain nanoparticles

Yangjing Chen, Zhiyu Hu, Zhigang Shen, Xiaoqiang Xue and Hongting Pu*



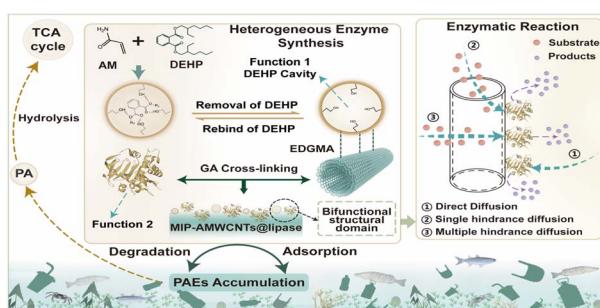
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**Long-persistent luminescence by host–guest Förster resonance energy transfer**

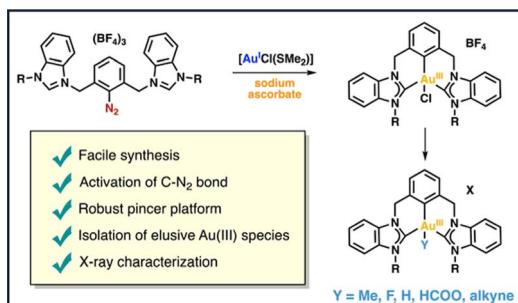
Hui-Li Sun, Qiang-Sheng Zhang, Zhong-Hao Wang, Yan-Ting Huang and Mei Pan*

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**A carbon-based bifunctional heterogeneous enzyme: toward sustainable pollution control**

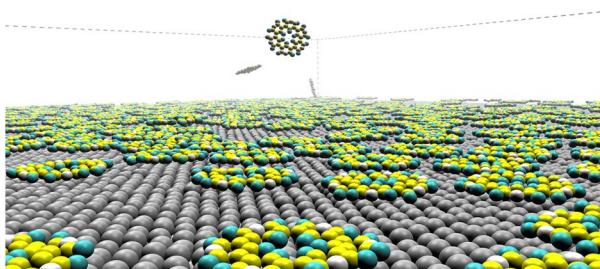
Yuting Sun, Ming Guo,* Shengnan Hu, Yankun Jia, Wenkai Zhu,* Yusuke Yamauchi* and Chaohai Wang*

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**CCC-NHC Au(III) pincer complexes as a reliable platform for isolating elusive species**

Hugo Valdés,* Nora Alpuente, Pedro Salvador, A. Stephen K. Hashmi* and Xavi Ribas*

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**Growth of two-dimensional covalent organic frameworks on substrates: insight from microsecond atomistic simulations**

Zilin Wang, Hong Du, Austin M. Evans,* Xiaojuan Ni, Jean-Luc Bredas* and Haoyuan Li*

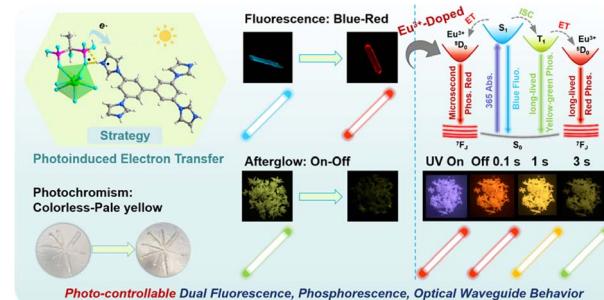


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A photoinduced electron-transfer strategy for switchable fluorescence and phosphorescence in lanthanide-based coordination polymers

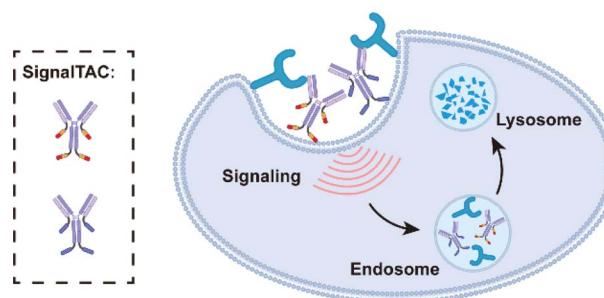
Yu-Juan Ma, Fei Xu, Xin-Ye Ren, Fan-Yao Chen, Jie Pan, Jin-Hua Li,* Song-De Han* and Guo-Ming Wang*



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Lysosome–targeting chimeras containing an endocytic signaling motif trigger endocytosis and lysosomal degradation of cell-surface proteins

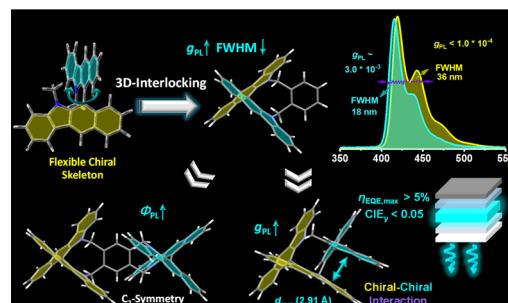
Tong Fang, Zhenting Zheng, Na Li, Yishu Zhang, Jing Ma, Chengyu Yun and Xiaoqing Cai*



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Enhanced chiroptical activity for narrow deep-blue emission in axial chiral frameworks via three-dimensional interlocking

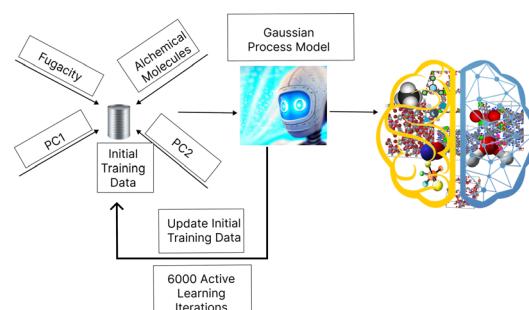
Xuechao Mo, Guohao Chen, Yulan Li, Biao Xiao, Xuefeng Chen, Xiaojun Yin* and Chuluo Yang*



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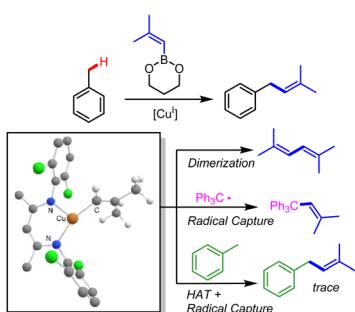
Active learning of alchemical adsorption simulations; towards a universal adsorption model

Etinosa Osaro, Fernando Fajardo-Rojas, Gregory M. Cooper, Diego Gómez-Gualdrón and Yamil J. Colón*



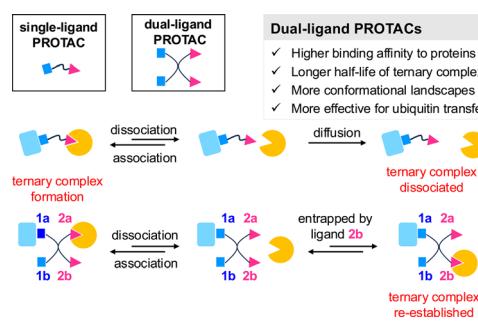
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**Copper catalyzed benzylic sp^3 C–H alkenylation**

Ting-An Chen, Richard J. Staples and Timothy H. Warren*

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**Dual-ligand PROTACS mediate superior target protein degradation *in vitro* and therapeutic efficacy *in vivo***

Yong Chen, Zihan Xia, Ujjwal Suwal, Pekka Rappu, Jyrki Heino, Olivier De Wever* and Bruno G. De Geest*

