

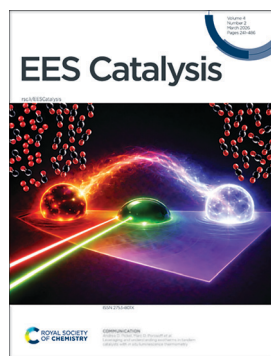
# EES Catalysis

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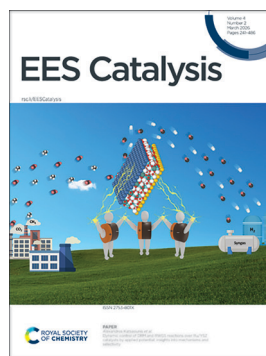
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eISSN 2753–801X CODEN ECEACE 4(2) 241–486 (2026)



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See Andrea D. Pickel, Marc D. Porosoff *et al.*, pp. 333–340. Image reproduced by permission of Marc D. Porosoff from *EES Catal.*, 2026, 4, 333.



### Inside cover

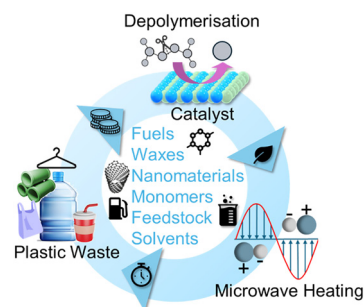
See Alexandros Katsaounis *et al.*, pp. 341–355. Image reproduced by permission of Alexandros Katsaounis from *EES Catal.*, 2026, 4, 341.

## REVIEWS

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### Recent advances in chemical upcycling of plastic waste: microwave-assisted heating and heterogeneous catalysis

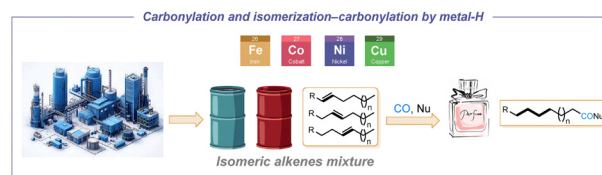
Rachel Breen, Justin D. Holmes and Gillian Collins\*



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### Carbonylation with 3d metal hydrides: expanding the potential for industrial applications

Zhi-Peng Bao, Le-Cheng Wang and Xiao-Feng Wu\*



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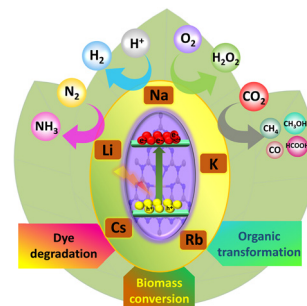
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### Alkali metal-doped g-C<sub>3</sub>N<sub>4</sub>: a multifunctional photocatalytic platform for solar-induced energy conversion and environmental restoration

Pratikshya Dash, Sulagna Patnaik, Sonali Panda, Bhagyashree Priyadarshini Mishra and Kulamani Parida\*

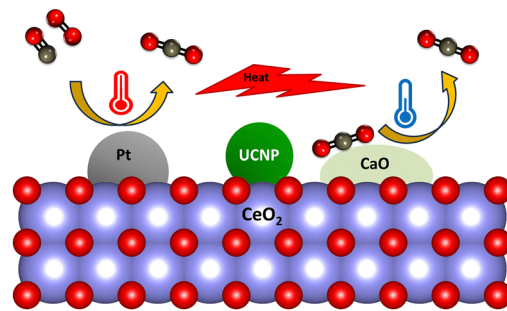


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Sinhara M. H. D. Perera, Benjamin Harrington, Adel Fadhul, Andrea D. Pickel\* and Marc D. Porosoff\*

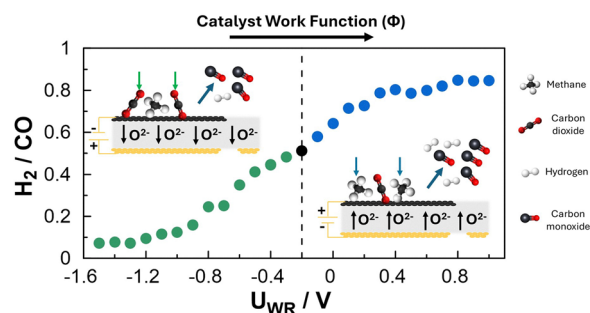


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### Dynamic control of DRM and RWGS reactions over Ru/YSZ catalysts by applied potential: insights into mechanisms and selectivity

Andriana Lymperi, Alexandros K. Bikogiannakis, Georgios Kyriakou and Alexandros Katsaounis\*

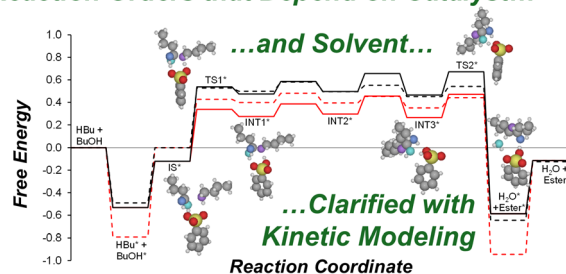


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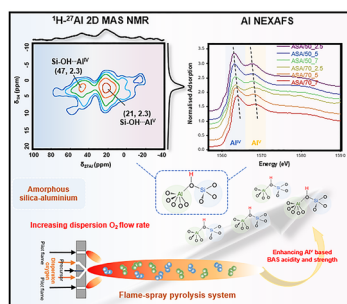
### Solvation effects in liquid-phase esterification reactions catalyzed by hydrogen-form ion exchange resins

Mackenzie R. Todd, Jaeryul Park, Mara Kuenen, Griffin Drake, Mohammed Al-Gharrawi, Luke T. Roling and Thomas J. Schwartz\*

#### Reaction Orders that Depend on Catalyst...



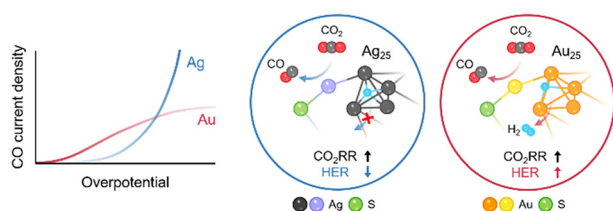
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### Tailoring penta-coordinated aluminium species on silica–alumina *via* flame spray pyrolysis for enhanced arene benzylation

Xingxu Liu, Wenjie Yang, Luke A. O'Dell, Haipeng Li, Qinfen Gu, Suman Pokhrel,\* Lutz Mädler\* and Jun Huang\*

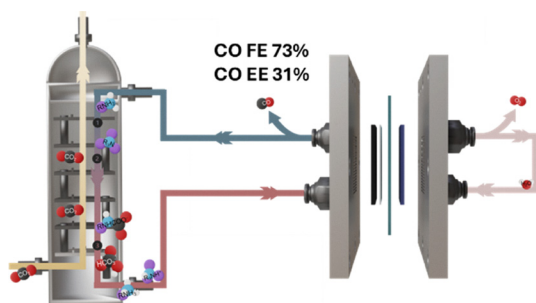
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### Understanding CO<sub>2</sub> reduction selectivity in silver and gold electrocatalysts using atomically precise nanoclusters

Ho Eun Seong, Fang Sun, Qing Tang\* and Dongil Lee\*

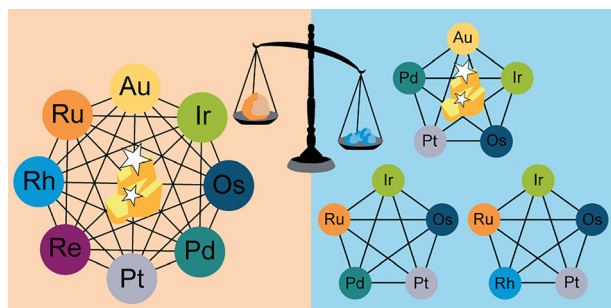
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### Industrial amine blends enable efficient CO electro-synthesis in reactive capture

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### Learning in higher dimensions: a strategy for alloy electrocatalyst discovery

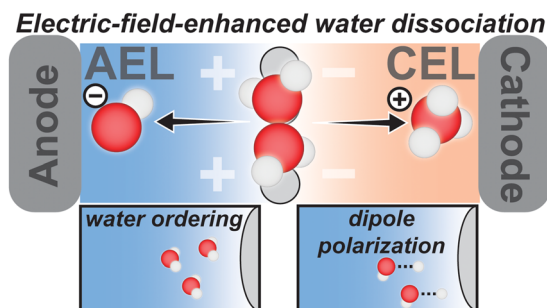
Vladislav A. Mints, Jack K. Pedersen, Gustav K. H. Wiberg, Jens Edolvang-Pejrup, Divyansh Gautam, Kirsten M. Ø. Jensen, Jan Rossmeisl\* and Matthias Arenz\*



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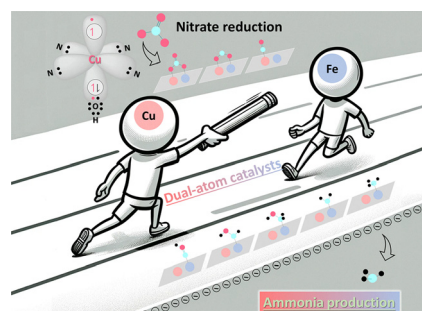
T. Nathan Stovall, Justin C. Bui, Yifan Wu, Shujin Hou, Shannon W. Boettcher\* and Adam Z. Weber\*



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### Cooperative relay catalysis over Cu–Fe dual sites via N-intermediate and hydrogen radical pathways for ammonia production

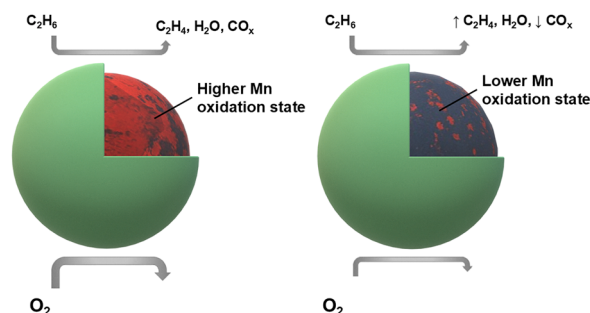
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### Unveiling the role of oxygen species in surface promoted Fe–Mn oxides for chemical looping oxidative dehydrogenation of ethane

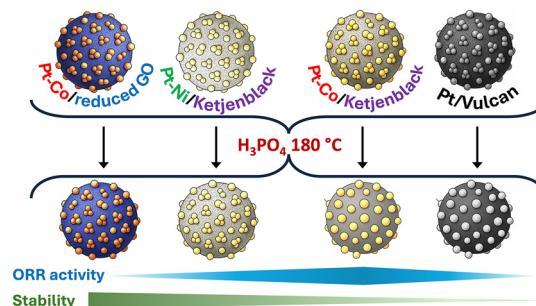
Dennis Chacko, Luke M. Neal, Andrew Pedersen and Fanxing Li\*



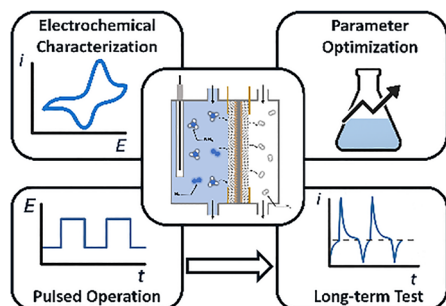
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### Activity and degradation of Pt–Co and Pt–Ni alloy catalysts for application in high-temperature PEM fuel cells

Jan Dismas Buriánek, Martin Prokop, Tomas Bystron,\* Martin Veselý, Lukáš Koláčný, Bruna Ferreira Gomes, Carlos Manuel Silva Lobo, Matija Gatalo, Luka Pavko, Nejc Hodnik, Martin Paidar, Christina Roth, Miran Gaberscek and Karel Bouzek



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Haowei Long, Chun Yat Sit, Akhil Paliwal, Tianhang Cheng, Jitendra K. Gupta, Michael A. Reynolds, Yoon Jun Son, Kun Zhang, Andrew A. Gewirth and Paul J. A. Kenis\*

### CORRECTION

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### Correction: Phosphate modification of Pd/Al<sub>2</sub>O<sub>3</sub> enhances activity and stability in aromatic hydrogenation under CO-contaminated hydrogen

Adrian Seitz, Yaoci Sheng, Ian Backes, Phillip Nathrath, Dennis Weber, Tanja Franken, Roberto Félix, Angelo Rillera, Johannes Frisch, Marcus Bär, Tanja Retzer and Patrick Schühle\*

