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See Jieun Jung, Susumu Saito *et al.*, pp. 254–258. Image reproduced by permission of Susumo Saito and Issei Takahashi from *EES Catal.*, 2025, **3**, 254.

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See Vikas Nandal, Kazuhiko Seki, Hiroyuki Matsuzaki *et al.*, pp. 274–285. Image reproduced by permission of Vikas Nandal, Kazuhiko Seki and Hiroyuki Matsuzaki from *EES Catal.*, 2025, **3**, 274.

REVIEWS

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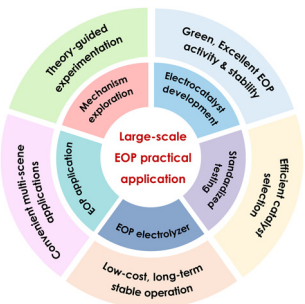
Electrochemical ozone production: from fundamental mechanisms to advanced applications

Jia Liu, Xiaoge Peng, Xiaosa Wang, Xing Zhong* and Jianguo Wang*



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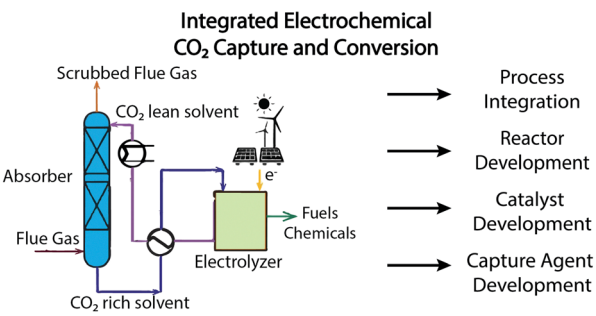
Integrated CO_2 capture and electrochemical conversion: coupled effects of transport, kinetics and thermodynamics in the direct reduction of captured-CO_2 adducts

Avishek Banerjee and Carlos G. Morales-Guio*



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REVIEWS

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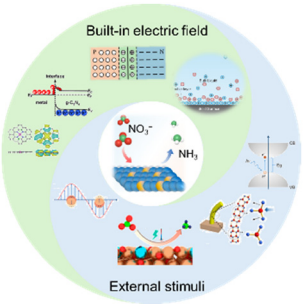
Ammonia synthesis from nitrate reduction by the modulation of a built-in electric field and external stimuli

Shaoce Zhang, Rong Zhang, Ying Guo and Chunyi Zhi*



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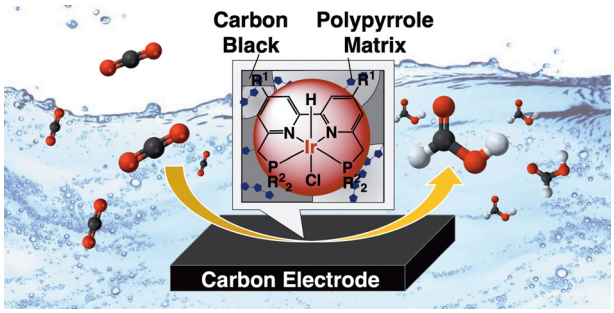
Selective electroreduction of CO_2 to formate by a heterogenized Ir complex using H_2O as an electron/hydrogen source

Jieun Jung,* Keun Woo Lee, Naonari Sakamoto, Selvam Kaliyamoorthy, Taku Wakabayashi, Kenji Kamada, Keita Sekizawa, Shunsuke Sato, Tomiko M. Suzuki, Takeshi Morikawa and Susumu Saito*



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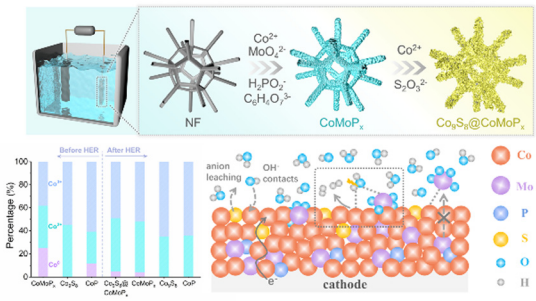
Integrating oxophilic and protophilic properties in a multivalent Co_9S_8@$CoMoP_x$ electrode to boost alkaline hydrogen evolution

Xijie Chen, Fengming Zhang, Xiao Wang, Fangming Liu, Jinhan Li, Meng Yu* and Fangyi Cheng*



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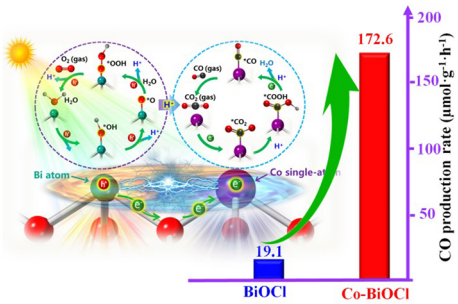
Neighboring effects of single-atom cobalt enable high-performance CO_2 photoreduction

Wenkai Yan, Yajun Zhang, Guojun Dong and Yingpu Bi*



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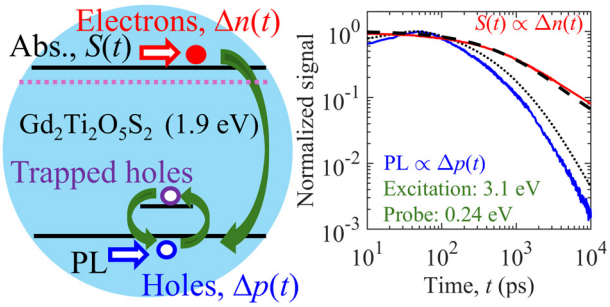

Quantifying the prospect of a visible-light-absorbing oxysulfide photocatalyst by probing transient absorption and photoluminescence

Ryota Shoji, Vikas Nandal,* Kazuhiko Seki,* Xiaoping Tao, Akihiro Furube, Takashi Hisatomi, Hiroaki Yoshida, Tsuyoshi Takata, Masanori Kaneko, Koichi Yamashita, Kazunari Domen and Hiroyuki Matsuzaki*

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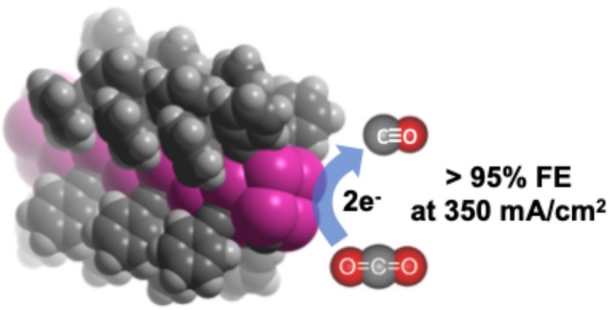

Self-assembled infinite silver cluster with atomic precision as a scalable catalyst for CO_2-electroreduction under industry-relevant reaction rates

Leonard Curet, William Lafargue dit-Hauret, Jordi Benet-Buchholz, Marta Martínez-Belmonte, Dominique Foix, Emilio Palomares,* Laurent Billon, Didier Begué and Aurelien Viterisi*

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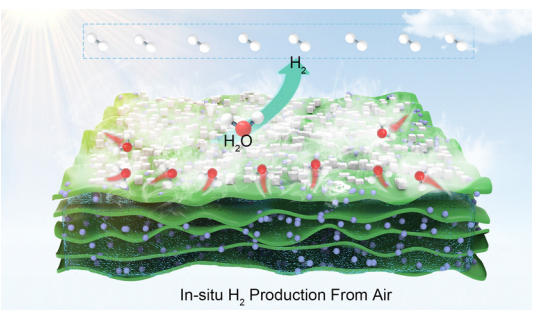

***In situ* hydrogen production in all-level-humidity air: integrating atmospheric water harvesting with photocatalysis**

Xueli Yan, Li Tian, Fei Xue, Jie Huang, Rui Zhao, Xiangjiu Guan,* Jinwen Shi,* Wenshuai Chen* and Maochang Liu*

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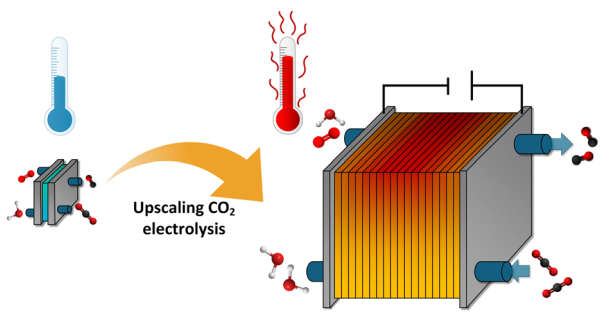

Heating dictates the scalability of CO_2 electrolyzer types

Jan-Willem Hurkmans, Henri M. Pelzer, Tom Burdyny, Jurriaan Peeters and David A. Vermaas*

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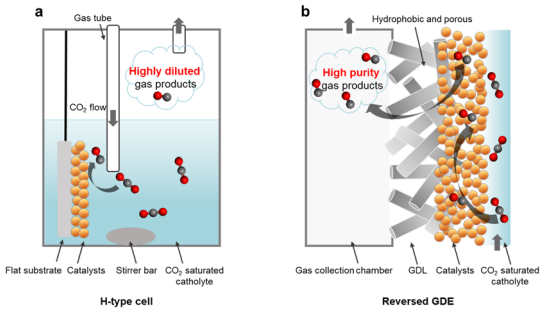
A reversed gas diffusion electrode enables collection of high purity gas products from CO_2 electroreduction

Bo Wu, Lakshmi Devi Voleti, Aidan Q. Fenwick, Chao Wu, Jiguang Zhang, Ning Ling, Meng Wang, Yuewen Jia, Weng Weei Tjiu, Mingsheng Zhang, Zainul Aabdin, Shibo Xi, Channamallikarjun S. Mathpati, Sui Zhang, Harry A. Atwater, Iftekhar A. Karimi and Yanwei Lum*



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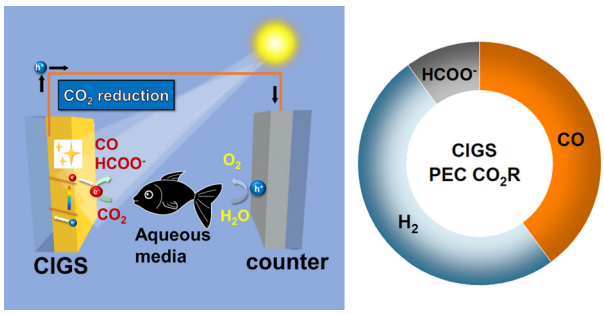
Origin of photoelectrochemical CO_2 reduction on bare Cu(In,Ga)S_2 (CIGS) thin films in aqueous media without co-catalysts

Rajiv Ramanujam Prabhakar, Sudhanshu Shukla,* Haoyi Li, R. Soyoung Kim, Wei Chen, Jérôme Beaudelot, Jan D'Haen, Daniely Reis Santos, Philippe M. Vereecken, Gian-Marco Rignanese, Ethan J. Crumlin, Junko Yano, Bart Vermang and Joel W. Ager III*



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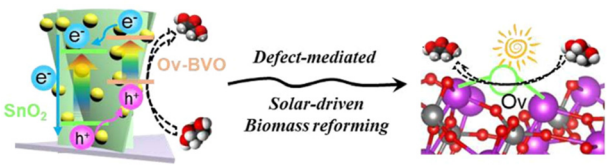
Vacancy-engineered bismuth vanadate for photoelectrocatalytic glycerol oxidation with simultaneous hydrogen production

Haoyue Sun, Rui Tang, Lizhuo Wang, Yuhang Liang, Wenjie Yang, Zhisheng Lin, Xingmo Zhang, Kaijuan Chen, Weibin Liang, Shenlong Zhao, Rongkun Zheng* and Jun Huang*



CORRECTION

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Correction: High performance acidic water electrooxidation catalysed by manganese–antimony oxides promoted by secondary metals

Sibimol Luke, Manjunath Chatti, Darcy Simondson, Khang N. Dinh, Brittany V. Kerr, Tam D. Nguyen, Gamze Yilmaz, Bernt Johannessen, Douglas R. MacFarlane, Aswani Yella,* Rosalie K. Hocking* and Alexandr N. Simonov*