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ISSN 2044–4761 CODEN CSTAGD 13(9) 2587–2866 (2023)

Cover
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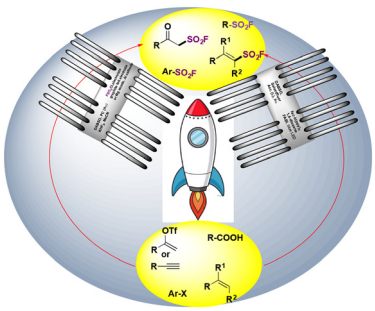
MINI REVIEWS

2597

Synthetic strategies for fluorosulfonylated compounds: application to click chemistry reactions

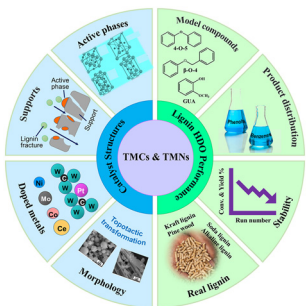
Sebastián Barata-Vallejo,* Damian E. Yerien and Al Postigo*



2618

Supported transition metal (Mo, W) carbide and nitride catalysts for lignin hydrodeoxygenation: interplay of supports, structure, and catalysis

Na Ji,* Poknam Ri, Xinyong Diao,* Yue Rong and Changsok Kim



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MINI REVIEWS

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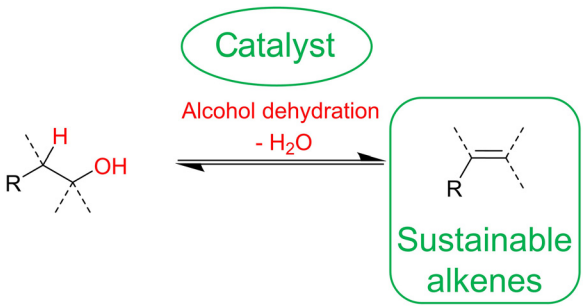
Sustainable routes to alkenes: applications of homogeneous catalysis to the dehydration of alcohols to alkenes

Daniel J. Ward, Daniel J. Saccomando, Gary Walker and Stephen M. Mansell*



COMMUNICATIONS

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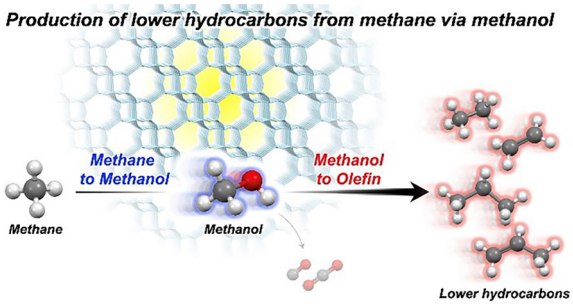
Impacts of framework Al distribution and acidic properties of Cu-exchanged CHA-type zeolite on catalytic conversion of methane into methanol followed by lower hydrocarbons

Kengo Nakamura, Peipei Xiao, Ryota Osuga, Yong Wang, Shuhei Yasuda, Takeshi Matsumoto, Junko N. Kondo, Mizuho Yabushita, Atsushi Muramatsu, Hermann Gies and Toshiyuki Yokoi*



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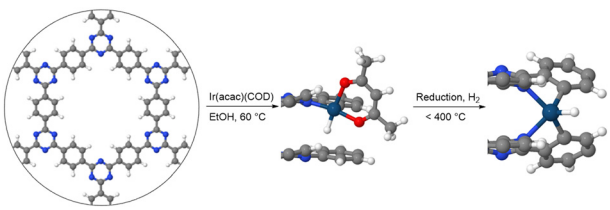
Understanding the structure of isolated iridium sites anchored on a covalent triazine framework

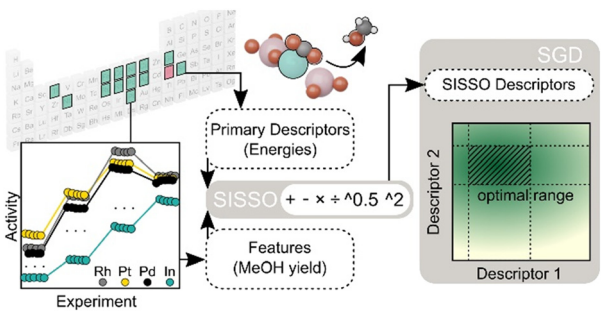
Nina M. Sackers, Andree Iemhoff, Philippe Sautet and Regina Palkovits*



2656

A data-driven high-throughput workflow applied to promoted In-oxide catalysts for CO_2 hydrogenation to methanol

Mohammad Khatamirad,* Edvin Fako, Chiara Boscagli, Matthias Müller, Fabian Ebert, Raoul Naumann d'Alnoncourt,* Ansgar Schaefer, Stephan Andreas Schunk, Ivana Jevtovikj, Frank Rosowski and Sandip De*



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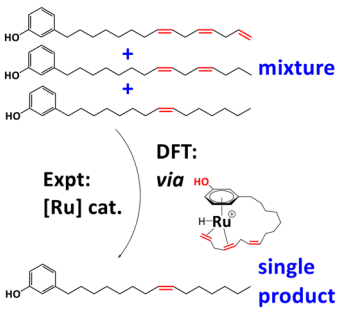

Insights into the ruthenium-catalysed selective reduction of cardanol derivatives *via* transfer hydrogenation: a density functional theory study

Shahbaz Ahmad, Ellis Crawford, Muhammad Bilal, Johannes G. de Vries and Michael Bühl*

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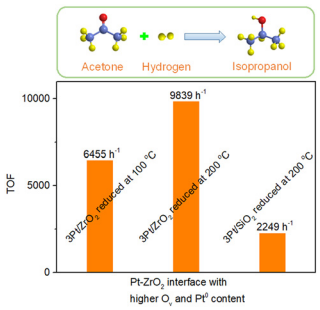

Influence of reduction temperature on Pt–ZrO_2 interfaces for the gas-phase hydrogenation of acetone to isopropanol

Kun Liu, Tingting Zhang, Xiaodong Liu, Tingyu Wang, Yan Su, Hong Wang, Liping Sun, Xiaoqun Cao, Yushui Bi,* Kaiqi Wang* and Li Zhang*

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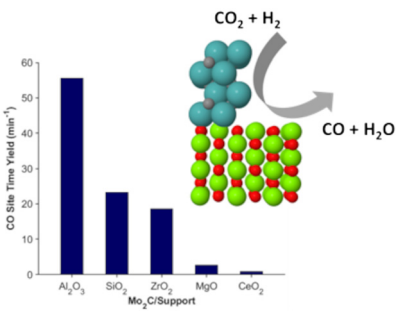

Evaluating metal oxide support effects on the RWGS activity of Mo_2C catalysts

Cameron F. Holder,* James R. Morse, Patrick M. Barboun, Andrew R. Shabaev, Jeffrey W. Baldwin and Heather D. Willauer

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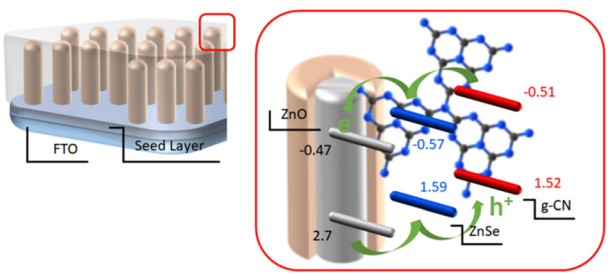

Interfacial anion vacancy engineered graphitic carbon nitride photoelectrode for promoting charge separation

P. V. R. K. Ramacharyulu and Chang Woo Kim*

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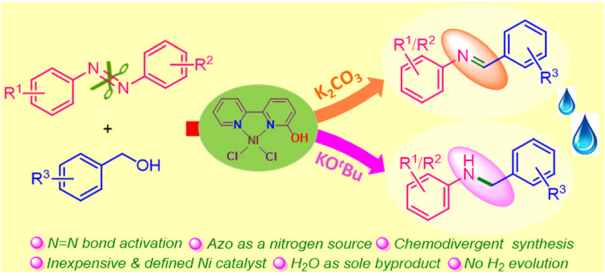
Chemodivergent coupling of azoarenes with benzyl alcohols *via* a borrowing hydrogen strategy using a well-defined nickel catalyst

Sadhna Bansal, Rajesh G. Gonnade and Benudhar Punji*



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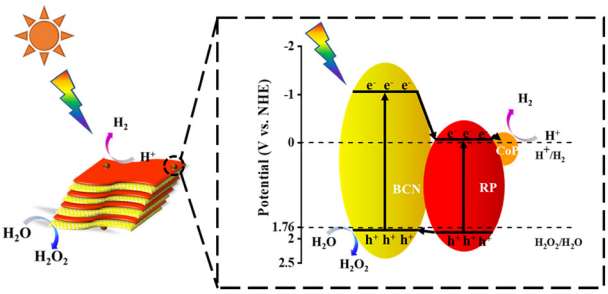
CoP decorated 2D/2D red phosphorus/B doped g-C_3N_4 type II heterojunction for boosted pure water splitting activity *via* the two-electron pathway

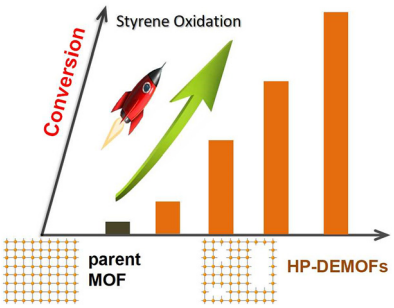
Zhiqi Guo, Yao Tian, Guangjin Dou, Ye Wang, Jiaping He and Hao Song*



2728

Significantly boosted activity for styrene oxidation through simultaneous regulation of porosity and copper sites in microporous metal–organic framework Cu-BTC

Penghu Guo,* Shuhua Zhang, Huicheng Cheng,* Xingye Zeng, Hanlu Wang, Roland A. Fischer and Martin Muhler



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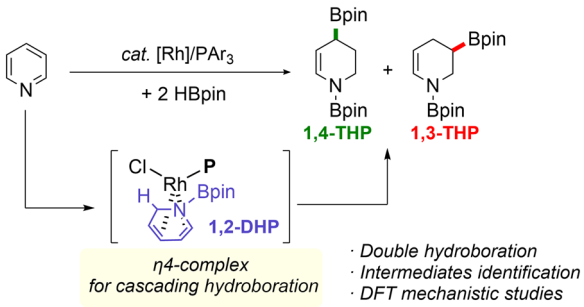
Rhodium-catalyzed double hydroboration of pyridine: the origin of the chemo- and regioselectivities

Hyoju Choi, Ruibin Wang, Suyeon Kim, Dongwook Kim, Mu-Hyun Baik* and Sehoon Park*



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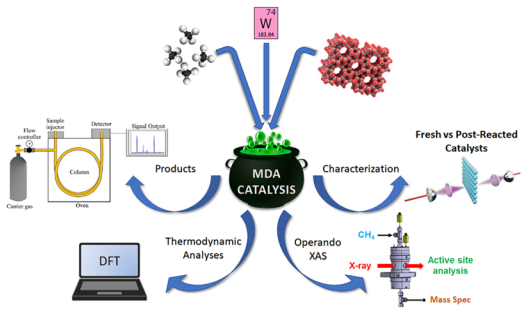

Understanding W/H-ZSM-5 catalysts for the dehydroaromatization of methane

Mustafa Çağlayan, Abdallah Nassereddine, Stefan-Adrian F. Nastase, Antonio Aguilar-Tapia, Alla Dikhtiarenko, Sang-Ho Chung, Genrikh Shterk, Tuiana Shoinkhorova, Jean-Louis Hazemann, Javier Ruiz-Martinez, Luigi Cavallo, Samy Ould-Chikh and Jorge Gascon*

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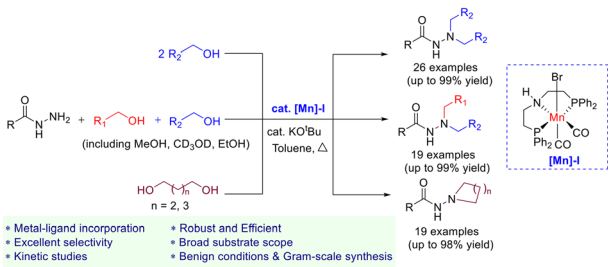

Expedient tandem dehydrogenative alkylation and cyclization reactions under Mn(I)-catalysis

Reshma Babu, Subarna S. Padhy, Ganesan Sivakumar and Ekambaram Balaraman*

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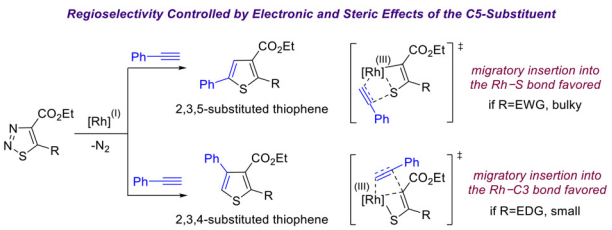

The effect of the C5-substituent on regioselectivity in the Rh(I)-catalyzed intermolecular transannulation of 1,2,3-thiadiazoles with phenylacetylene

Marina A. Tokareva, Indrek Pernik, Barbara A. Messerle, Tatiana V. Glukhareva and Sinead T. Keaveney*

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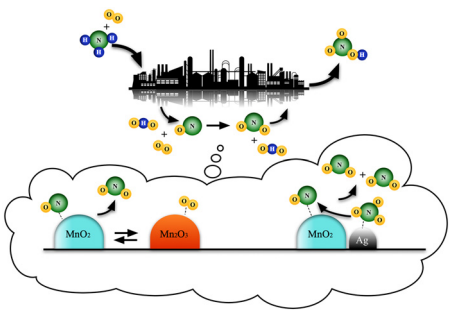

Catalytic oxidation of NO to NO_2 for industrial nitric acid production using Ag-promoted MnO_2/ZrO_2 catalysts

Jithin Gopakumar, Sunniva Vold, Bjørn Christian Enger, David Waller, Per Erik Vullum and Magnus Rønning*

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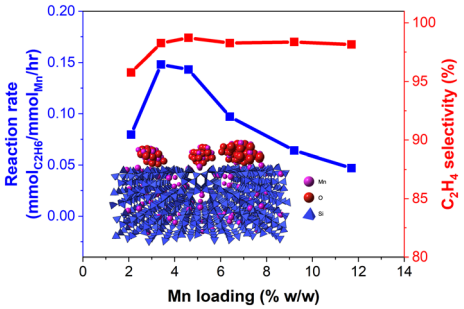
Ethane dehydrogenation over manganese oxides supported on ZSM-5 zeolites

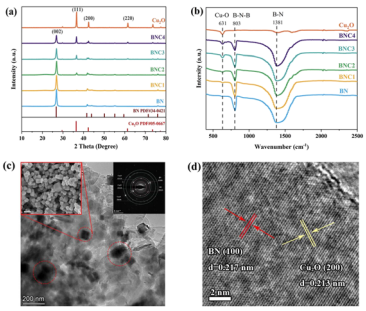
Jian Pan and Raul F. Lobo*



2802

2D boron nitride supported Cu_2O promotes photocatalytic nitrogen fixation at normal temperature and pressure

Liangchen Chen, Min Liu,* Yutong Chen, Shouxin Zhu, Can Sun, Xuewei Tu and Hui Zheng*



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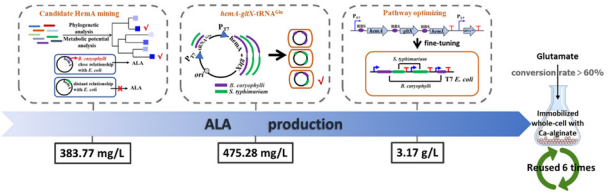
Efficient biosynthesis of 5-aminolevulinic acid from glutamate *via* whole-cell biocatalyst in immobilized engineered *Escherichia coli*

Ying Luo, Liang Liu, Jinshui Yang, Anping Su, Qijun Yu, Entao Wang and Hongli Yuan*



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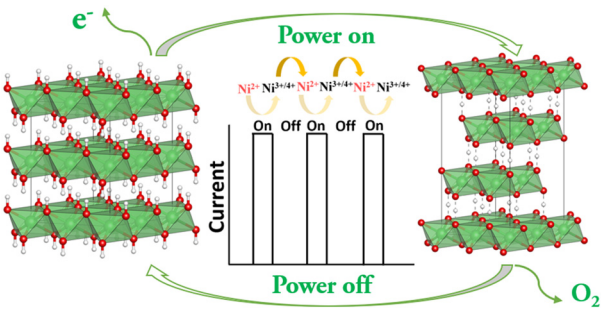
Reversion of catalyst valence states for highly efficient water oxidation

Xiaolei Huang,* Fenghe Wang, Lipo Ma, Jiawei Wang,* Tianyi Zhang, Xiaoyu Hao, Xiao Chi, Hao Cheng, Ming Yang, Jun Ding and Diing Shenp Ang*



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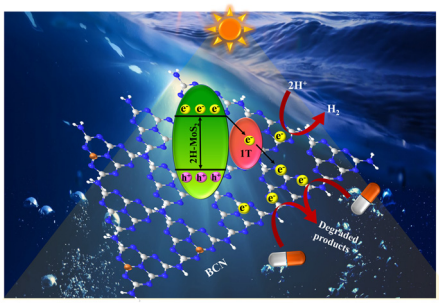

Photocatalytic activity towards antibiotic degradation and H_2 evolution by development of a Z-scheme heterojunction constructed from 1T/2H-MoS_2 nanoflowers embellished on BCN nanosheets

Sarmistha Das, Lopamudra Acharya, Lijarani Biswal, Bhagyashree Priyadarshini Mishra and Kulamani Parida*

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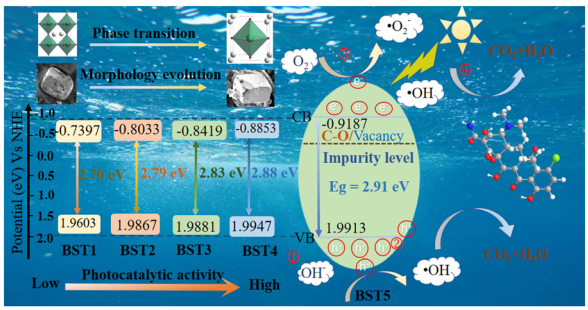

Strontium-induced phase, energy band and microstructure regulation in $Ba_{1-x}Sr_xTiO_3$ photocatalysts for boosting visible-light photocatalytic activity

Yan Han, Shifa Wang,* Maoyuan Li, Huajing Gao, Mengjun Han, Hua Yang, Leiming Fang,* Jagadeesha Angadi V., A. F. Abd El-Rehim, Atif Mossad Ali and Dengfeng Li*

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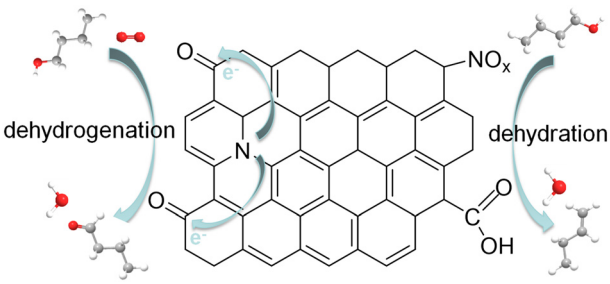

An oxygen-assisted conversion of butanol to value-added products on nanocarbon catalysts: tuning product selectivity *via* nitrogen doping

Xueya Dai, Fan Li, Di Wang, Miao Guo, Yunli Bai and Wei Qi*

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