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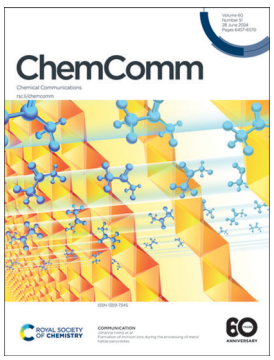
ISSN 1359–7345 CODEN CHCOFS 60(51) 6457–6570 (2024)



Cover
See Johanna Heine *et al.*, pp. 6488–6491.
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Inside cover
See Yuki Nagai, Yoichi Kobayashi *et al.*, pp. 6492–6495.
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HIGHLIGHT

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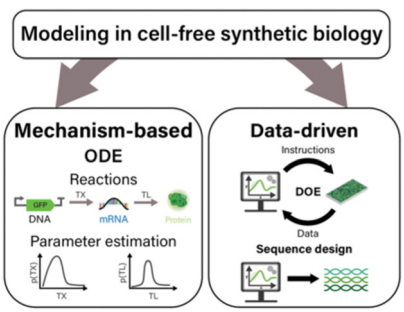
Mechanism-based and data-driven modeling in cell-free synthetic biology

Angelina Yurchenko, Gökçe Özkul, Natal A. W. van Riel, Jan C. M. van Hest and Tom F. A. de Greef*

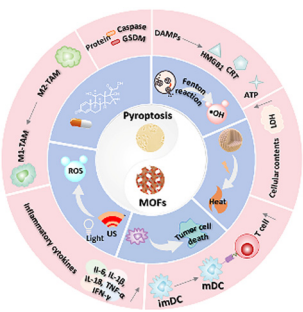


FEATURE ARTICLE

6476

Metal–organic framework (MOF)-based materials for pyroptosis-mediated cancer therapy

You Dou, Yuting Wang, Shu Tian, Qiao Song, Yun Deng, Zhipeng Zhang,* PeiYao Chen* and Yao Sun*



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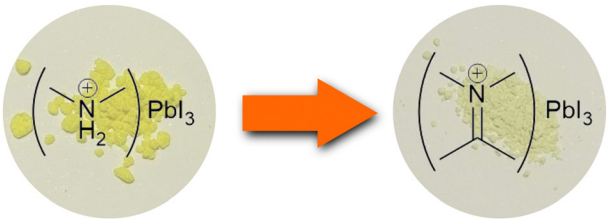
6488

Formation of iminium ions during the processing of metal halide perovskites

Jakob Möbs, Ajna Tomori and Johanna Heine*

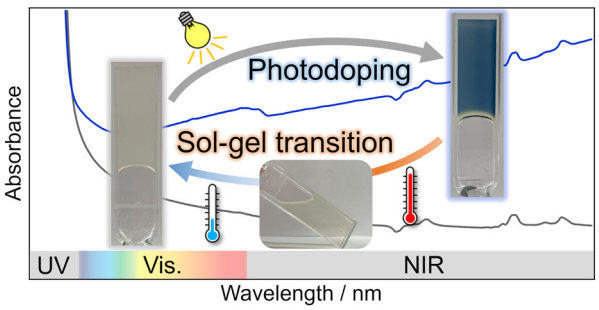


Rapid conversion in acetone

6492

Photodoping-based broadband photochromism of semiconductor nanocrystals under air operated by a supramolecular gel

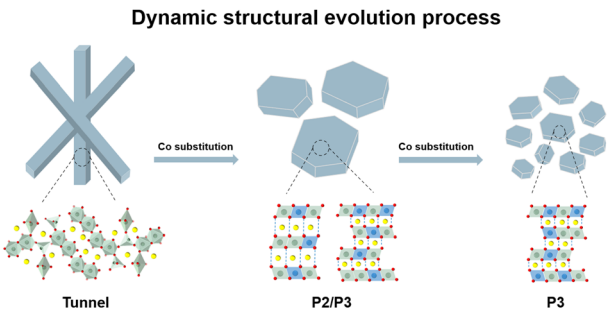
Yuki Nakai, Yuki Nagai,* Yoshinori Okayasu and Yoichi Kobayashi*



6496

Insights into dynamic structural evolution and its sodium storage mechanisms of P2/P3 composite cathode materials for sodium-ion batteries

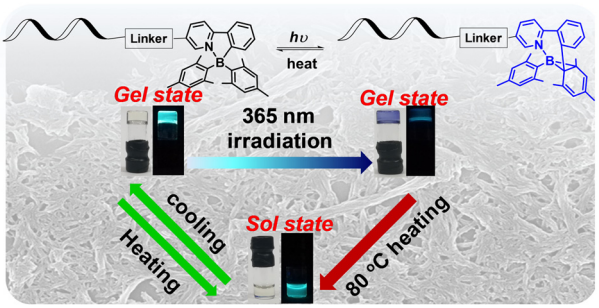
Yi-Feng Liu, Hai-Yan Hu, Yan-Fang Zhu,* Dan-Ni Peng, Jia-Yang Li, Yan-Jiang Li, Yu Su, Rui-Ren Tang,* Shu-Lei Chou* and Yao Xiao*



6500

Organoboron based photochromic gelator

Tongtong Zhang, Zhenhui Zhao, Xiaodong Yin and Nan Wang*



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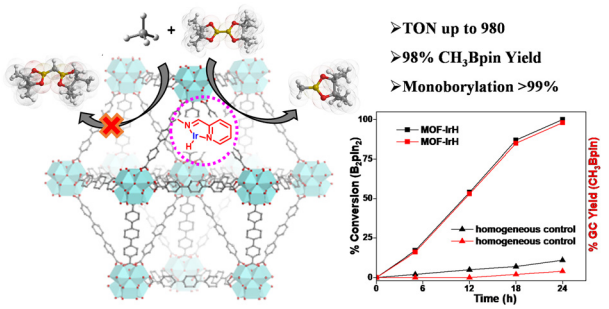
6504



Selective monoborylation of methane by metal–organic framework confined mononuclear pyridylimine-iridium(I) hydride

Rahul Kalita, Manav Chauhan, Poorvi Gupta, Wahida Begum, Chhaya Thadhani, Biplab Ghosh, Balendra, Himani Bisht and Kuntal Manna*

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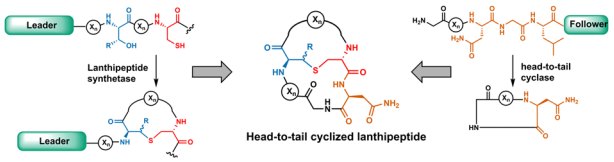
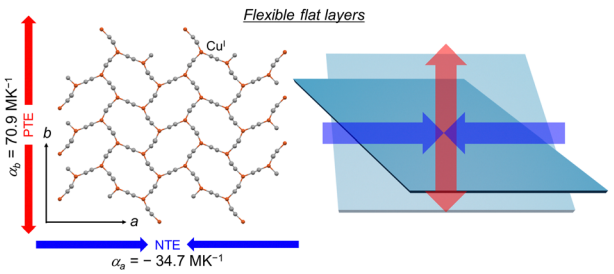


Use of a head-to-tail peptide cyclase to prepare hybrid RiPPs

Tung Le, Dongtianyu Zhang, Rachel M. Martini, Subhanip Biswas and Wilfred A. van der Donk*

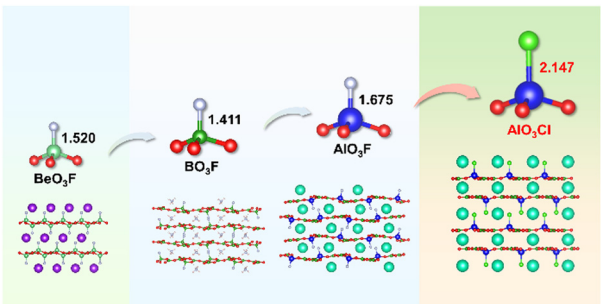
6512



Giant anisotropic thermal expansion of copper-cyanido flat layers with flexible copper nodes

Yuudai Iwai, Manabu Nakaya, Yuta Tsuji, Benjamin Le Ouay, Masaaki Ohba* and Ryo Ohtani*

6516



$CsAlB_3O_6Cl$: the rational construction of a KBBF-type structure with aligned $^2{}_\infty[AlB_3O_6Cl]$ layers *via* introducing unprecedented $[AlO_3Cl]$ tetrahedra

Haoran Liu, Jiahao Jiao, Abudukadi Tudi, Qingyu Liu, Zhihua Yang, Shilie Pan* and Min Zhang*

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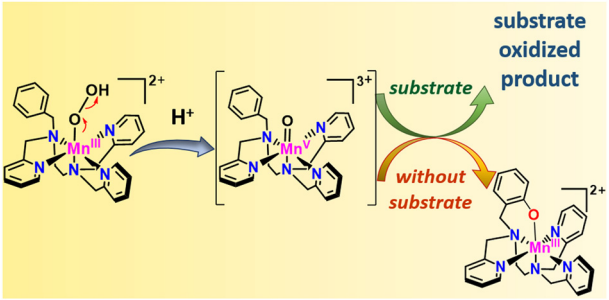
6520

Proton-assisted activation of a Mn^{III}–OOH for aromatic C–H hydroxylation through a putative [Mn^{V}=O] species

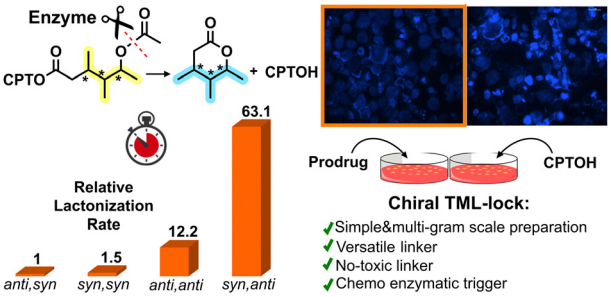
Sikha Gupta, Parkhi Sharma, Khyati Jain, Bittu Chandra, Sharath Chandra Mallojjala* and Apparao Draksharapu*



6524

A chiral trimethyl lock based on the *vicinal* disubstituent effect: prolonged release of camptothecin into cancer cells

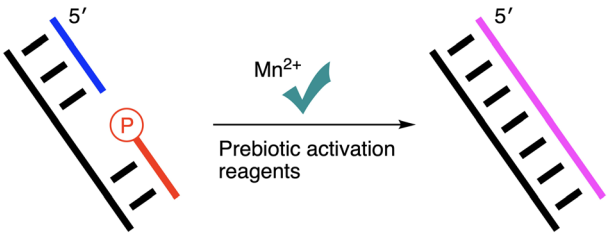
Silvia Venturi, Ferdinando Chiaradonna, Francesco G. Gatti,* Barbara La Ferla,* Roberta Palorini and Barbara Zerbato



6528

Manganese(II) promotes prebiotically plausible non-enzymatic RNA ligation reactions

Ziwei Liu,* Clancy Zhijian Jiang, Andrew D. Bond, Nicholas J. Tosca and John D. Sutherland



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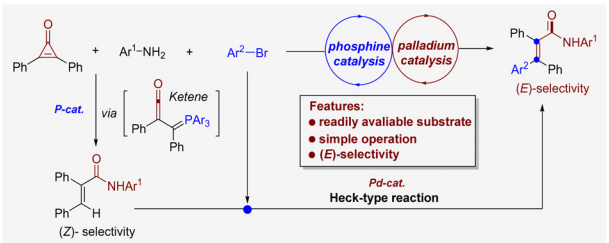
Expedient access to polysubstituted acrylamides *via* strain-release-driven dual phosphine and palladium catalysis

Yu-Xiang Yao, Jing Zhang, Xuehong Min, Lan Qin, Yi Wei, Yang Gao* and Xiao-Qiang Hu*



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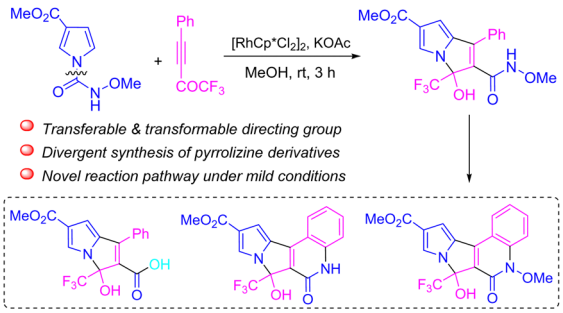

Divergent synthesis of pyrrolizine derivatives through C–H bond functionalization of pyrroles

Manqing Wang, Yuanshuang Xu, Huihang Hou, Xinying Zhang* and Xuesen Fan*

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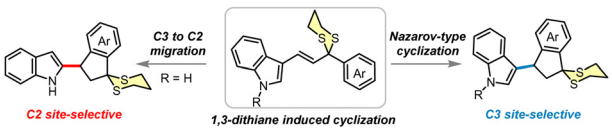

Site-selective synthesis of indanyl-substituted indole derivatives *via* 1,3-dithiane induced Nazarov cyclization

Jia Li, Liang Li, Mingming Mao, Rui-Peng Li, Xing Huo* and Shouchu Tang*

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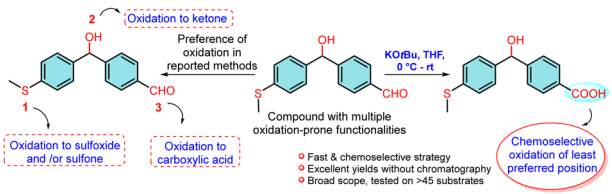

Chemoselective oxidation of aromatic aldehydes to carboxylic acids: potassium *tert*-butoxide as an anomalous source of oxygen

Waseem I. Lone, Auqib Rashid, Bilal A. Bhat* and Showkat Rashid*

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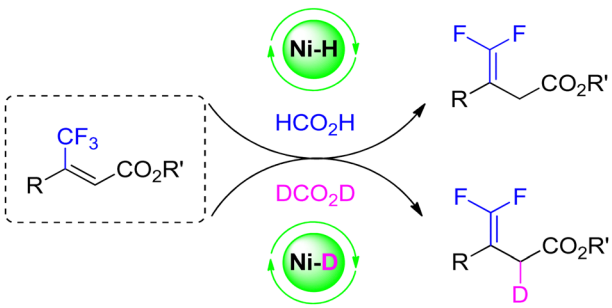

Nickel-catalyzed hydrodefluorination/deuterodefluorination of CF_3-alkenes with formic acid

Peng Yang,* Haiping Yu, Runze Zhai, Jianrong Steve Zhou* and Bo Tang*

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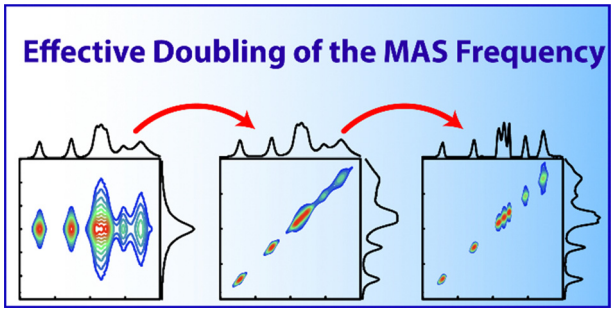
Elimination of homogeneous broadening in ^{1}H solid-state NMR

Frédéric A. Perras



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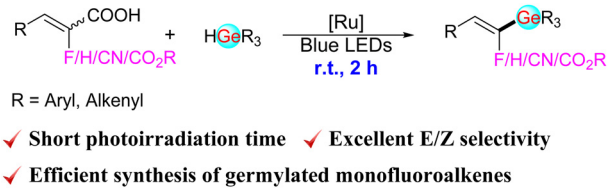
Photoinduced decarboxylative germylation of α-fluoroacrylic acids: access to germylated monofluoroalkenes

Xiao-Yu Lu,* Yu-Jun Qian, Hai-Lun Sun, Meng-Xue Su, Zi-Zhen Wang, Fan Jiang, Xin-Yue Zhou, Yan-Xi Sun, Wan-Li Shi and Ji-Ru Wan



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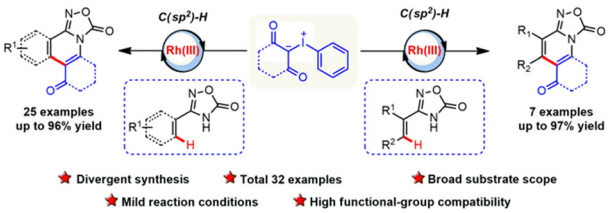
Rh(III)-catalyzed C(sp^2)–H functionalization/[4+2] annulation of oxadiazolones with iodonium ylides to access diverse fused-isoquinolines and fused-pyridines

Wang-Liang Chen, Jia-Lin Song, Sheng Fang, Jiong-Bang Li, Shang-Shi Zhang* and Bing Shu*



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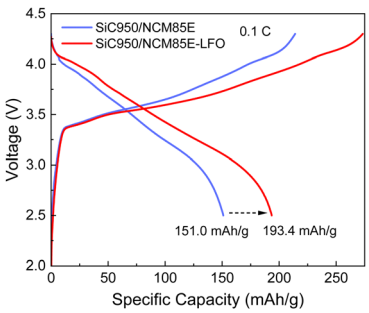
Over-lithiated NCM through Li_5FeO_4 for high energy silicon-based lithium-ion batteries

Yue Dai, Bo Chang, Wei Li,* Haoshen Zhou and Ping He*