

## Special Issue

# Advances in Synthesis and Characterization of Zeolite Catalysts for Sustainable Applications

### Message from the Guest Editors

Zeolites have been utilized in industrial catalysis and separation processes for decades, initially in petroleum refinement and more recently in sustainable chemical applications. Their catalytic efficiency is attributed to three key properties: acidity, shape selectivity, and high surface area. Advances in post-synthesis modifications, such as dealumination, metal loading, and ion exchange, enable the tuning of acidity and porosity, thus optimizing the selectivity and stability of catalysts. This Special Issue aims to highlight recent advances in the synthesis, characterization, and application of zeolite catalysts, emphasizing their role in sustainable and environmentally friendly industrial processes. We therefore welcome the submission of articles that provide insights into zeolite design and novel applications in renewable energy, pollution mitigation, and chemical transformations.

### Guest Editors

Prof. Dr. Bruno O. Dalla Costa

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Dr. María Soledad Legnoverde

### Deadline for manuscript submissions

20 June 2026



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