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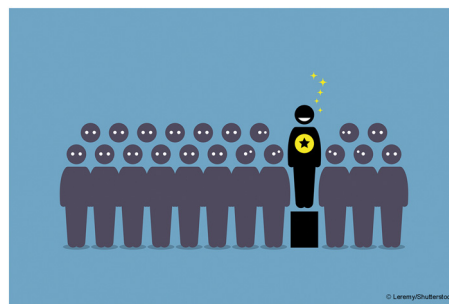


Inside cover
See Akihiro Kushima,
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EDITORIAL

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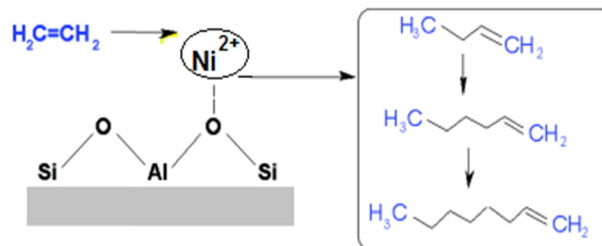


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Nickel-aluminosilicate catalysts for ethylene oligomerization: recent scientific progress

Vasile Hulea



Environmental Science: Atmospheres

GOLD
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ACCESS

Connecting communities
and inspiring new ideas

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Fundamental questions
Elemental answers

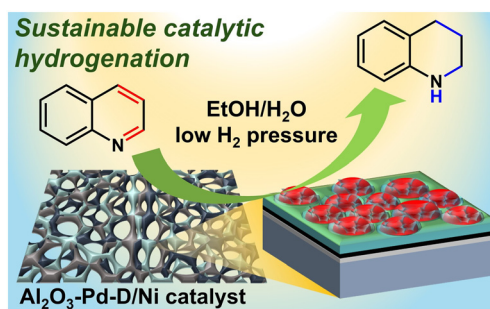


COMMUNICATION

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Selective and sustainable quinoline hydrogenation with a robust hierarchical catalyst framework

Azina Rahmani, Diego R. Javier-Jiménez, Deborah Israel, Brian Butkus, Lei Zhai, Parag Banerjee, William E. Kaden, Akihiro Kushima* and Titel Jurca*

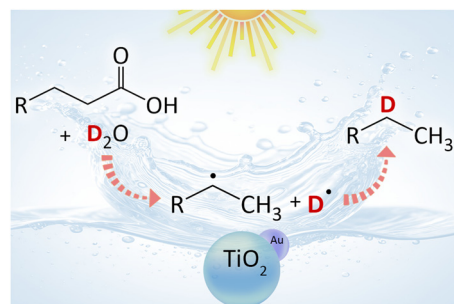


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Photocatalytic decarboxylative deuteration of lauric acid with heavy water for sustainable synthesis of deuterated alkanes

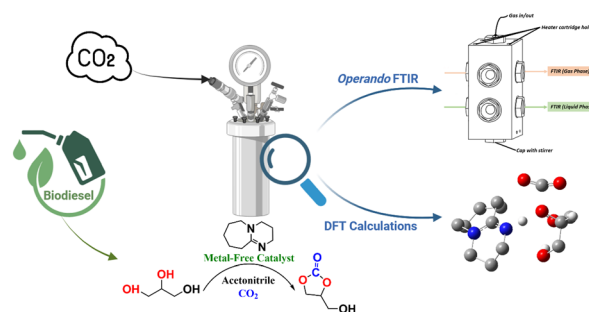
Haifan Huang, Zihan Lin, Akira Yamamoto, Yagna Bhoi Prakash, Kexin Zou, Shohichi Furukawa, Ken-ichi Fujita, Gunik Lee, Jun Kumagai and Hisao Yoshida*



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Unveiling the organocatalytic pathway to glycerol carbonate from glycerol and CO₂: a comprehensive study using phase behavior, *operando* high-pressure FTIR, and DFT insights

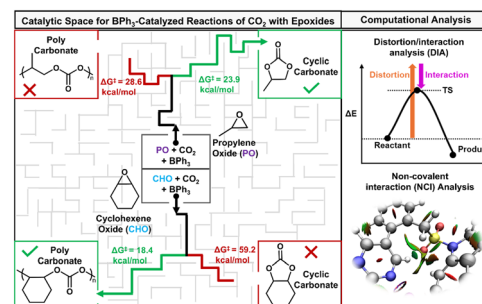
Taha Amine Chibane, Raphaël Méreau, Thierry Tassaing* and Karine De Oliveira Vigier*



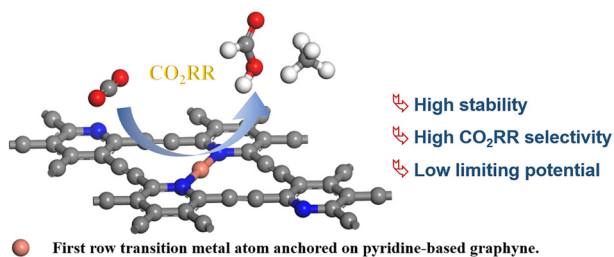
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Mapping the catalytic landscape of triphenylborane (BPh₃)-catalyzed CO₂-epoxide coupling to carbonates: an *in silico* approach to solve substrate-dependent selectivity

Nikunj Kumar and Puneet Gupta*



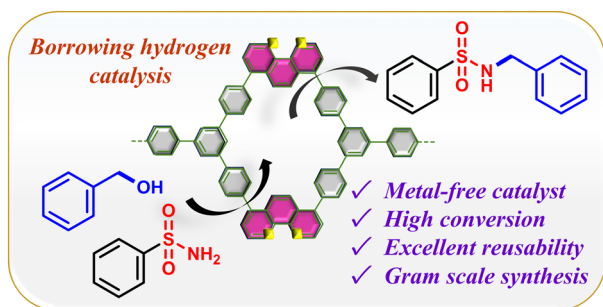
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Density functional theory calculation of first-row transition metals anchored on pyridine-based graphynes as single-atom catalysts for electrocatalytic CO₂ reduction

Xin Li, Decheng Peng, Yuhang Wang, Congcong Liang, Qiang Wang,* Jianguang Chen* and Liangfu Zhao*

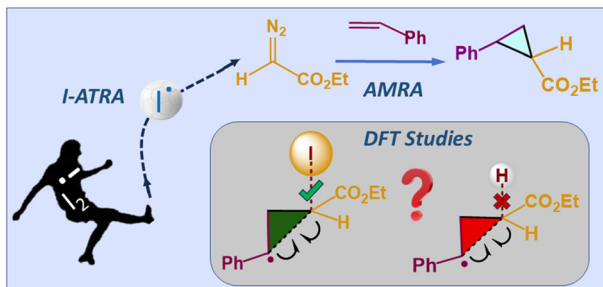
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A metal-free porous organic polymer-based heterogeneous catalyst for the borrowing hydrogen-mediated N-alkylation of sulfonamides with alcohols

Ragupathi Vijay, Dasari Yogesh, Ramasamy Shanmugam, Nakka Lingaiah, Thanasekaran Ponpandian* and Gunniya Hariyanandam Gunasekar*

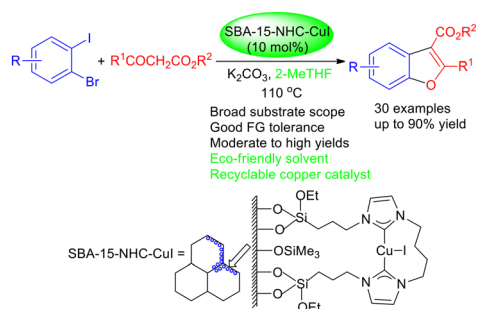
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Single electron transfer (SET) and iodine-atom transfer radical addition (I-ATRA) induced cyclopropanation reaction: elucidating the role of iodine

Krishnapriya Anattil Unnikrishnan, Athul Santha Bhaskaran, Surya K and Rositha Kuniyil*

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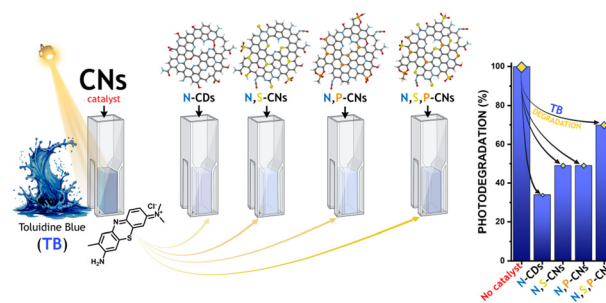
Ling Chen,* Qian Ye, Yan Wang and Mingzhong Cai*



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On the enhanced photocatalytic activity of N-doped carbon dots

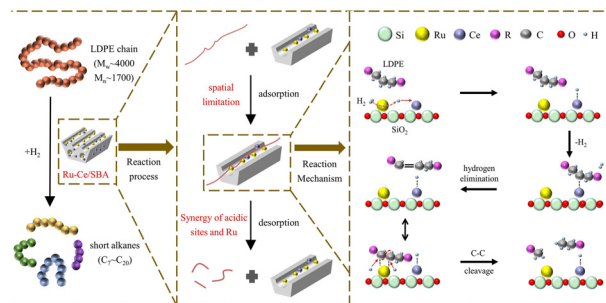
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Synergistic effect of acidic sites and mesoporous confinement in Ce-doped Ru/SBA-15 catalysts for efficient hydrogenolysis of low-density polyethylene to liquid fuels

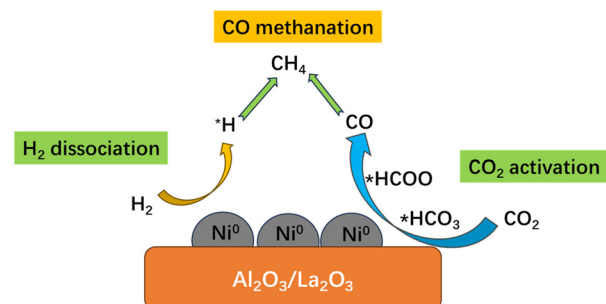
Zhenghang Ren, Zhicheng Luo* and Huiyan Zhang*



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Enhanced low-temperature CO₂ methanation over a Ni-based catalyst supported on La₂O₃-Al₂O₃ composite supports

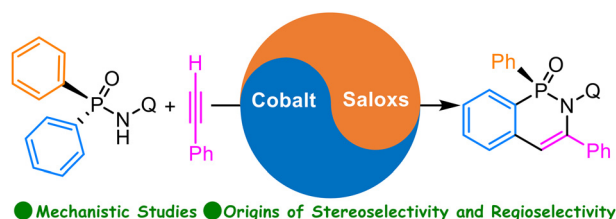
Longhao Xu, Wenhao Zhang, Liang Shen, Minghui Zhu* and Yi-Fan Han*



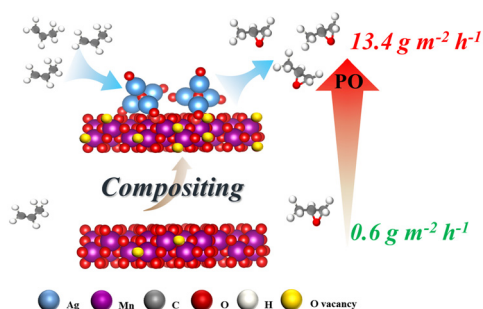
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Mechanism and origin of stereoselectivity and regioselectivity in cobalt-catalyzed C-H functionalization of arylphosphinamide

Chuanchuan Luo, Saibo Cao, Hao-Ran Yang* and Yang Wang*



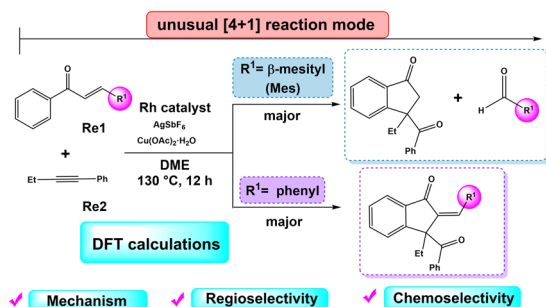
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Ag₂O-modified MnO₂ enhanced electrocatalytic propylene epoxidation with water as the sole oxygen source

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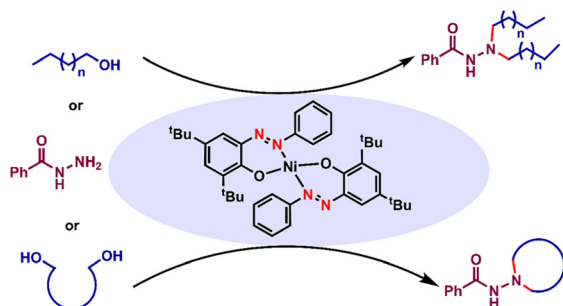
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DFT investigation of mechanism, regioselectivity, and chemoselectivity in rhodium(III)-catalyzed oxidative cyclization of chalcones with internal alkynes

Simeng Qi, Ran Fang,* Yanyun Dong, Jiacheng Fan, Alexander M. Kirillov and Lizhi Yang*

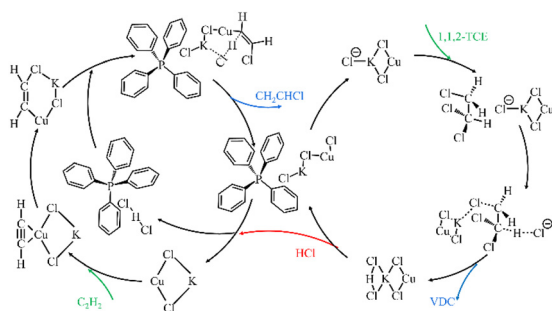
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Ligand-assisted nickel catalysis enabling *N,N*-dialkylation and cyclization of acyl hydrazides using aliphatic alcohols

Ayanangshu Biswas, Sourav Mandal, Supriya Halder, Bikramaditya Mandal and Debashis Adhikari*

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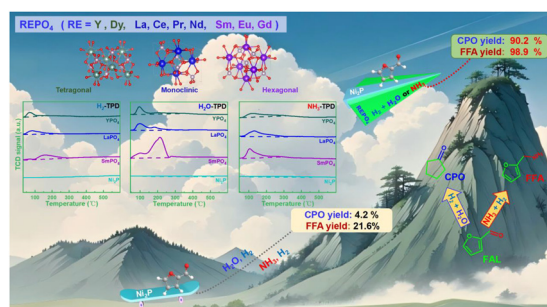
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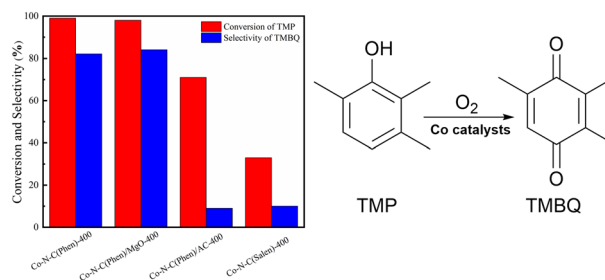
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Selective oxidation of 2,3,6-trimethylphenol into 2,3,5-trimethyl-1,4-benzoquinone with dioxygen over heterogeneous Co catalysts

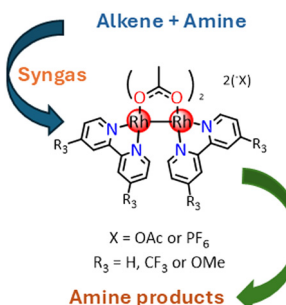
Mengjing Han, Bairui Guo, Zhengzhuo Qin, Xu Chen, Zhongtian Du* and Changhai Liang*



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Dirhodium(II,II) catalyst optimisation for chemoselective hydroaminomethylation: towards efficient amine synthesis

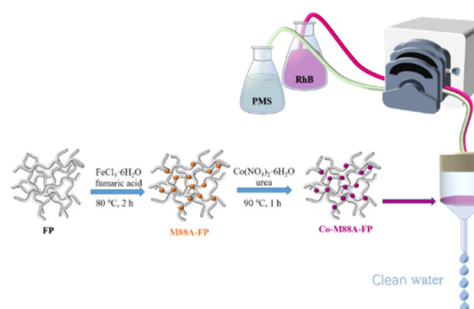
Stephen de Doncker, Gregory S. Smith* and Siyabonga Ngubane*



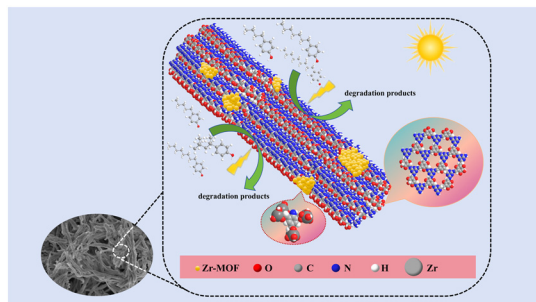
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Cobalt-doped MIL-88A anchored on a cellulose filter paper: a recyclable flow-through catalyst for peroxymonosulfate activation during the degradation of organic dyes

Yaru Li, Jing-jing Shao, Thomas L. Eberhardt and Hui Pan*



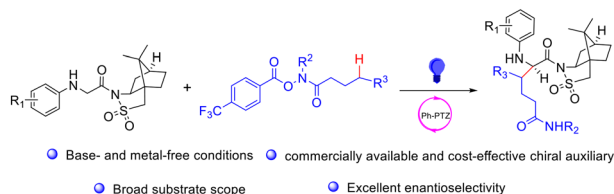
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Designing an S-scheme heterojunction based on MOF-808-NH₂ and TpTt-COF for enhanced photocatalytic degradation of alkylphenols under visible light

Haiyue Yuan, Jianhui Zhu, Desheng Liu, Mengyao Wang, Siyue Zhu, Xiping Hu, Yongqiang Ma* and Yan Wang*

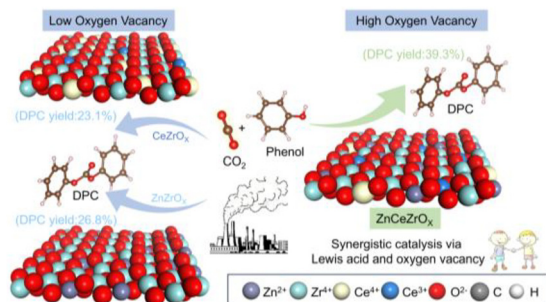
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Cost-effective chiral auxiliary-assisted remote asymmetric C(sp³)-H alkylation of hydroxamic acid derivatives with glycine derivatives

Zhongzhen Yang, Li Li, Jian Chen, Jinyu Hou, Hongying Fan, Xue Zhang, Guanghui Lv* and Yong Wu*

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Diphenyl carbonate synthesis from CO₂ over a ZnCeZrO_x ternary solid solution: synergistic catalysis using oxygen vacancies and Lewis acid sites

Mengke Xing, Tianli Hui,* Rui Zhang, Tao Zheng, Zhichang Liu, Haiyan Liu, Chunming Xu and Xianghai Meng*

