Special Issue

Chalcogenides as Efficient Catalysts: Synthesis, Characterization and Applications

Message from the Guest Editors

Chalcogenides are compounds that incorporate a chalcogen element such as sulfur, selenium, tellurium, polonium or one or more metals, and thus exhibit various metallic properties. These materials are good candidates for n or p-type semiconductors, with their application being demonstrated using various chemical methods; this includes chemical bath deposition (CBD), electrodeposition, successive ionic layer adsorption and reaction, spray pyrolysis, etc. Chalcogenide materials have garnered significant attention in recent years due their distinctive optical, electronic and catalytic properties. Chalcogens can be used to tune the electronic levels of metal catalysts, producing metal chalcogenides with different properties according to the elements involved in the compound phase and fabrication method. Therefore, metal chalcogenides have been praised for their efficient catalytic activity in various applications.

Guest Editors

Dr. Amanda Carrillo Castillo

Prof. Dr. Priscy Alfredo Luque Morales

Dr. Santos Jesús Castillo

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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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Prof. Dr. Keith Hohn
Carl R. Ice College of Engineering, Kansas State University, Manhattan, KS, USA

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