EES Catalysis

ROYAL SOCIETY OF CHEMISTRY

EDITORIAL

View Article Online
View Journal

Cite this: DOI: 10.1039/d5ey90030a

EES Catalysis: advancing catalysis together in 2026

Shi-Zhang Qiao †

As we welcome the first issue of *EES Catalysis* in 2026, it is inspiring to reflect on how far our community has progressed in such a short period. Since its launch in 2023, *EES Catalysis* has rapidly evolved from a new open-access journal into a vibrant platform that unites scientists working across all aspects of energy and environmental catalysis. Building on the strong momentum of 2024 and 2025, the journal continues to champion impactful, interdisciplinary research that addresses some of the most urgent challenges faced by our planet.

DOI: 10.1039/d5ey90030a

rsc.li/eescatalysis

Catalysis driving sustainable transformation

Catalysis remains central to achieving global sustainability targets; from developing carbon-neutral energy technologies to enabling efficient chemical manufacturing and environmental remediation. In 2026, these challenges are even more pressing, and the need for transformative catalytic science has never been greater. At *EES Catalysis*, we remain committed to providing a home for studies with both fundamental significance and real-world relevance, supporting innovative concepts, new methodologies, and emerging technologies that shape the future of catalysis. As the world accelerates its transition toward renewable energy and circular chemical economies, catalytic systems will play an essential role in bridging scientific breakthroughs with practical deployment. We particularly encourage research that uncovers mechanistic insights, leverages advanced computational tools, and integrates operando and *in situ* characterization to guide rational catalyst design. By fostering collaboration across materials science, engineering, chemistry, and environmental science, our journal strives to stimulate innovations that can address urgent societal need, from low-carbon fuels and emissions control to green chemical synthesis and resource-efficient processes.

Publication highlights

Over the past year, the journal has published a diverse collection of studies that demonstrate extraordinary creativity and scientific rigor. Researchers around the world have advanced our understanding of catalytic reaction mechanisms, developed high-performance materials for electrocatalysis and photocatalysis, and proposed new strategies for carbon conversion, hydrogen technologies, ammonia synthesis, and beyond. Many of these works have already sparked interest and discussion within the community, showcasing the journal's expanding influence and reach. We are also proud to witness the increasing adoption of transparent peer review, which enhances trust, reproducibility, and collaboration. The dedication of our authors, reviewers, and board members continues to ensure the high-quality standards that define *EES Catalysis*.

In 2025, *EES Catalysis* continued to attract outstanding contributions from leading groups worldwide across diverse subfields of energy and environmental catalysis. Prof. Dapeng Cao's team reported the work "Constructing four-in-one catalysts to realize ultralow voltage hydrogen production at ampere-level current densities", in which a four-in-one V_{SA}–CoN_x catalyst couples hydrazine and urea oxidation with HER/OER in an AEM water electrolyser, enabling ampere-level hydrogen production at ultralow cell voltages and setting a new benchmark for paired electrocatalysis-assisted water splitting (https://doi.org/10.1039/D5EY00117J). Prof. Yan Jiao's team published the comprehensive review "Advancing electrochemical N_2 reduction: interfacial electrolyte effects and *operando* computational approaches", clarifying how interfacial electrolyte organization and operando computational methods jointly determine activity and selectivity, and outlining design principles for next-generation eNRR systems (https://doi.org/10.1039/D4EY00197D). In the field of photocatalysis, Prof. Hyojung Cha and co-workers reported the study "Synergistic dual-electron acceptors in linear conjugated polymers for boosting photocatalytic hydrogen evolution", demonstrating that a

School of Chemical Engineering, The University of Adelaide, Adelaide, SA 5005, Australia.
E-mail: s.qiao@adelaide.edu.au
† Editor-in-Chief, *EES Catalysis*

dual-electron-acceptor engineering strategy in linear conjugated polymers simultaneously enhances exciton dissociation and charge separation, leading to markedly improved visible-light hydrogen evolution performance (https://doi.org/10.1039/D5EY00155B). Meanwhile, Prof. Meenesh R. Singh's group authored the perspective ''Advancements in dinitrogen activation for catalytic breakthroughs'', summarizing advances across molecular, heterogeneous, electrochemical and plasma-assisted pathways, and offering mechanistic insights toward sustainable ammonia synthesis (https://doi.org/10.1039/D5EY00033E). Prof. George W. Huber and co-workers presented ''Kinetic and process modeling of Guerbet coupling chemistry over Cu–Mg–Al mixed oxides'', establishing a quantitative micro-kinetic and process model for upgrading ethanol and butanol to C_6^+ diesel-range oxygenates over Cu–Mg–Al mixed-oxide catalysts (https://doi.org/10.1039/D5EY00045A).

Together, these studies demonstrate the breadth of catalytic science published in *EES Catalysis* and exemplify the journal's mission to bridge fundamental understanding with scalable technologies for a sustainable energy future.

Strengthening our editorial mission

Our international editorial team, which is supported by experts across chemistry, materials science, physics, engineering, and environmental sciences, continues to ensure a rigorous and fair peer-review process. We deeply appreciate the invaluable contributions of our Associate Editors and Advisory Board members, whose expertise and commitment help guide the journal's scientific direction and uphold its vision. Their active engagement in evaluating cutting-edge manuscripts, identifying emerging trends, and providing strategic advice has been fundamental to shaping *EES Catalysis* into a trusted platform for impactful catalytic science.

We will also continue offering authors a smooth and efficient publishing experience, emphasizing rapid decisions, constructive feedback, and transparent processes. As part of the Royal Society of Chemistry's open-access initiative, we remain dedicated to ensuring equitable access to knowledge and lowering barriers for global contributors.

Looking ahead to 2026 and beyond

In 2026, *EES Catalysis* will continue to embrace new opportunities and challenges in catalysis research. We particularly welcome interdisciplinary topics such as AI-driven catalyst design, operando characterization, sustainable chemical manufacturing, and integrated energy systems. We believe that catalysis research will increasingly benefit from cross-field collaboration, and our journal will remain an inclusive platform for such innovation. In particular, we hope to encourage studies that bridge fundamental mechanistic understanding with device-level validation, as well as contributions that explore data-centric methodologies, predictive modelling, and automation-enabled discovery – all of which are rapidly reshaping the landscape of modern catalysis.

As we set our sights on the future, we are confident that *EES Catalysis* will continue to serve as a catalyst by bringing together exceptional research, inspiring scientific dialogue, and driving technological advances that contribute to a cleaner and more sustainable world. We also foresee a growing role for open science, reproducible workflows, and transparent communication in accelerating progress across global catalysis communities.

Finally, we extend our heartfelt thanks to all authors, reviewers, board members, and readers for your continued support. We look forward to another productive and exciting year with you and eagerly anticipate the transformative discoveries that will define the next chapter of catalysis research.

Best wishes,
Shi-Zhang Qiao
Editor-in-Chief