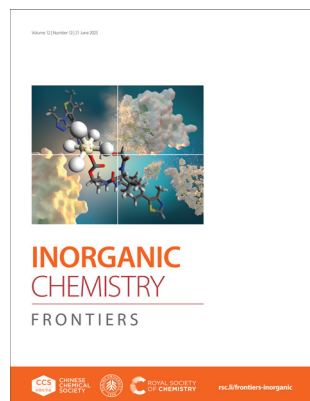


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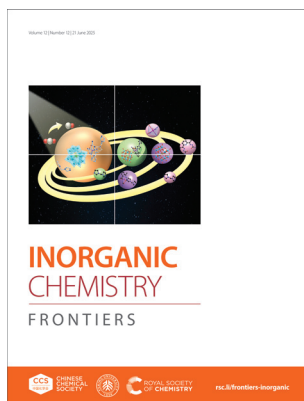
ISSN 2052-1553 CODEN ICFNAW 12(12) 3951–4142 (2025)



Cover

See Guangyu Zhu *et al.*, pp. 3981–3987.

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Inside cover

See Hua Mei, Yan Xu *et al.*, pp. 3988–3996.

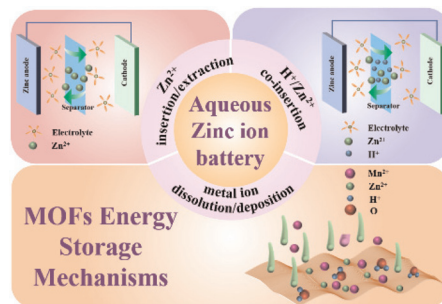
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REVIEW

3959

Toward highly durable aqueous zinc ion batteries: a review of MOFs/MOF-derived cathode materials

Yi Liu, Xiang Wu* and Yoshio Bando*

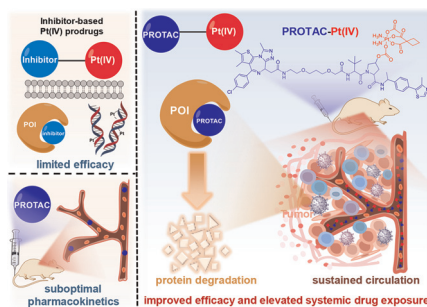


RESEARCH ARTICLES

3981

A platinated prodrug leveraging PROTAC technology for targeted protein degradation and enhanced antitumor efficacy

Jiaqian Xu, Shu Chen, Ka-Yan Ng, Xianfeng Chen, Wai Chung Fu and Guangyu Zhu*



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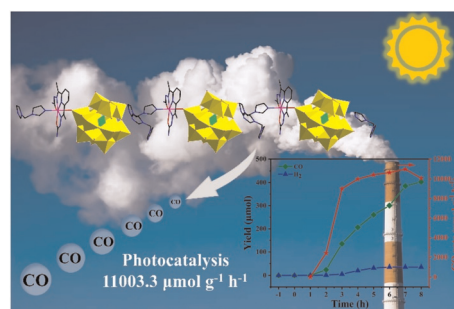
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RESEARCH ARTICLES

3988

Metal-doped polyoxometalates with dual ligands for efficient CO₂ photoreduction

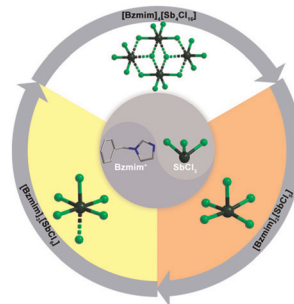
Yu Lv, Ting Jin, Ji-Lei Wang, Jiu-Lin Zhou, Zhi-Ming Dong, Hua Mei* and Yan Xu*



3997

Stepwise structural transformation in hybrid antimony chloride for time-resolved and multi-stage informational encryption and anti-counterfeiting

Zeping Wang and Xiaoying Huang*



4007

Distortable functionalized ligand implantation in ultra-microporous MOFs for efficient C₂H₂ purification

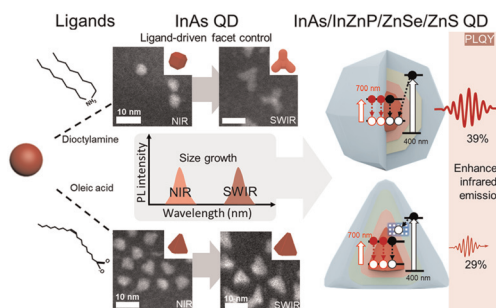
Hong-Juan Lv, Yunhui Zhai,* Ying-Ying Xue, Jiao Lei, Wenyu Yuan* and Quan-Guo Zhai









4019

Ligand-driven facet control of InAs-based quantum dots for enhanced near- and shortwave infrared emission

Hyunjin Cho, Yujin Kim, Whi Dong Kim, Young-Shin Park, Ju Young Woo,* Hyung-Kyu Lim* and Doh C. Lee*



 <p>Electronic conductivity Kohn-Sham band gap</p>	 <p>Phase stability Energy above convex hull</p>
 <p>Mechanical properties Bulk modulus, shear modulus</p>	 <p>Ion transportation Lithium ion conductivity</p>
 <p>Chemical stability Reaction energy</p>	 <p>Experiment Experimentally observed</p>

Chenxi Xu, Teng Zhao,* Ji Qian, Ke Wang, Tianyang Yu,
Wangming Tang, Li Li, Feng Wu and Renjie Chen*

Chenxi Xu, Teng Zhao,* Ji Qian, Ke Wang, Tianyang Yu,
Wangming Tang, Li Li, Feng Wu and Renjie Chen*

The figure consists of three main parts. The top part displays seven EDS elemental maps for a catalyst sample, labeled O, Ce, Y, La, Sc, Zr, and Pt. Each map shows the distribution of the respective element. A scale bar of 1 μm is provided for the O map. The bottom left part is a line graph showing CO production rate (mmol g⁻¹ h⁻¹) versus temperature (°C) for two catalysts: Pt/CeLaScZrO_x (black squares) and Pt/ZrO₂ (orange triangles). The bottom right part is a line graph showing CO production rate (mmol g⁻¹ h⁻¹) versus light intensity (W m⁻²) for the same two catalysts.

Temperature (°C)	Pt/CeLaScZrO _x (mmol g ⁻¹ h ⁻¹)	Pt/ZrO ₂ (mmol g ⁻¹ h ⁻¹)
200	~10	~10
300	~10	~10
400	~10	~10
500	~100	~100
600	~1300	~400

Light intensity (W m ⁻²)	Pt/CeLaScZrO _x (mmol g ⁻¹ h ⁻¹)	Pt/ZrO ₂ (mmol g ⁻¹ h ⁻¹)
0.8	~1	~1
1.6	~10	~5
2.4	~15	~10
3.2	~18	~15

Xin Liu, Senyan Huang, Dachao Yuan, Shan Li, Lin Ma,
Linjie Gao,* Zhaoqi Li, Yachuan Wang, Yaguang Li* and
Jinhua Ye

Xin Liu, Senyan Huang, Dachao Yuan, Shan Li, Lin Ma,
Linjie Gao,* Zhaoqi Li, Yachuan Wang, Yaguang Li* and
Jinhua Ye

The figure illustrates the contribution of the non-classical pathway to the catalytic activity of zeolites. It consists of three main parts:

- Schematic Diagram:** A seesaw balance is shown with two pans. The left pan is labeled "Non-classical" and the right pan is labeled "Classical". The balance is tilted towards the "Non-classical" side, indicating its higher contribution. A vertical arrow on the left points upwards and is labeled "Non-classical pathway", while a vertical arrow on the right points upwards and is labeled "Classical pathway". The top of the diagram is labeled "Contribution" and the bottom is labeled "Quantization".
- Chemical Reaction Scheme:** A chemical reaction is shown: c1ccccc1CO + CC(C)O >> c1ccccc1COCC(C)C. The reaction is catalyzed by "Catalyst A" in the presence of EtOH/SiO_2 .
- Bar Chart:** A horizontal bar chart shows the "Conversion" percentage for three different catalysts. The x-axis ranges from 0 to 100. The first bar (top) is orange and reaches approximately 85%, accompanied by a green smiley face. The second bar (middle) is orange and reaches approximately 80%. The third bar (bottom) is orange and reaches approximately 70%, accompanied by a blue sad face.

Jiayu Yu, Ke Du, Di Pan, He Li, Ling Ding, Wei Chen,
Yahong Zhang* and Yi Tang

Jiayu Yu, Ke Du, Di Pan, He Li, Ling Ding, Wei Chen,
Yahong Zhang* and Yi Tang

Xiaomeng Cui, Yuanrui Li, Qiang Zhang,* Xihang Zhang,
Weiju Hao, Yuling Song, Renxian Qin and Yali Lu

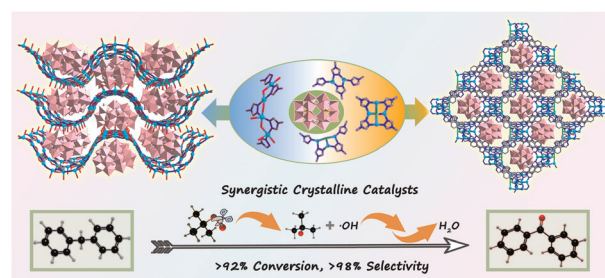
Xiaomeng Cui, Yuanrui Li, Qiang Zhang,* Xihang Zhang,
Weiju Hao, Yuling Song, Renxian Qin and Yali Lu

RESEARCH ARTICLES

4078

Synergistic crystalline catalysts assembled with Wells–Dawson-type polyoxometalates and heterovalent metal complexes for efficient benzylic C–H bond oxidation

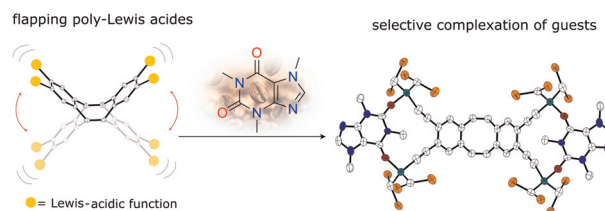
Ze-Xuan Liu, Jing Du,* Shuai Li, Miao-Qi Zhu, Yuan-Yuan Ma* and Zhan-Gang Han*



4091

Dibenzocyclooctatetraene based poly-Lewis-acids: flapping hosts for multidentate guests

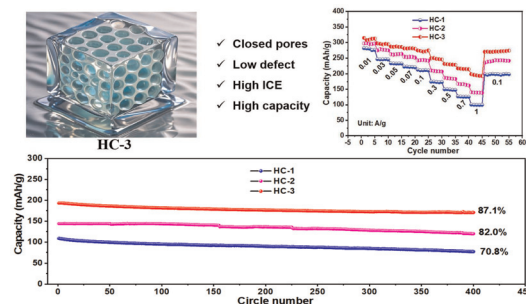
Maximilian J. Klingsiek, Julian Buth, Pia C. Trapp, Andreas Mix, Jan-Hendrik Lamm, Beate Neumann, Hans-Georg Stammler and Norbert W. Mitzel*



4106

Pore structure modulation and defect engineering of soft carbon@coal-derived hard carbon for enhanced sodium storage application in SIBs

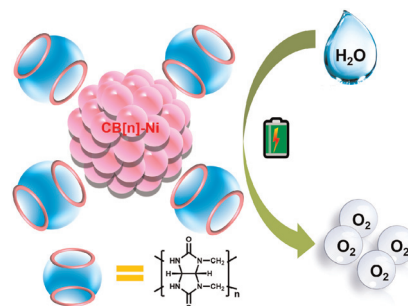
Xinhui Jin, Haoyu Ma, Guoping Liu, Xikun Zhang, Dong Wang, Dejie Mo, Jiangyan Xie, Lirong Feng, Maochun Wu, Baolian Su and Xiaohui Guo*



4115

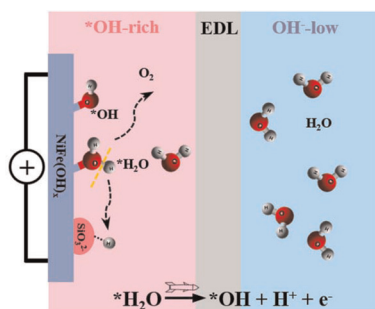
Ultrafine cucurbit[*n*]uril (*n* = 5–8)–Ni nanocomposites as highly efficient catalysts for the electrocatalytic oxygen evolution reaction

Yu-Ting Liu, Quan-Jiang Lv, Hang Cong, Wen-Feng Zhao, Qing-Mei Ge, Nan Jiang* and Qi-Long Zhu*



RESEARCH ARTICLES

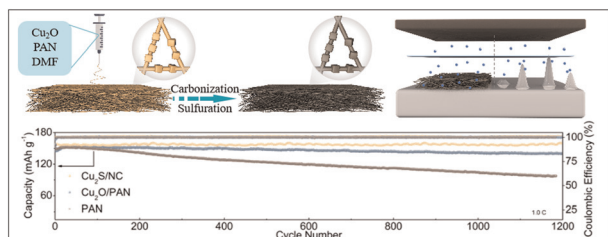
4124



Brønsted base tuning the local reaction environment to enhance neutral water oxidation

Mei Han, Kangning Liu, Hongyan Liang* and Yongchang Liu*

4133



3D bead-like $\text{Cu}_2\text{S}/\text{NC}$ nanofiber fabric as an interlayer for fabricating dendrite-free lithium metal anodes

Junzhuo Jiang, Junfan Wei, Yuan Tian* and Cheng Wang

