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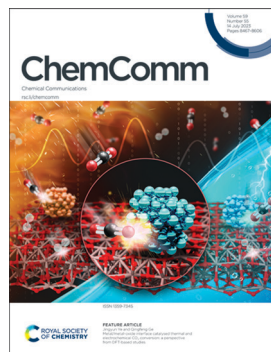
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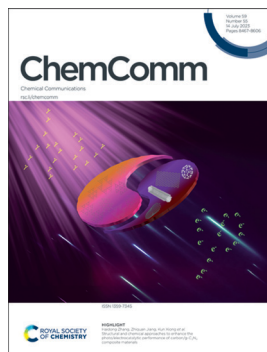
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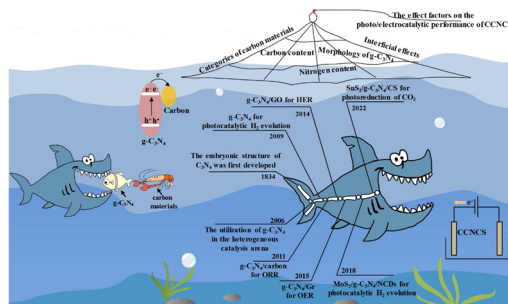
See Haidong Zhang, Zhiquan Jiang, Kun Xiong et al., pp. 8476–8487. Image reproduced by permission of Haidong Zhang from *Chem. Commun.*, 2023, 59, 8476.

HIGHLIGHT

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Structural and chemical approaches to enhance the photo/electrocatalytic performance of carbon/g-C₃N₄ composite materials

Qiuyue Du, Haidong Zhang,* Zhiquan Jiang,* Kun Xiong,* Qi Yang, Na Yang, Yuting Song and Jia Chen

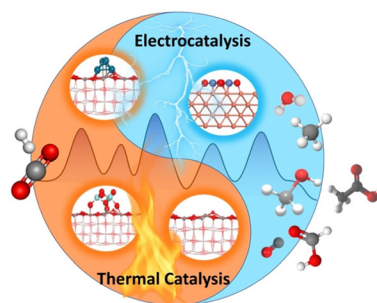


FEATURE ARTICLES

8488

Metal/metal-oxide interface catalysed thermal and electrochemical CO₂ conversion: a perspective from DFT-based studies

Jingyun Ye* and Qingfeng Ge*



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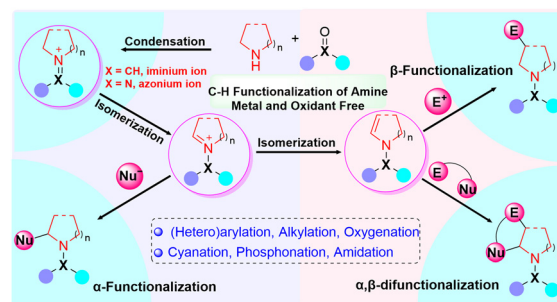


FEATURE ARTICLES

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Iminium and azonium-activated metal and oxidant-free C–H functionalization of aliphatic amines

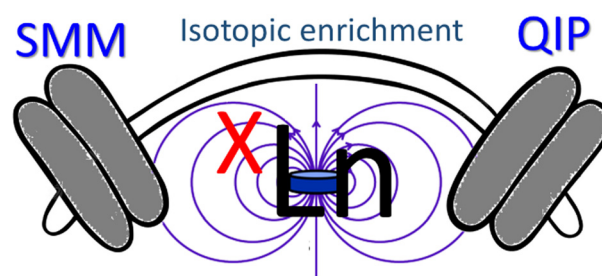
Nandini Ray and Chandan K Jana*



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Isotopic enrichment in lanthanide coordination complexes: contribution to single-molecule magnets and spin qudit insights

Fabrice Pointillart,* Kevin Bernot, Boris Le Guennic and Olivier Cador

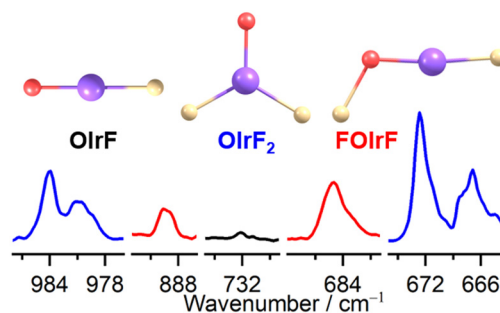


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Infrared spectroscopic and theoretical investigations of novel iridium oxyfluorides

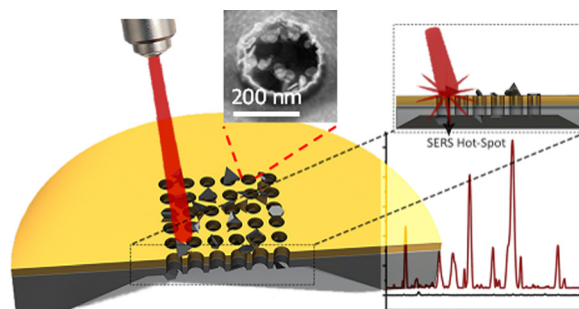
Yan Lu, Robert Medel, Guohai Deng and Sebastian Riedel*



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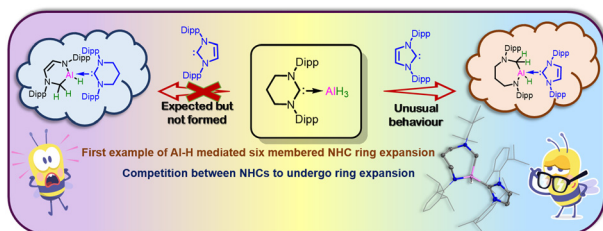
Hybrid plasmonic metasurface as enhanced Raman hot-spots for pesticide detection at ultralow concentrations

Yazan Bdour, Graham Beaton, Juan Gomez-Cruz, Oscar Cabezuelo, Kevin Stamplecoskie and Carlos Escobedo*



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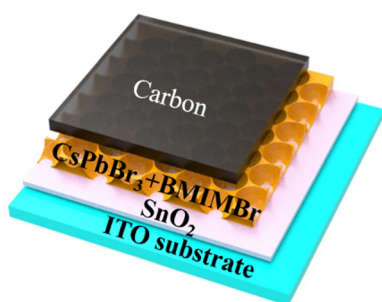
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On the competition between six-membered and five-membered NHC towards alane centered ring expansion

Kajal Balayan, Himanshu Sharma, Kumar Vanka, Sapna Ravindranathan, Rajesh G. Gonnade and Sakya S. Sen*

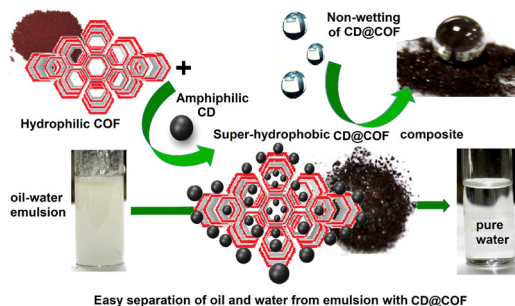
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Ionic liquid enables high-performance, self-powered CsPbBr₃ perovskite nanonet photodetector

Hai Zhou,* Rui Wang, Xuhui Zhang, Bo'ao Xiao, Zihao Shuang, Dingjun Wu and Pingli Qin*

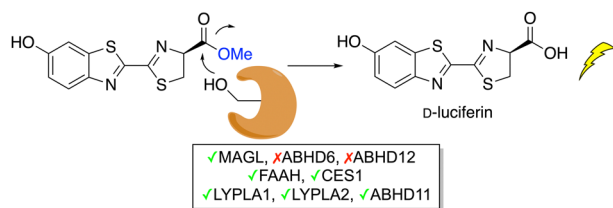
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Carbon dot-based superhydrophobic modification of a covalent organic framework for oil-in-water emulsion separation

Suman Nayak, Atikur Hassan, Neeladri Das* and Prolay Das*

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Firefly luciferin methyl ester illuminates the activity of multiple serine hydrolases

Innus Mohammad, Kate L. Liebmann and Stephen C. Miller*

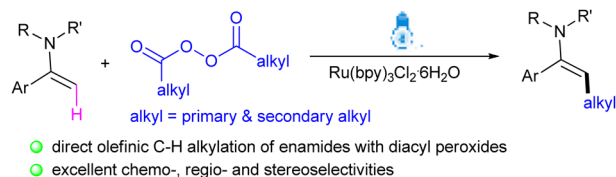


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Photocatalytic chemo-, regio- & stereoselective olefinic β -C–H decarboxylative alkylation of enamides with diacyl peroxides

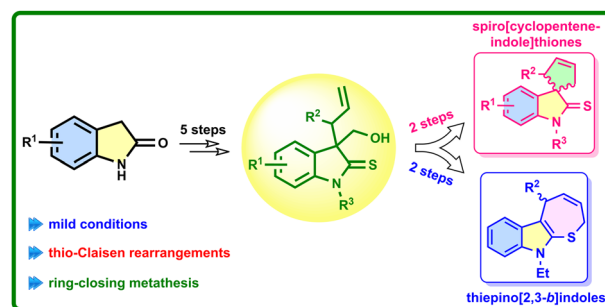
Han Liu, Yechun Wu, Lingli Liu, Jin-Tao Yu* and Changduo Pan*



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Base-mediated cascade synthesis of indole diolefin: a route to spiro[cyclopentene-indole]thiones and thiepino[2,3-*b*]indoles

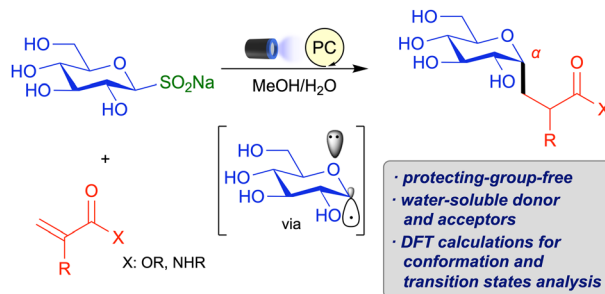
Sengodagounder Muthusamy,* Ramasamy Naveen and Muniyappankovilhottam Devaraj Senthil Kumar



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Photoredox-catalyzed protecting-group-free C-glycosylation with glycosyl sulfinate *via* the Giese reaction

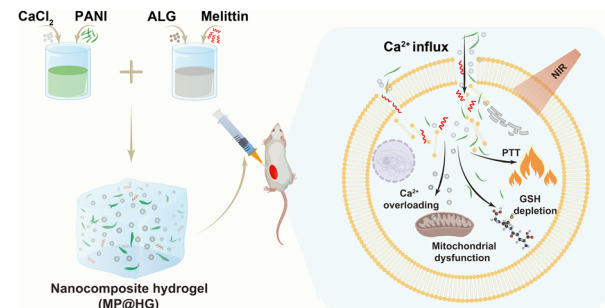
Taishi Miura, Makoto Yoritate* and Go Hirai*



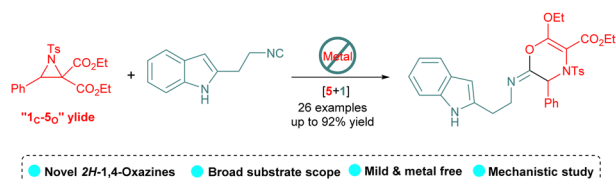
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An injectable nanocomposite alginate- Ca^{2+} hydrogel for melittin-assisted Ca^{2+} -overload and photothermal cancer therapy

Wen Jing Yang, Ruixiang Ma, Shibing Wei, Wenping Sun, Wenya Xu and Lianhui Wang*



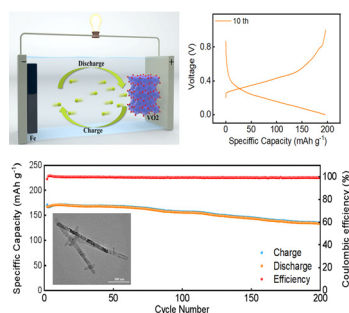
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Metal-free anomalous [5+1] cycloaddition reactions of donor–acceptor aziridines for the synthesis of 2H-1,4-oxazines

Jianfeng Zheng,* Jingzhi Bi, Lan Ma, Lvli Chen, Luhao Tang, Dong Xiong and Yin Tian

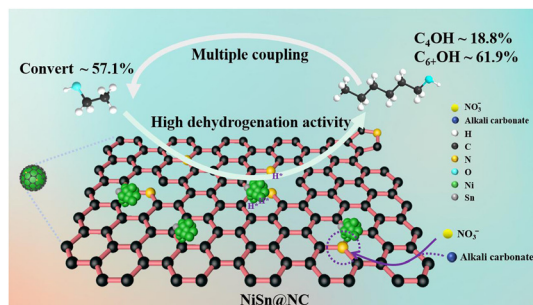
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Achieving high performance in aqueous iron-ion batteries using tunnel-like VO₂ as a cathode material

YuShuang Xu, Chang Li, WenJun Deng, JinLin Zhu, Yi Zhou, RunDuo Zhu, Chao Huang, WenXia Zou and Rui Li*

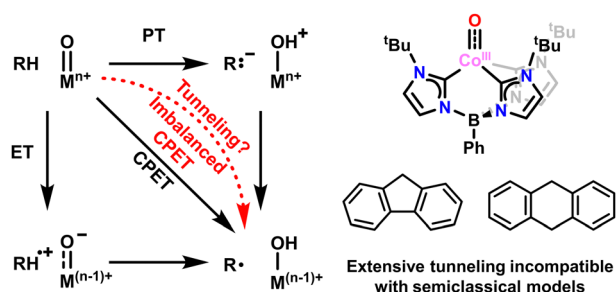
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Alkali carbonate induced N-doped NiSn@NC for direct aqueous ethanol coupling to C₆₊ higher alcohols

Yongjun Ling, Junwei Liao, Yuanfei Xie, Songbai Qiu, Xiaoping Wu, Qingwei Meng, Qian Zhang* and Tiejun Wang*

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Variable temperature kinetic isotope effects demonstrate extensive tunnelling in the C–H activation reactivity of a transition metal-oxo complex

Joseph E. Schneider, McKenna K. Goetz and John S. Anderson*

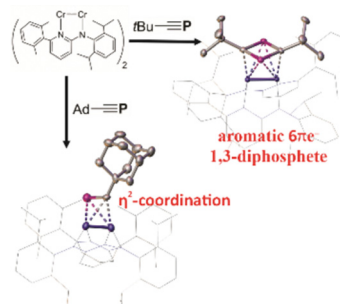


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Unusual coordination mode for 1,3-diphosphete ligands towards a Cr–Cr quintuple bond complex

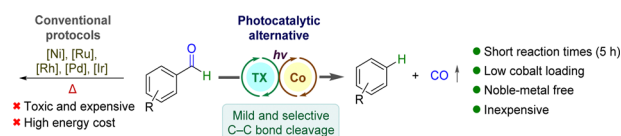
M. Elsayed Moussa, E.-M. Rummel, G. Balázs, C. Riesinger, A. Noor, R. Kempe and M. Scheer*



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Decarbonylation of benzaldehydes by dual photoorgano-cobalt catalysis

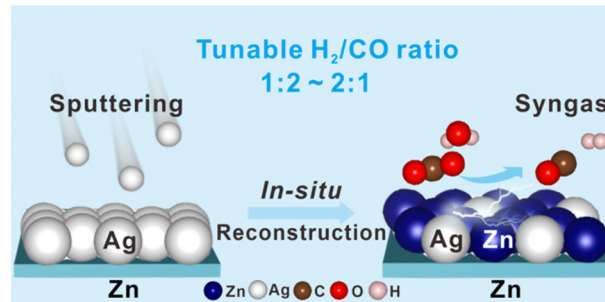
Daniel Kolb, Martin Morgenstern and Burkhard König*



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In situ reconstructed AgZn₃ nanoparticles supported on zinc nanoplates for efficient CO₂ electroreduction to tunable syngas

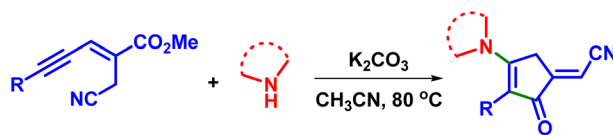
Yanrui Xu, Wangjian Liu, Zihang Xu, Yitong Zhou* and Xin-Yao Yu*



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Aminative annulation of cyano-enynyl esters leading to functionalized cyclopentenones

Chada Raji Reddy,* Veeramalla Ganesh and Nagender Punna



- unexpected stereoselective intramolecular annulation
- successive C–N and C–C bond formations
- uniquely functionalized cyclopentenones, 22-examples

