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Cover

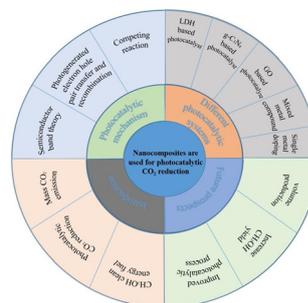
See Elisabete C. B. A. Alegria, Martin H. G. Prechtl *et al.*, pp. 6503–6512. Image reproduced by permission of Martin H. G. Prechtl from *Catal. Sci. Technol.*, 2024, 14, 6503.

REVIEWS

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Innovations in nanocomposite photocatalysts for CO₂ to CH₃OH conversion

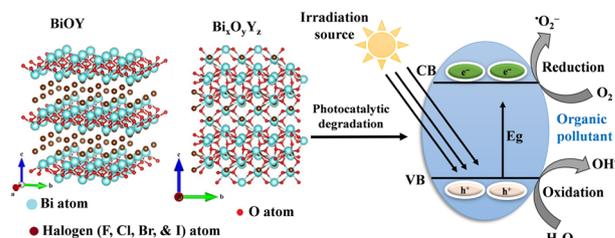
Shuang Deng, Nannan Wang,* Yanqiu Zhu and Kunyapat Thumavichai*



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Enhancing light-driven photocatalytic reactions through solid solutions of bismuth oxyhalide/ bismuth rich photocatalysts: a systematic review

Robert O. Gembo, Rudzani Ratshiedana, Lawrence M. Madikizela, Ilunga Kamika, Cecil K. King'ondeu, Alex T. Kuvarega and Titus A. M. Msagati*





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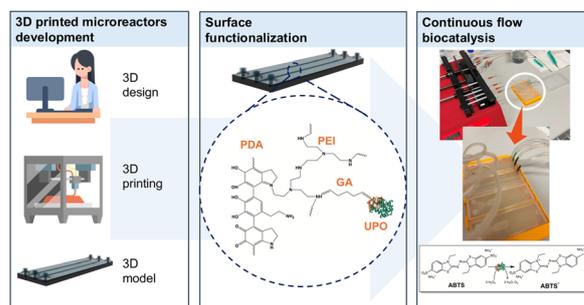
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6496

Unspecific peroxygenase immobilization in 3D-printed microfluidics: towards tailor-made screening platforms

Elena Gkantzou, Theofilia Koulopoulou, Hannah Brass, David Schönauer, Anton Glieder and Selin Kara*

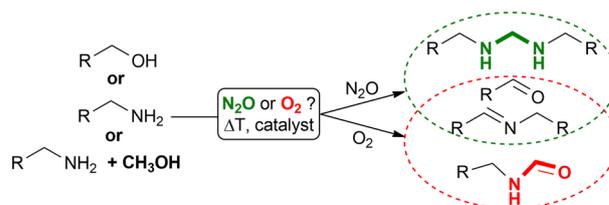


PAPERS

6503

Bioinspired copper-catalysed nitrous oxide reduction with simultaneous N–H or O–H bond oxidation

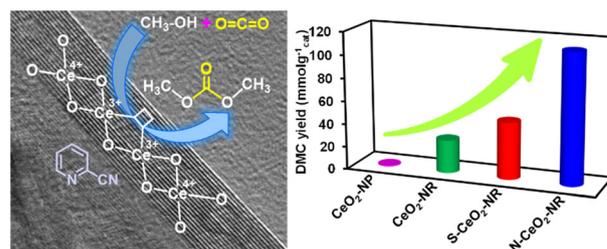
Bruce A. Lobo Sacchelli, Suellen M. P. Onguene, Ruben S. M. Almeida, Alexandra M. M. Antunes, Dmytro S. Nesterov, Leandro H. Andrade, Elisabete C. B. A. Alegria* and Martin H. G. Prechtl*



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Heteroatom-assisted oxygen vacancies in cerium oxide catalysts for efficient synthesis of dimethyl carbonate from CO₂ and methanol

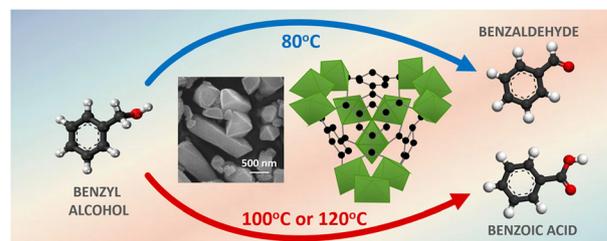
Niladri Maity,* Samiyah A. Al-Jendan, Samir Barman, Nagendra Kulal and E. A. Jaseer



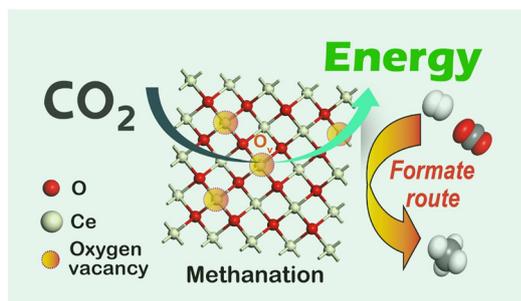
6524

Switching of selectivity from benzaldehyde to benzoic acid using MIL-100(V) as a heterogeneous catalyst in aerobic oxidation of benzyl alcohol

Duygu Hacıfendioğlu and Ali Tuncel*



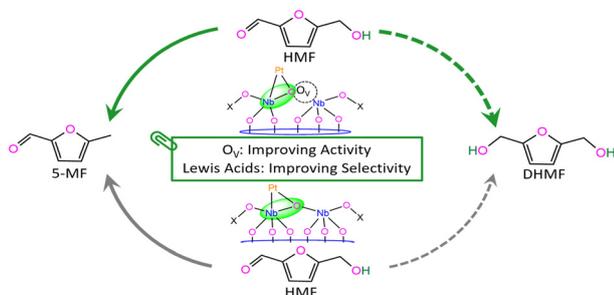
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Oxygen vacancy-dependent low-temperature performance of Ni/CeO₂ in CO₂ methanation

Luliang Liao, Kunlei Wang, Guangfu Liao,*
Muhammad Asif Nawaz* and Kun Liu*

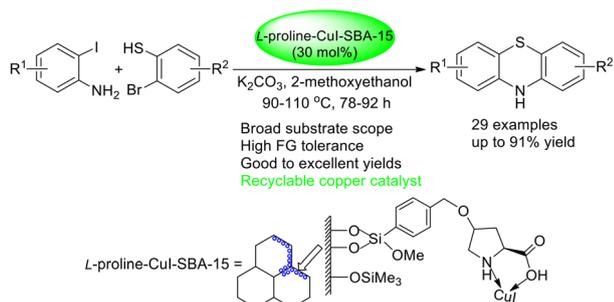
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Synergistic promotion of oxygen vacancy and Lewis acidity of Nb₂O₅ on the preferential hydroxymethyl hydrogenolysis of 5-hydroxymethylfurfural catalyzed by single atom Pt

Ting-Hao Liu, Shuai Fu, Jin-Tao Gou, Yin-Sheng Zhang,
Chang-Wei Hu and Hua-Qing Yang*

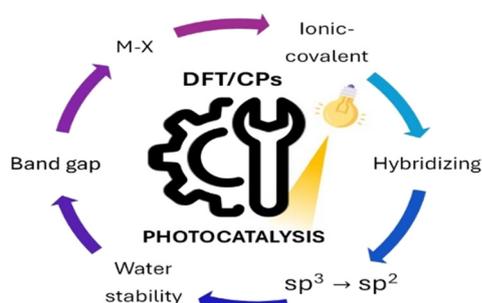
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Recyclable copper(i)-catalyzed cascade C–S and C–N bond formation between 2-iodoanilines and 2-bromobenzenethiols towards functionalized phenothiazines

Yan Wang, Chengkai Luo, Li Wei* and Mingzhong Cai*

6573



1D Zn(II)/2D Cu(I) halogen pyridyl coordination polymers. Band gap engineering by DFT for predicting more efficient photocatalysts in water treatment

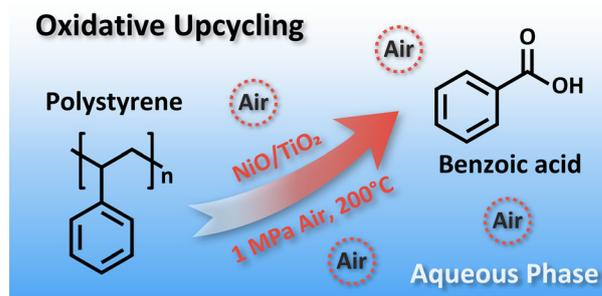
Andrea García-Hernán, Fernando Aguilar-Galindo,
Oscar Castillo and Pilar Amo-Ochoa*



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Heterogeneous oxidative upcycling of polystyrene plastics to benzoic acid under air conditions

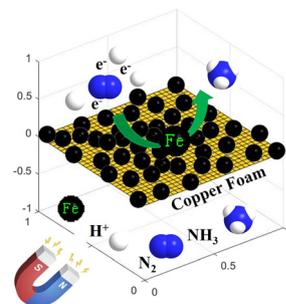
Chengyang Sun, Yong Guo, Xiaohui Liu and Yanqin Wang*



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In situ preparation and performance of iron-based electro-magnetic synergistic electrochemical nitrogen fixation catalysts

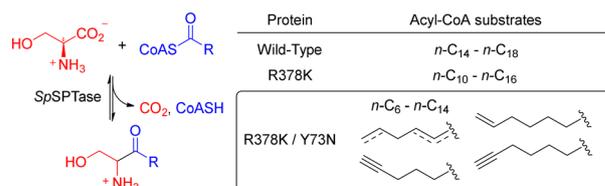
Kaidi Chen, Run Deng, Chen Zhao and Qikun Zhang*



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Broadening the substrate range of serine palmitoyltransferase by protein engineering and applications to 3-keto-dihydrosphingosine analogs

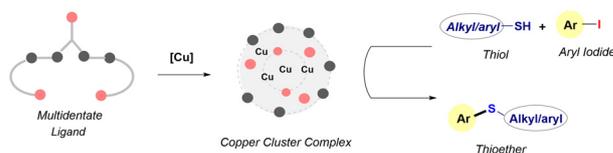
Hyunjun Choe, Minsun Cha, Ahram Kim and Jon D. Stewart*



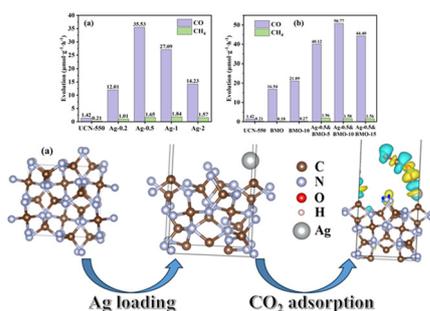
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Copper cluster complex-catalyzed C-S bond formation

Nien-Chi Chang Liao, R. Sidick Basha, Bo-Hao Shih, Chia-Chun Liu, Miao-Han Wang, Po-Heng Lin* and Chin-Fa Lee*



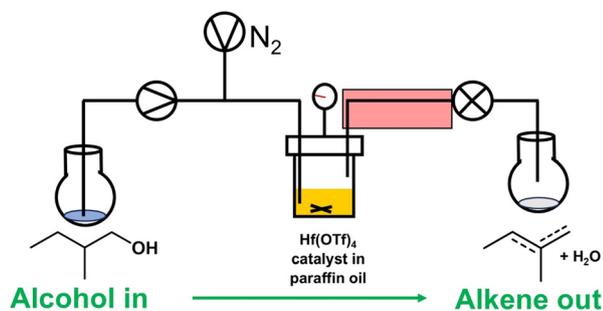
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Study on the effect and mechanism of Ag and Bi₂MoO₆ modification on the CO₂ photo-thermal reduction performance of g-C₃N₄ catalysts with localized surface plasmon resonance

Bin Guan,* Junyan Chen, Zhongqi Zhuang, Zhan Gao, Zeren Ma, Xuehan Hu, Chenyu Zhu, Sikai Zhao, Kaiyou Shu, Hongtao Dang, Tiankui Zhu and Zhen Huang

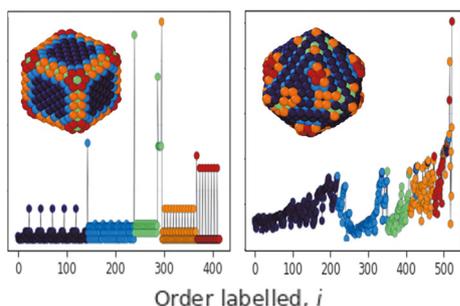
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Flow chemistry enhances catalytic alcohol-to-alkene dehydration

D. J. Ward, D. J. Saccomando, F. Vilela, G. Walker and S. M. Mansell*

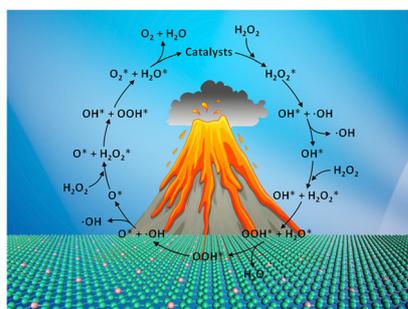
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Unsupervised pattern recognition on the surface of simulated metal nanoparticles for catalytic applications

Jonathan Y. C. Ting,* George Opletal and Amanda S. Barnard*

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Heteroatom-doped carbon nanomaterials as potential heterogeneous Fenton reaction catalysts

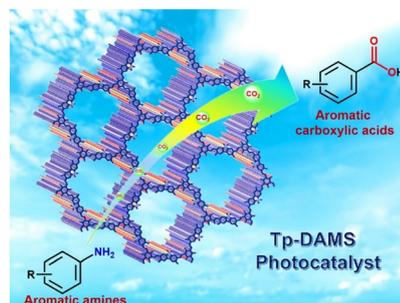
Haobin Tan, Xiuli Hou,* Chen Zhou, Shengbo Wang, Qiang Liu, Zhenhui Xu and Peng Zhang*



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Highly effective solar CO₂ fixation *via* photocatalytic carboxylation of aromatic amines with carbon dioxide over a covalent organic framework (COF) as a photocatalyst

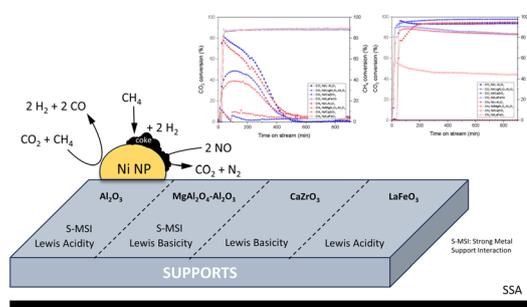
Chandani Singh, Jae Young Kim, No-Joong Park, Rajesh Kumar Yadav and Jin-Ook Baeg*



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Enhancing coking resistance of nickel-based catalysts for dry reforming of methane *via* nitric oxide abatement: a support study

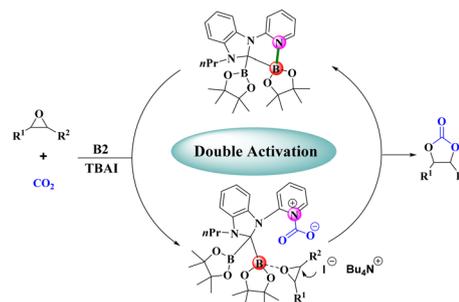
Beatrice Senoner,* Andrea Osti and Antonella Glisenti



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Boron–pyridine nitrogen cooperative catalytic conversion of carbon dioxide and epoxides to cyclic carbonates

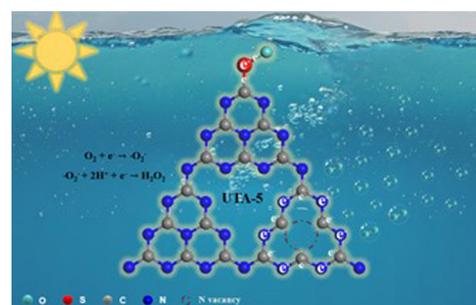
Yu-Hui Luo, Sheng Tao, Fei Chen,* Zhi-Hong Du, Hao Zhang, Min Li and Ning Liu*



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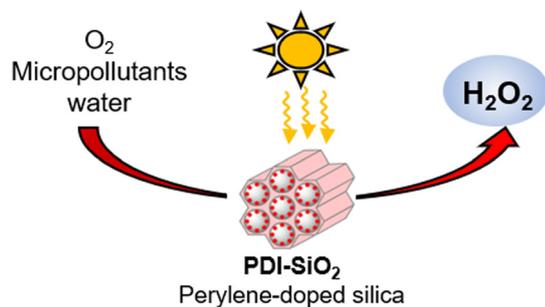
Dual defect sites at g-C₃N₄ synergistically induce the electron localization effect for boosting photocatalytic H₂O₂ production

Jingjing Jiang, Yuyao Chen, Shijian Zhou,* Haoran Xie, Changlai Li, Zheng Wei and Yan Kong*



PAPERS

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Photocatalytic H₂O₂ production with perylene(bis-imide)-doped periodic mesoporous silica using micropollutants as sacrificial donors

Charlotte David, Stephane Grolleau, Denys Grekov, Aydar Rakhmatullin, Errol Blart, Valerie Hequet* and Yann Pellegrin*

CORRECTION

6720

Correction: 1D Zn(II)/2D Cu(I) halogen pyridyl coordination polymers. Band gap engineering by DFT for predicting more efficient photocatalysts in water treatment

Andrea García-Hernán, Fernando Aguilar-Galindo, Oscar Castillo and Pilar Amo-Ochoa*

