



## Advanced Catalytic Materials for Carbon Dioxide Reduction

Guest Editors:

**Dr. Meng-Nan Zhu**

Department of Chemical Engineering, McMaster University, 1280 Main St W, Hamilton, ON, L8S 4L8, Canada

**Dr. Meng Li**

Energy and Environment Science and Technology, Idaho National Laboratory, Idaho Falls, ID, USA

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### Message from the Guest Editors

To mitigate current environmental issues and climate changes caused by the over-emission of carbon dioxide, the traditional energy systems relying on non-reproducible fuels need to be re-envisioned. Converting carbon dioxide to value-added chemicals in an electrolyzer presents one promising avenue toward a carbon net-zero future. At the current stages, however, the CO<sub>2</sub> reduction reactions (CO<sub>2</sub>RR) still face significant challenges, such as the unsatisfactory product selectivity, low energy efficiency, long-term stability, etc., hindering the industrialization and large-scale application of CO<sub>2</sub>RR techniques.

The aim of this Special Issue of *Materials* is to present a comprehensive range of topics that advance the CO<sub>2</sub>RR-related techniques by enhancing the fundamental understanding of materials science. Research focusing on novel catalyst design, synthesis, and characterization and the integration of materials into practical CO<sub>2</sub> conversion systems is of interest. Submissions addressing other pivotal components, such as membranes, electrolytes, anodes, etc., are also encouraged.





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### Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

## Message from the Editor-in-Chief

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Materials Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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