



Special Issue Based on 7th International Conference on Catalysis and Chemical Engineering

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This special issue of *Topics in Catalysis* comprises a collection of articles selected from contributions that were primarily based on research presented by scientists and engineers at the “7th International Conference on Catalysis and Chemical Engineering” (CCE-2023) held in Las Vegas, NV, USA on February 20–24, 2023. This conference, organized by the United Scientific Group (USG) in TX, USA, offered a unique opportunity for academic researchers, industry professionals, and emerging startups from around the globe to convene and engage in dialogues concerning the latest breakthroughs in the fields of heterogeneous catalysis and chemical engineering.

The scientific program of the conference was structured around various catalysis-related topics, including catalysis for chemical synthesis, catalysis for energy applications, catalytic processes, catalytic materials, reaction mechanisms, photocatalysis, electrocatalysis, biocatalysis, reaction engineering, and the simulation and modeling associated with catalytic processes. In keeping with the tradition established at this conference series, young researchers were given a platform to showcase their work through both oral and poster presentations, with the most outstanding presenters receiving recognition. In total, the conference featured 196 presentations, including six plenary and ten keynote lectures. A notable highlight was Nobel Laureate Prof. Richard R. Schrock’s talk on Olefin Metathesis Catalysts.

Subsequently, selected participants were invited to contribute manuscripts based on their presentations. Following

a stringent peer review process, seventeen manuscripts were accepted for publication in this special issue of the journal. We extend our gratitude to the Chairman of the conference and the members of the Organizing Committee for allowing us to publish these selected manuscripts in the Special Issue of “*Topics in Catalysis*”, published by Springer.

The selected articles are organized into the following topics: electrocatalytic, thermochemical, and photocatalytic carbon dioxide conversion (articles 1–3), heterogeneous catalysis (articles 4–6), catalysis by early transition metal complexes (articles 7–10), computational catalyst and process design (articles 11–13), green chemistry and environmental catalysis (articles 14 and 15), and catalytic processes for organic synthesis (articles 16 and 17).

As guest editors, we wish to express our appreciation to all contributing authors and reviewers who have made this special issue possible. We anticipate that readers will find these articles useful, as they offer insights into the core principles and the latest technological advancements of catalysis. We are confident that the publication of this special issue will draw the attention of more scientists and researchers to the upcoming conference in the series, scheduled to take place from February 26 to 28, 2024, in Boston, MA, USA.

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