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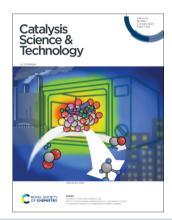
### IN THIS ISSUE

ISSN 2044-4761 CODEN CSTAGD 15(1) 1-222 (2025)



### Cover

See Hajime Kawanami et al., pp. 52-61. Image reproduced by permission of Hajime Kawanami from Catal. Sci. Technol., 2025, 15, 52.



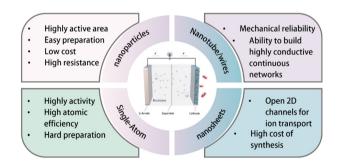
Inside cover See Andrew C. Chien and Corinna C. Chi. pp. 62-70.

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### **REVIEW**

Scale and morphology design of metal-based catalysts for enhanced Li-CO<sub>2</sub> battery performance

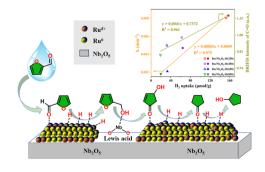
Jingzhao Wang, Xiangming Cui, Mi Zhou, Xin Chen, Shiyi Sun, Kai Yang, Jianan Wang\* and Wei Yan



### **COMMUNICATIONS**

Correlation of the catalytic performance with Ru $^{\delta+}$ species on Ru/Nb<sub>2</sub>O<sub>5</sub> in furfural aqueous reductive conversion

Yulong Deng, Binyu Zhang, Huiru Wu, Zhuo He, Xiaorui Du, Jiayi Ou, Tianyu Ren, Haiyong Wang, Yuhe Liao, Qiying Liu,\* Chenguang Wang\* and Yanbin Cui\*







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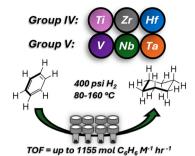
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### COMMUNICATIONS

### 41

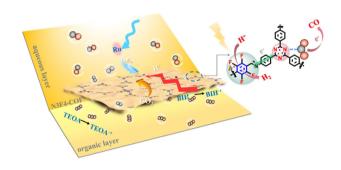
### Benzene hydrogenation utilizing organometallic early transition metal precursors

Reece Johnson, Peijie Hu, James Pugh, Rahul Koottanil Haridasan and Keith Searles\*



### Fluorinated covalent organic frameworks for visiblelight driven CO<sub>2</sub> reduction

Wei-Jia Wang,\* Bin Li, Jing Gao and Kaihong Chen\*



### **PAPERS**

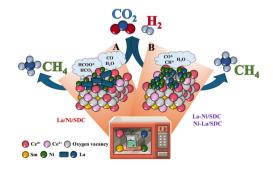
Iridium complexes supported on cross-linked polyacrylic acid as release-and-catch catalysts for continuous formic acid dehydrogenation

Keito Sawahara, Shinji Tanaka, Ryota Gemma, Ryoichi Kanega and Hajime Kawanami\*



Effect of metal loading sequences in CO<sub>2</sub> methanation activity on samarium-doped ceria supported bimetallic catalysts

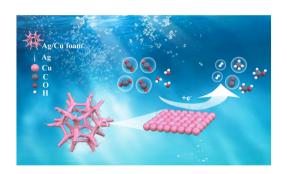
Andrew C. Chien\* and Corinna C. Chi



71

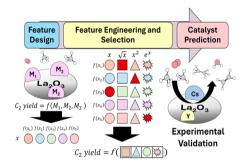
### Bis-thiourea and macrocyclic polyamines as binary organocatalysts for the ROP of lactide

Assunta D'Amato, Maria Voccia, Filippo Bruno, Sara D'Aniello, Lucia Caporaso,\* Francesco De Riccardis, Irene Izzo, Giorgio Della Sala\* and Mina Mazzeo\*



# Ag/Cu foam catalyst for selective reduction of CO<sub>2</sub> to CH3OH at low potential

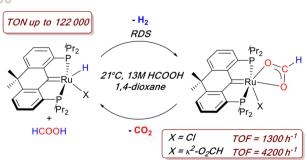
Ruitao Nie, Xiaolong Deng, Haoyu Yang, Hongwei Chen, Jie Yang, Meiyi Lu, Kegi Peng, Xiaoyu Zhou, Chen Yang, Juan Xie\* and Hu Wang\*



# Design of low temperature La<sub>2</sub>O<sub>3</sub> oxidative coupling of methane catalysts using feature engineering and automated sampling

Fernando Garcia-Escobar,\* Lauren Takahashi, Ali Shaaban, Shun Nishimura and Keisuke Takahashi\*

100



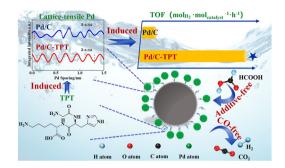
# Rapid and selective formic acid dehydrogenation catalysis by molecular ruthenium hydrides supported by rigid PCcarbeneP pincer ligands

Laurie J. Donnelly, Benjamin S. Gelfand and Warren E. Piers\*

### 107

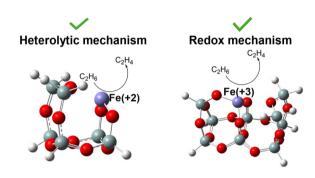
### Exploiting tripeptide in Pd/C for boosting hydrogen production from formic acid dehydrogenation

Yan Gu, Hongli Wang,\* Yaohao Zhang, Lu Yang, Xiaoshan Liu and Xuesong Li\*



### On the mechanisms of ethane dehydrogenation on silica-supported mononuclear Fe

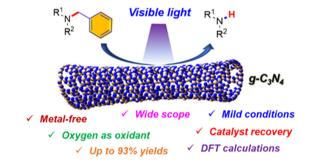
Sakshi Satyanand, Sanjana Srinivas, Dionisios G. Vlachos\* and Stavros Caratzoulas



### 123

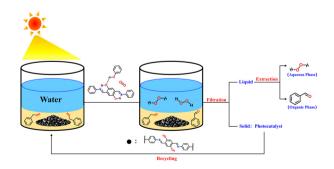
### Green photocatalytic N-debenzylations with molecular oxygen catalyzed by recyclable metalfree tubular carbon nitride

Yufeng Wu,\* Jiajie Kang, Jianing Li, Mingshu Bi and Qingwei Meng

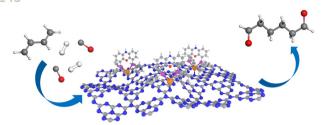


## Phenol hydroxyl-modified imine-based covalent organic frameworks for enhanced solar-driven generation of H<sub>2</sub>O<sub>2</sub> via hydrogen bonds

Lang Chen, Song Qin, Jiahui Hang, Bo Chen, Jinyang Kang, Yang Zhao, Shanyong Chen, Yongdong Jin, Hongjian Yan, Yuanhua Wang\* and Chuangin Xia\*

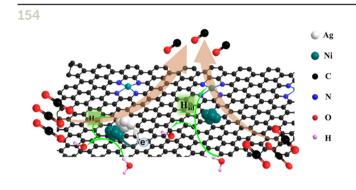


### 145



### Investigation on heterogeneous Rh catalysts for the hydroformylation of 1,3-butadiene to adipic aldehyde

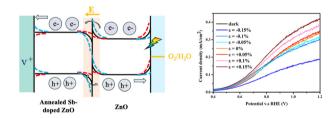
Lijin Gan, Zekun Liu, Lei Feng, Yi Duan, Guangyuan Xu, Si Chen and Huan Yan\*



# Alignment of active sites on Ag-Ni catalysts for highly selective CO<sub>2</sub> reduction to CO

Huangdong Wang, Zhihua Guo, Heng Zhang, Lin Jia, Min Sun, Lifeng Han, Haorun Li, Yan Guo\* and Shanghong Zeng\*

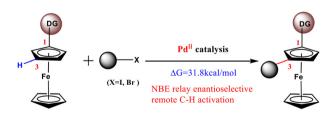
165



### Enhancing the photoelectrochemical water splitting efficiency of ZnO P-N homojunction nanorod arrays under the piezocatalyst effect

Yi-Miao Lin, Yu-Liang Hsiao, Chia-Shing Wu, Ying-Chih Pu and Chuan-Pu Liu\*

173



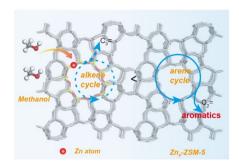
### Mechanistic insights into an enantioselective synthetic strategy for 1,3-disubstituted planar chiral ferrocenes

Feiyun Jia,\* Chenghua Zhang, Yongsheng Yang, Xueting Zheng and Mingsong Shi\*

### 185

The catalytic relevance of hydrothermally substituted Zn on the zeolite ZSM-5 during the methanol-to-aromatics process

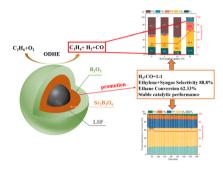
Xin Zhang, Xinyu You, Yunfan Wang, Hexun Zhou, Xue Zhou and Abhishek Dutta Chowdhury\*



### 193

B<sub>2</sub>O<sub>3</sub> supported La<sub>0.8</sub>Sr<sub>0.2</sub>FeO<sub>3</sub> for direct ethane oxidation into ethylene and syngas for hydroformylation synthesis

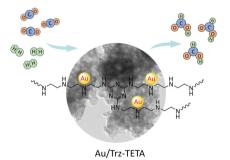
Shan Hu, Yunfei Gao,\* Lu Ding, Xueli Chen, Weitong Pan and Fuchen Wang



### 203

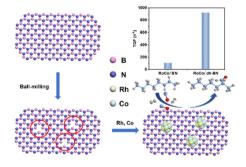
Modulating the electronic interaction between Au and nitrogen-rich porous organic polymers for enhanced CO<sub>2</sub> hydrogenation to formic acid

Huixin Yan, Xingyan Wang, Xiaoyu Liang, Xinxin Zhang, LongFei Liu, Min Ji, Min Wang\* and Xinkui Wang\*



Heterogeneous hydroformylation of internal alkenes over a defect-laden hexagonal BN supported RhCo alloy: reaction performance modulated by N vacancies

Bowen Qiu, Shujuan Liu, Shimin Liu, Xinjiang Cui, Dongcheng He, Kang Zhao, Bin Wang and Feng Shi\*



# CORRECTION

219

Correction: Integrated adsorption and photocatalytic degradation of VOCs using a TiO2/diatomite composite: effects of relative humidity and reaction atmosphere

Guangxin Zhang,\* Arman Peyravi, Zaher Hashisho,\* Zhiming Sun,\* Yangyu Liu, Shuilin Zheng and Lexuan Zhong