Special Issue

Mechanochemical Approaches for the Preparation of Catalysts: Toward Green Synthesis of (Nano) Materials and Chemicals

Message from the Guest Editor

A captivating prospect lies in the mechanochemical synthesis of heterogeneous catalysts using active metals such as Ru, Pt, Pd, Fe, Cu, and Ni, among other transition metals, in single-atom or single-cluster configurations that are supported on carbonaceous materials, ideally derived from biomass. This Special Issue welcomes the submission of papers that feature novel research presenting mechanochemical approaches (such as ball-milling, extrusion, resonant acoustic mixing, etc.) for the synthesis of catalytic materials. Authors are required to emphasize the incorporation of most, if not all, fundamental principles of green chemistry; this includes the following: (i) prevention, (ii) optimized raw material utilization, (iii) improved waste management, (iv) energy efficiency, and (v) minimized solvent usage. We also encourage the submission of review articles that spotlight the advancement of mechanochemical techniques in heterogeneous catalysis, particularly those exploring biomass valorization methods. Submissions that consider the principles of green chemistry, incorporating aspects of scale-up, energy efficiency, and equipment design, are particularly welcome.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

There are many issues facing society, such as energy/food/water security, plastic pollution, antibiotic resistance, global warming. To solve these (and other issues), scientists and engineers need to work together to tackle these imminent dangers. The field of Green (or Sustainable) Chemistry has been transformed in the last 30 years since Paul T. Anastas and John C. Warner pioneered the now famous “12 Principles of Green Chemistry”. The journal, Sustainable Chemistry (published by MDPI), aims to be one of the go-to journals in the area, publishing cutting-edge research in the area more broadly. The open access model allows our work to reach a broad base of readers from all corners of the world.

Editor-in-Chief

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