

# Catalysis Science & Technology

A multidisciplinary journal focussing on all fundamental science and technological aspects of catalysis

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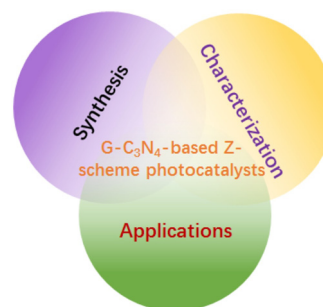
**Inside cover**  
See Peter Deglmann, Alex J. Plajer *et al.*, pp. 2937-2945.  
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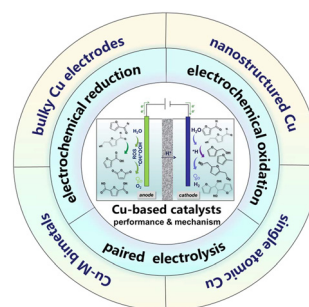
Chunxue Li, Hao Lu,\* Guixiang Ding, Qing Li\* and Guangfu Liao\*



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Jingwen Tan, Mei Jiang, Kun Yu, Yuyang Song, Wenbiao Zhang and Qingsheng Gao\*



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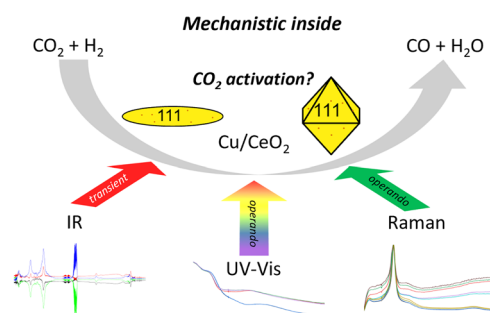


## COMMUNICATION

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### Unravelling the mechanism of CO<sub>2</sub> activation over low-loaded Cu/CeO<sub>2</sub>(111) catalysts using *operando* and transient spectroscopies

Marc Ziemba and Christian Hess\*

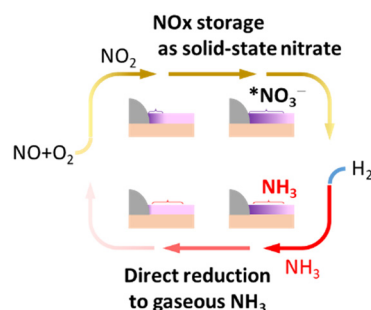


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### Catalytic conversion to ammonia through solid-state nitrate as a proposal for the emerging usage of nitrogen oxides

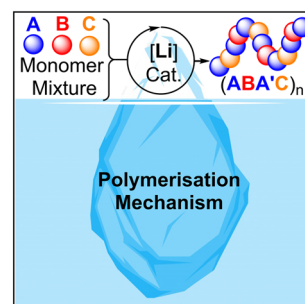
Atsuko Tomita, Ryutaro Wakabayashi and Tatsuo Kimura\*



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### Lithium catalysed sequence selective ring opening terpolymerisation: a mechanistic study

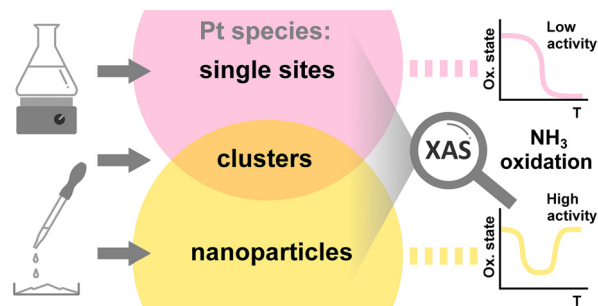
Peter Deglmann,\* Sara Machleit, Cesare Gallizioli, Susanne M. Rupf and Alex J. Plajer\*



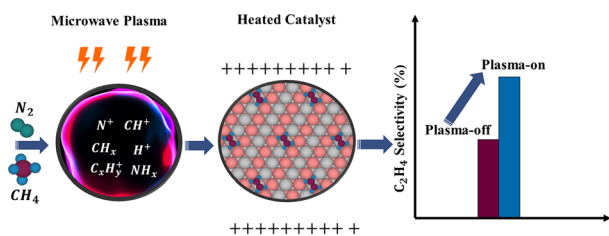
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### Structure sensitivity of alumina- and zeolite-supported platinum ammonia slip catalysts

Vasyl Marchuk, Xiaohui Huang, Jan-Dierk Grunwaldt and Dmitry E. Doronkin\*



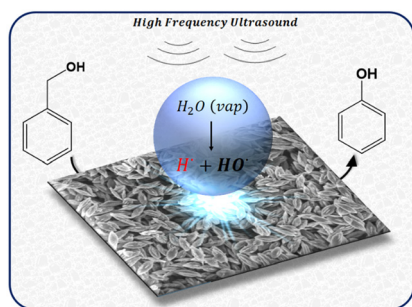
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### Post-plasma catalysis: charge effect on product selectivity in conversion of methane and nitrogen plasma to ethylene and ammonia

Sarojini Tiwari, Saleh Ahmat Ibrahim, Brandon Robinson, Siobhan Brown, Qiang Wang, Fanglin Che\* and Jianli Hu\*

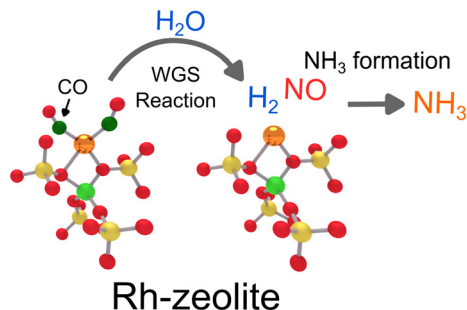
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### Water-assisted sonochemically-induced demethylenation of benzyl alcohol to phenol over a structurally stable cupric oxide catalyst

Teseer Bahry, Shang Jiang, Umesh Jonnalagadda, Wen Liu, Benoit Teychene, Francois Jerome, Samir H. Mushrif\* and Prince N. Amaniampong\*

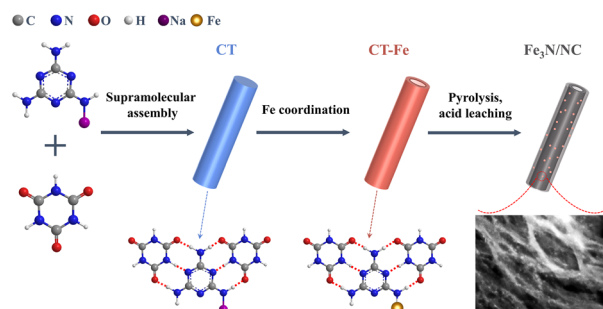
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Shunsaku Yasumura, Ken Nagai, Yucheng Qian, Takashi Toyao, Zen Maeno and Ken-ichi Shimizu\*

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### Supramolecular confinement synthesis of ultrafine iron nitride nanocrystals for the oxygen reduction reaction in Zn-air batteries

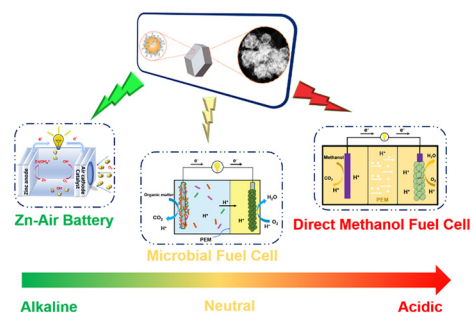
Fanglei Yao, Jiabao Bi, Lei Yu, Liming Dai, Wenkang Xue, Jingyao Deng, Zhihui Yao, Yunyan Wu, Jingwen Sun\* and Junwu Zhu



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### Metal–organic framework-loaded carbon-encapsulated nano-catalyst as a pH-universal oxygen reduction reaction electrocatalyst for various fuel cell devices

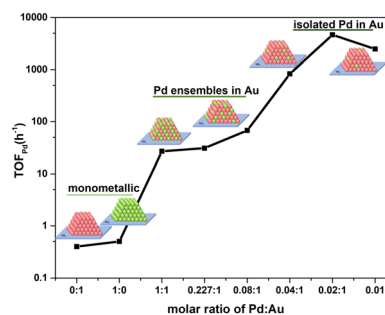
Xintao Zhou, Mingyang Wu, Kai Chen, Suqin Ci\* and Zhenhai Wen\*



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### The preparation of silica supported, dilute limit PdAu alloys via simultaneous strong electrostatic adsorption

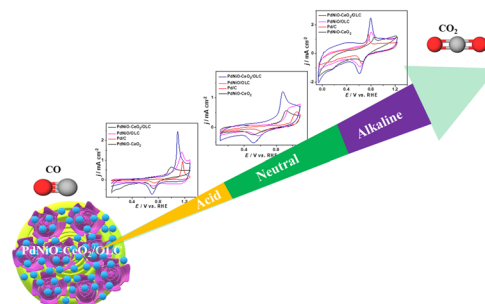
Anhua Dong, Abolfazl Shakouri, Stavros Karakalos, Doug Blom, Christopher T. Williams and John R. Regalbuto\*



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### Ternary PdNiO nanocrystals-ornamented porous CeO<sub>2</sub>/onion-like carbon for electrooxidation of carbon monoxide: unveiling the effect of supports and electrolytes

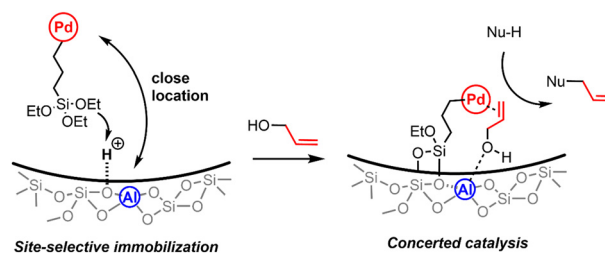
Adewale K. Ipadeola, Aderemi B. Haruna, Aboubakr M. Abdullah,\* Rashid S. Al-Hajri, Roman Viter, Kenneth I. Ozoemena\* and Kamel Eid\*



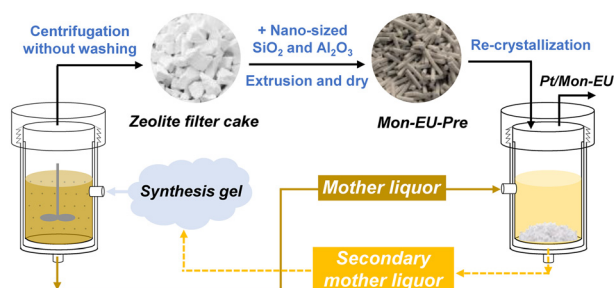
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### A heterogeneous Pd complex catalyst for allylation with allylic alcohols enhanced by an aluminum-doped mesoporous silica support

Siming Ding, Yuichi Manaka, Masayuki Nambo, Wang-Jae Chun, Ikuyoshi Tomita and Ken Motokura\*



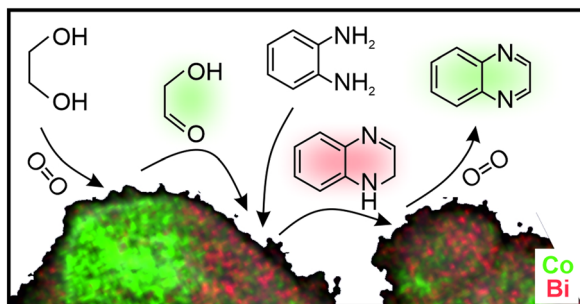
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### Full-crystalline monolithic EU-1 zeolite: sustainable synthesis and its applications in the hydroisomerization of ethylbenzene with *meta*-xylene

Guanghua Liang, Jianyi Chen,\* Tao Dou, Zhijie Wu, Xiaofeng Li and Yuanshuai Liu\*

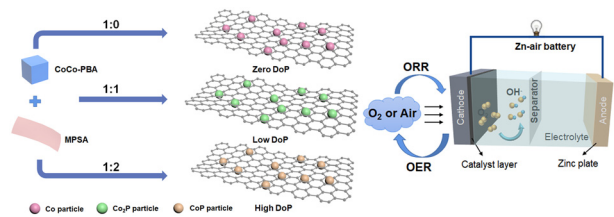
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### Sustainable synthesis of azobenzenes, quinolines and quinoxalines *via* oxidative dehydrogenative couplings catalysed by reusable transition metal oxide–Bi(III) cooperative catalysts

Marianna Kocsis, Kornélia Baán, Sándor B. Ötvös, Ákos Kukovecz, Zoltán Kónya, Pál Sipos, István Pálinkó and Gábor Varga\*

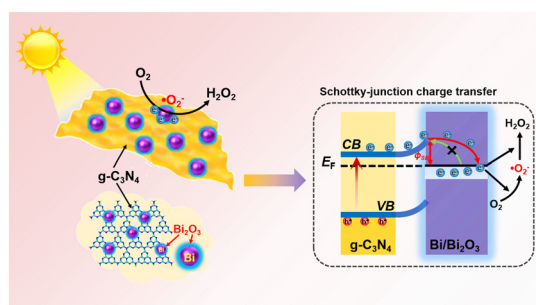
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### Tunable phosphorization degree of $\text{Co}_x\text{P}_y@N,P$ -doped carbon as a highly-active bifunctional electrocatalyst for rechargeable zinc–air batteries

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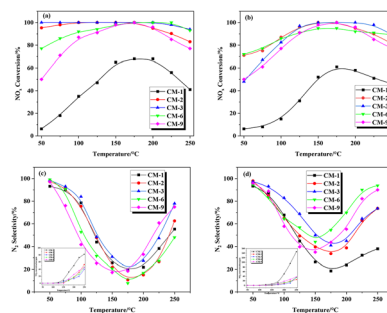
Xinyue Yan, Guiyang Yu,\* Chuanwang Xing, Yujia Hu, Heyuan Liu and Xiyou Li\*



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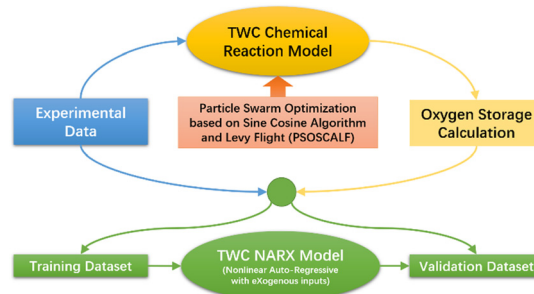
Chengbo Xuan, Shiwang Han, Luyuan Wang,\*  
Xingyu Zhang,\* Rongfeng Sun, Xingxing Cheng,  
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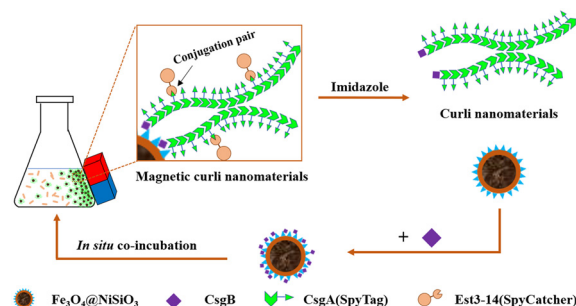
Zhuoxiao Yao, Tao Chen,\* Weipeng Lin, Yifang Feng,  
Ran Xia, Le Li and Tao Song



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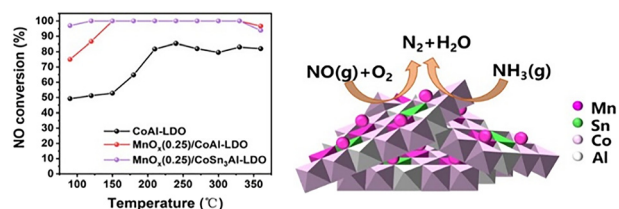
Hao Dong, Wenxue Zhang, Chao Chen\* and Ping Wang\*



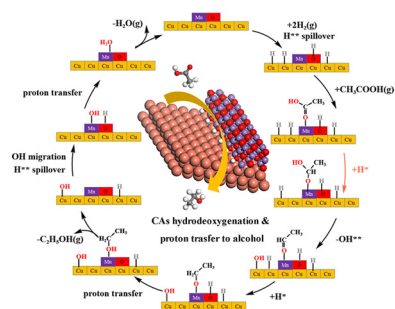
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Hange Wang, Wen Chen, Wei Jin and Yueli Liu\*



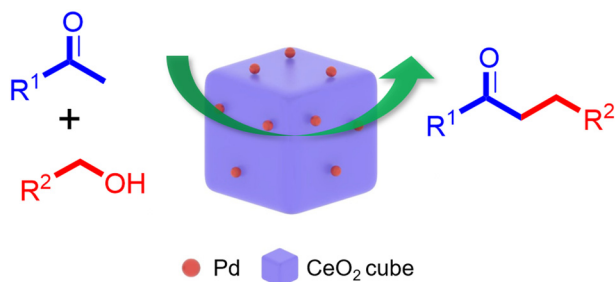
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Jingbo Du, Yifei Chen, Lingtao Wang and Minhua Zhang\*

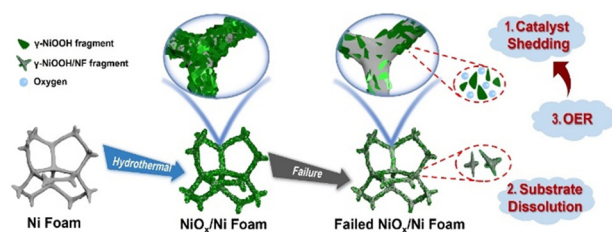
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### Palladium single-atom catalyst supported on ceria for $\alpha$ -alkylation of ketones with primary alcohols

Dongyuan Yang, Hongli Wang,\* Ce Liu and Chun-Ran Chang\*

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### Insights into the deactivation mechanism of a self-supported nickel electrode for 5-hydroxymethyl furfural electrooxidation: focus on the stability of the electrode as a whole

Fangbing Liu, Nan Lin,\* Deyuan Xin, Xinxin Li, Linchuan Cong, Fuyun Han and Haibo Lin

