Special Issue

Photoelectrocatalysis for Sustainable Environment: Green Technology Advances in the Water-Energy-Climate Nexus

Message from the Guest Editors

Over the last few years, photoelectrocatalysis has been developed as an exciting green technology with high potential for a wide variety of sustainable applications, including water treatment, energy production, climate protection, sustainable synthesis of products, and resource recovery. The synthesis of new nano-structured photoelectrocatalysts has enabled new pathways to exploit benefits not only with UV light but also with visible light that can be provided by free sunlight as an energy source. All of this together is highlighting photoelectrocatalysis as a green, inexpensive, and innovative technology to face environmental challenges. Their implication in water treatment and disinfection, water splitting within the hydrogen economy, or CO2 reduction to valuable chemical products has opened the doors to intensive research in this field. This Special Issue aims to cover recent advances from fundamentals to applications at higher technology readiness levels, and new trends using efficient photoelectrochemical cells with new advanced photocatalysts to offer green solutions to environmental problems.

Guest Editors

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