

Special Issue

Understanding the Zeolite Catalysis: Synthesis and Application

Message from the Guest Editor

Zeolites and zeolite-based materials are versatile catalysts for a wide range of important transformations in both current and future chemical industries. Recent developments in the rational design and fabrication of advanced zeolites and zeolite-based composites have significantly expanded the scope of synthetically available structures. Further breakthroughs in this direction are hardly possible without a deep understanding of the corresponding structure–activity, structure–selectivity, and structure–stability relationships. The aim of this Special Issue is to highlight promising research on zeolite catalysis, including conventional catalysis, photocatalysis, electrocatalysis, and plasma catalysis. Special attention will be paid to articles (i) linking the physico-chemical properties of zeolite-based materials with their catalytic action; (ii) employing novel characterization strategies to deepen the understanding of the existing catalytic systems; (iii) utilizing the fundamental understanding of zeolite materials for the rational design of improved catalysts; and (iv) unravelling the mechanistic pathways of zeolite catalysis.

Guest Editor

Dr. Nikolay Kosinov

Laboratory of Inorganic Materials and Catalysis, Eindhoven University of Technology, PO Box 513, 5600 MB Eindhoven, The Netherlands.

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

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