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Plasma Assisted Photocatalysis for Activation of Small Molecules

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Message from the Guest Editors

This special issue will be focused on a combination of non-thermal plasma and catalysis in an attempt to improve the selectivity and/or energy efficiency of plasma chemical transformations. Until recently, catalysts used in plasma-assisted catalytic processes are mostly “thermal” catalysts, i.e. catalysts used at non-plasma conditions and higher temperatures for similar reactions. This issue invites original contributions and review papers from authors to demonstrate the efficient use of semiconductor and plasmonic-type heterogeneous catalysts in combination with non-thermal plasma as well as photochemical transformations on plasmonic nanoparticles for conversion of small molecules. Special attention will be devoted to the development of modern time-resolved characterization of non-thermal plasmas and photocatalytic reactions to study kinetics of ultra-fast chemical reactions.



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Special Issue