

## Special Issue

# Advanced Zeolites in Industrial Effluent Purification and Carbon Sequestration

### Message from the Guest Editor

This Special Issue aims to compile advanced scientific contributions on innovative applications of zeolites in the development of sustainable environmental technologies. The scope encompasses the use of synthetic and natural zeolites, functionalized or modified, for the removal of emerging contaminants in industrial effluents, such as heavy metals and recalcitrant organic compounds (e.g., dyes) and also for the capture and sequestration of greenhouse gases, with a focus on CO<sub>2</sub>. Priority will be given to studies exploring adsorption mechanisms, selective catalysis, diffusion dynamics in porous media, as well as process-material integration approaches that expand efficiency and applicability at scale. Also, submissions that combine pollutant remediation with waste valorization, resource recovery, and energy consumption reduction, promoting synergies with the principles of the circular economy are encouraged. This Special Issue aims to provide an interdisciplinary platform for discussions in materials science, process engineering, and environmental chemistry, with an emphasis on technology transferability and sustainable impact.

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### Guest Editor

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### Deadline for manuscript submissions

closed (20 March 2026)



## Applied Sciences

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### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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