

## Topical Collection

# Layered Double Hydroxides and Related Materials for Advanced Heterogeneous Catalytic Processes

### Message from the Collection Editors

Layered double hydroxides (LDHs) belong to the class of anionic clays and possess some specific properties, such as uniform distribution of cations/anions in the network, tailored textural characteristics, high surface area, both acid-base and redox properties, and memory effect, which make them peculiar catalytic materials, catalyst supports, and precursors for multicationic mixed oxides, supported metal catalysts, high-entropy oxides, and composite or hybrid materials (polymer/LDH nanocomposites, graphene oxide/LDH hybrids, core/shell multifunctional materials, thin films, etc.). They can act as acid-base, redox, bifunctional or multifunctional heterogeneous catalysts, photocatalysts, and electrocatalysts for different processes. Thus, the present topical collection is devoted to the investigation of the catalytic behavior of innovative LDH-based materials in a wide range of challenging processes, including, but not limited to, the synthesis of value-added chemicals and fuels, biomass conversion, energy production, pollution abatement, etc.

### Collection Editors

Prof. Dr. Ioan-Cezar Marcu

Laboratory of Chemical Technology and Catalysis, University of Bucharest, 4-12, Blv. Regina Elisabeta, 030018 Bucharest, Romania

Dr. Octavian D. Pavel

Faculty of Chemistry, University of Bucharest, 050663 Bucharest, Romania



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

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