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Cover

See Naoyuki Shimada et al., pp. 11202–11222.
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Inside cover

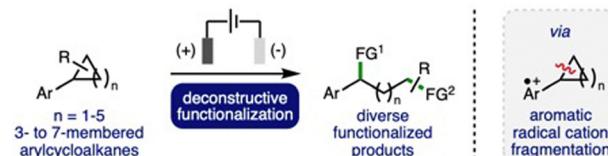
See Jianhui Wang et al., pp. 11275–11278.
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HIGHLIGHT

11190

Electrochemical deconstructive functionalization of arylcycloalkanes via fragmentation of anodically generated aromatic radical cations

Hussain A. Maashi, Abdulrahman H. Husayni,
James Harnedy and Louis C. Morrill*

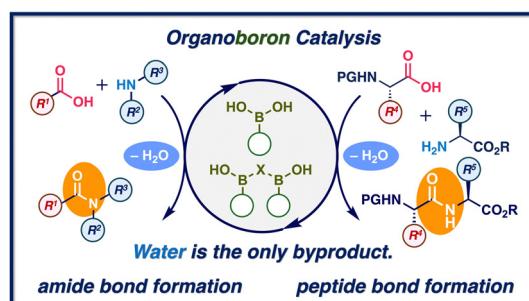


FEATURE ARTICLES

11202

Organoboron catalysis for direct amide/peptide bond formation

Masayoshi Koshizuka, Naoya Takahashi and
Naoyuki Shimada*



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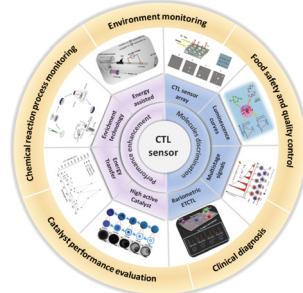
Fundamental questions
Elemental answers

FEATURE ARTICLES

11223

Recent progress of cataluminescence sensing based on gas–solid interfaces

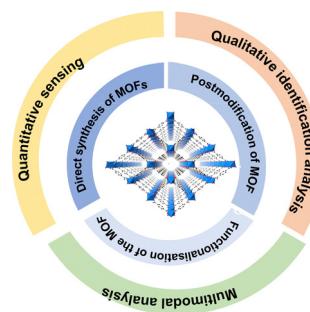
Jiaxi Hu, Hongjie Song, Lichun Zhang and Yi Lv*



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The design, synthesis and application of metal–organic framework-based fluorescence sensors

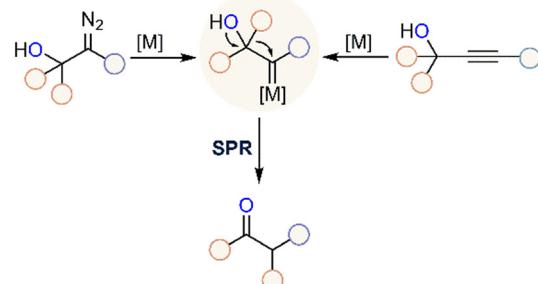
Juan He, Guijiao Wen, Qianqian Peng and Xiandeng Hou*



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Recent advances in metal carbene-induced semipinacol rearrangements

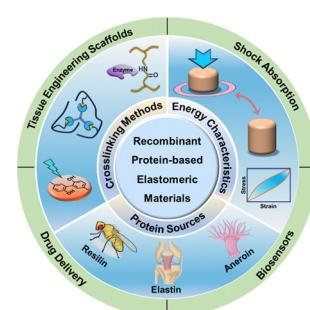
Yang Chen and Shifa Zhu*



11267

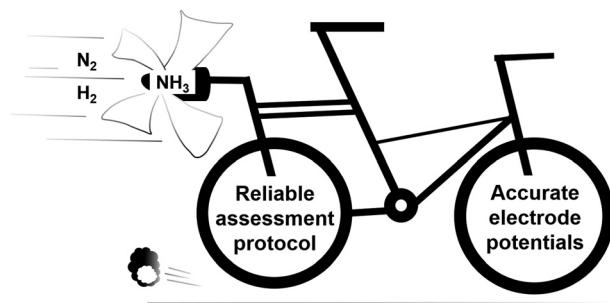
Engineered protein elastomeric materials

Zhongcheng Liu, Haopeng Li, Jingjing Li,* Jing Yu* and Kai Liu*



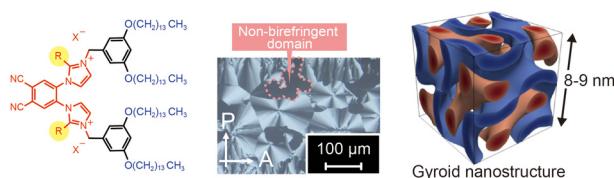
COMMUNICATIONS

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**Improvements in the evaluation of electrocatalytic ammonia oxidation reactions**

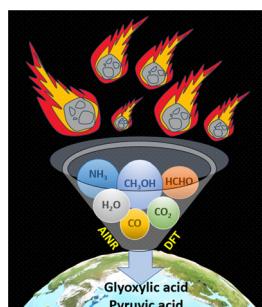
Ting Zhang, Yongzhen Jin, Yang Liu, Runze Chen and Jianhui Wang*

11279

**Design of V-shaped ionic liquid crystals: atropisomerisation ability and formation of double-gyroid molecular assemblies**

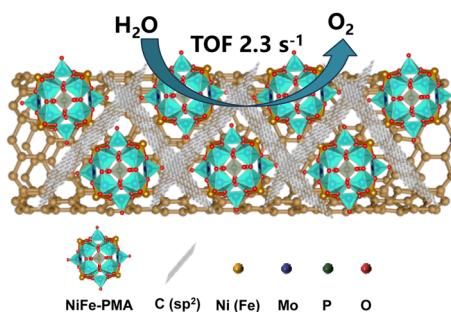
Takahiro Ichikawa,* Soki Obara, Saori Yamaguchi, Yumin Tang, Toshiyo Kato and Xiangbing Zeng

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**Unravelling the prebiotic origins of the simplest α-ketoacids in cometary ices: a computational investigation**

Soumya Ranjan Dash, Rinu Pandya, Geetika Singh, Himanshu Sharma, Tamal Das, Hritwik Haldar, Srinivas Hotha* and Kumar Vanka*

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**Polyoxometalate-incorporated NiFe-based oxyhydroxides for enhanced oxygen evolution reaction in alkaline media**

Yuyan Qiao, Yanqiu Pan, Wenjun Fan,* Guifa Long* and Fuxiang Zhang*

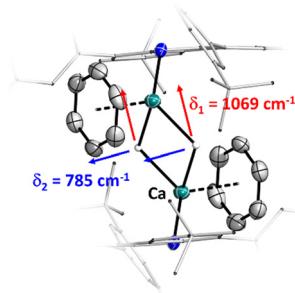


COMMUNICATIONS

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CO reduction by calcium and ytterbium hydride complexes with a bulky monodentate carbazolyl ligand

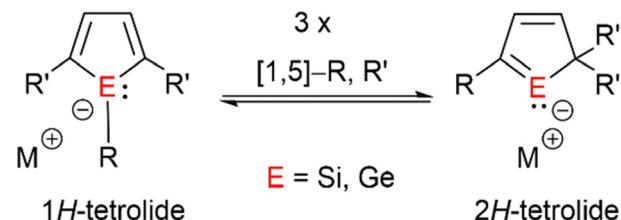
Alexander Hinz,* Lucas Winkler and Xiaofei Sun



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Metal ion-driven formation of 2*H*-silolides and -germolides

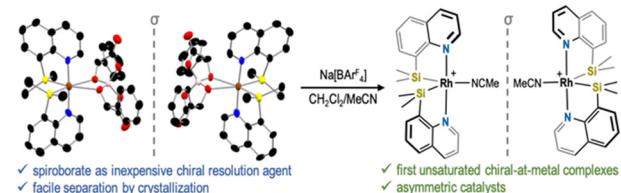
Chenghuan Liu, Marc Schmidtmann and Thomas Müller*



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Unsaturated chiral-only-at-metal rhodium(III) complexes bearing SiN-type ligands

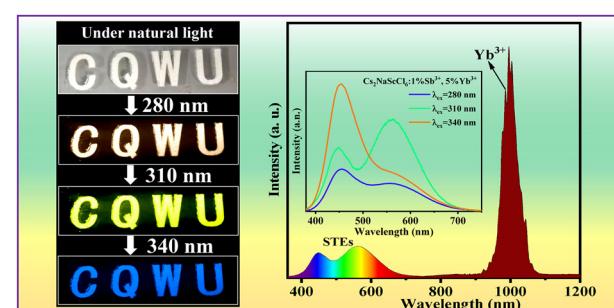
Unai Prieto-Pascual, Itxaso Bustos, Pablo Salcedo-Abraira, Iñigo J. Vitorica-Yrezabal, Aitor Landa, Zoraida Freixa* and Miguel A. Huertos*



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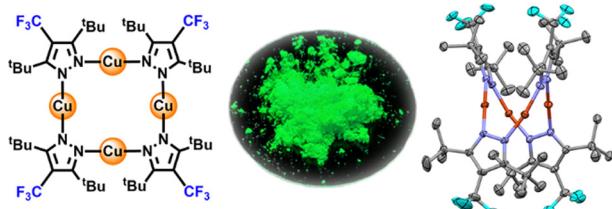
Excitation-dependent emission and highly efficient near-infrared luminescence in Cs₂NaScCl₆ double perovskite via Sb³⁺–Yb³⁺ alloying for multifunctional photoelectric applications

Mingsheng Cai, Junyang Chen, Tianchun Lang,* Xiaolong Jing, Gaoxunyu Guan, Jun Wang, Qinping Qiang, Wenbo Chen, Tao Han and Bitao Liu*



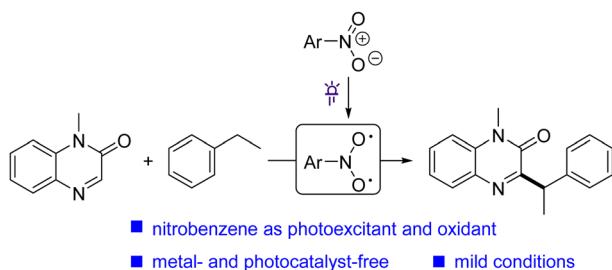
COMMUNICATIONS

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**Rigidochromism of tetranuclear Cu(i)-pyrazolate macrocycles: steric crowding with trifluoromethyl groups**

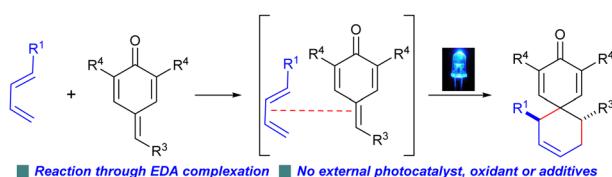
Shinaj K. Rajagopal, Matthias Zeller, Sergei Savikhin, Lyudmila V. Slipchenko and Alexander Wei*

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**Photoexcited nitroarenes for alkylation of quinoxalin-2(1H)-ones**

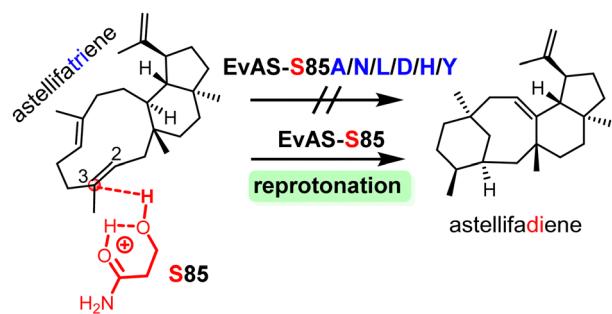
Lingang Wu,* Zhaoxue Wang, Yanling Qiao, Lei Xie* and Qingmin Wang*

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**Photoinduced [4+2] cycloaddition of dienes and quinonemethides**

Jobsy Jose, Arun Yadav and Chandra Bhushan Tripathi*

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**Serine 85 functions as a catalytic acid in the reprotonation process during EvAS-catalyzed astellifadiene biosynthesis**

Weiyan Zhang, Kaitong Peng, Keying Lan, Kangwei Xu, Ruibo Wu, Tom Hsiang, Shaoping Nie, Lixin Zhang, Xinye Wang* and Xueling Liu*

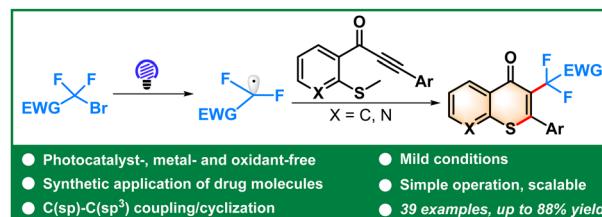


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Photo-induced difluoroalkylation/cyclization of alkyne ketones: a novel strategy to access difluoroalkyl thiofavones

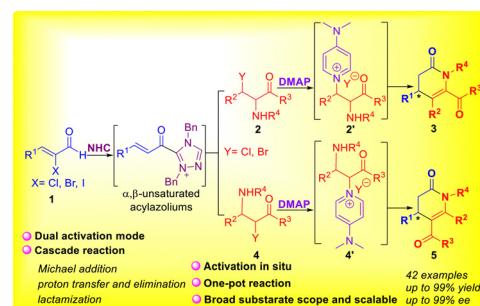
Shengjie Song, Can Luo, Guan Wang, Jingjing Guo, Zhi Chen and Jianjun Li*



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One-pot synthesis of functionalized dihydropyridin-2-ones via carbene-catalyzed base-controlled [3+3] annulation reaction

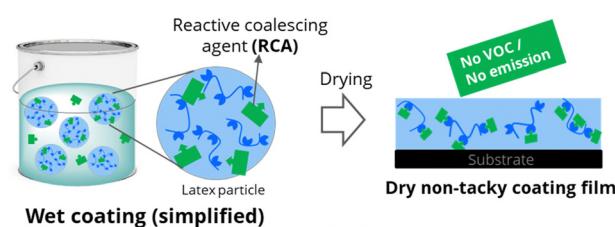
Zhan-Yong Wang, Guoyang Ma, Yaoyao Xu, Qingqing Wang, Mengru Zhang, Xueji Ma, Chenyang Ma, Aili Sun, Ran Xia* and Hongxin Liu*



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Amine functional reactive coalescing agents (RCA) for emission-free waterborne paints and coatings

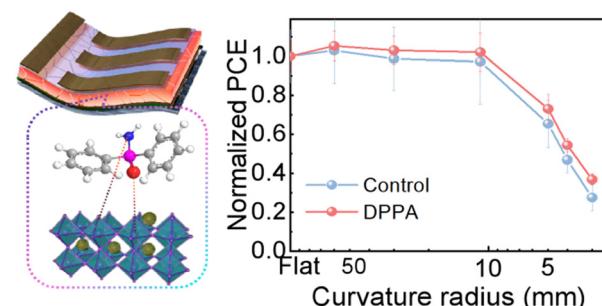
Ranganathan Krishnan, Jagjit Kaur, Balamurugan Ramalingam* and Satyasankar Jana*



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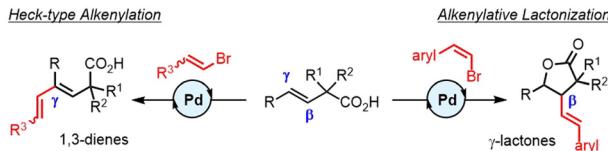
A multifunctional phenylphosphinamide additive for stable flexible inverted perovskite solar cells

Feihu Liu, Jidong Geng, Wei Zhang, Jie Dou,* Qiyo Guo, Jialong Duan and Qunwei Tang*



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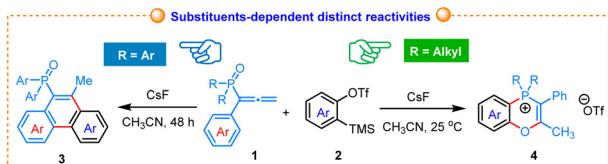
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Substrate-directed regioselective alkene functionalizations of (*E*)- β,γ -unsaturated carboxylic acids

Chi-Hao Chang, Chao-Ting Yen, Théo P. Goncalves, Yu-Sheng Lin, Yu-Chun Wang, R. Sidick Basha, Bo-Yan Chen, Cheng-Hao Fu, Liang-Wei Chen, Meng-Li Jhou, Kuo-Wei Huang and Chih-Ming Chou*

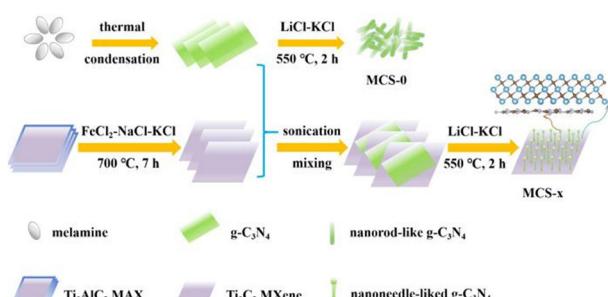
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Substituent-dependent [4+2] or [2+2] cycloadditions of phenylallenyl phosphine oxides with arynes

Yunlong Qin, Jianing Zhang, Congcong Zhang and Qilin Wang*

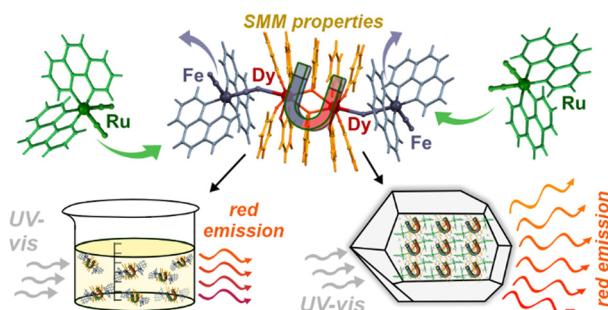
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The synthesis of 3D organic–inorganic hybrid heterojunctions of g-C₃N₄ nanoneedles@Ti₃C₂ MXene with superior photocatalytic H₂ evolution

Fang He,* Yuying Mao, Yan Hu, Jingyang Wu, Enqi Xie, Zhenxing Wang and Yuexiang Li*

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Making soluble Dy₂ single-molecule magnets red emissive through their functionalization by ruthenium–cyanido luminophores

Michał Liberka and Szymon Chorzy*



COMMUNICATIONS

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From Li_2NiO_3 to high-performance LiNiO_2 cathodes for application in Li-ion and all-solid-state batteries

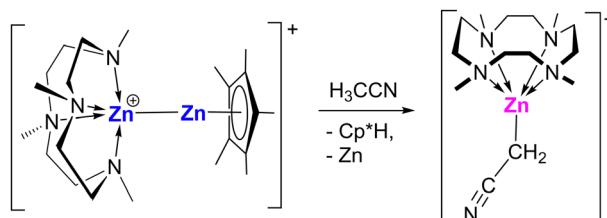
Leonhard Karger, Philip Henkel, Saravanakumar Murugan, Ruizhuo Zhang, Aleksandr Kondrakov* and Torsten Brezesinski*



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Hypervalent zinc(i) complexes with an NNNN-macrocycle: C–H bond activation across the zinc(i)–zinc(i) bond

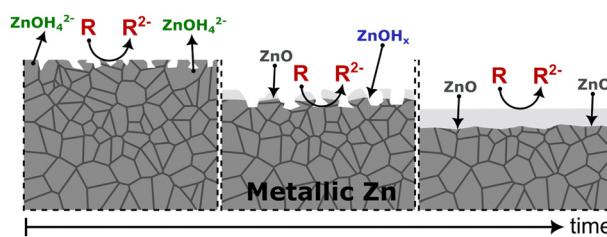
Pritam Mahawar, Thayalan Rajeshkumar, Thomas P. Spaniol, Laurent Maron and Jun Okuda*



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Phenomenological observations of quinone-mediated zinc oxidation in an alkaline environment

Christopher T. Mallia and Fikile R. Brushett*



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Silane-mediated, facile C–H and N–H methylation using formaldehyde

Jabir Khan, Neha Taneja, Naveen Yadav and Chinmoy Kumar Hazra*

