Special Issue

Plasma-Catalysis for Environmental and Energy-Related Applications

Message from the Guest Editors

Plasma–catalysis has been a topic of research for many years due to its potential for applications in a wide range of chemical, environmental, and energy-related processes. The coupling of plasma with catalysis can steer the reactions in the desired direction, thus providing improved selectivity and reducing unwanted by-products. Environmental applications have been focused on the removal of various air pollutants, such as nitrogen oxides and volatile organic compounds, as well as on the degradation of organic pollutants in water. Energy applications of plasma–catalysis include hydrogen production, syngas production by partial oxidation of methane, higher hydrocarbons or oxygenates, carbon dioxide dry reforming, and ammonia synthesis. Recently, significant research efforts have been devoted to explaining the mechanisms of plasma–catalyst interaction. This Special Issue welcomes research papers on experimental work and/or fundamental aspects of plasma–catalysis, as well as reviews that describe the state of the art in the abovementioned topics.

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Deadline for manuscript submissions

closed (31 August 2021)

Catalysts

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 7.6

mdpi.com/si/28322

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