

Special Issue

Emerging Plasma-Based Technologies for Sustainable Processes and Resource Recovery

Message from the Guest Editors

This Special Issue invites original high-quality contributions that advance both fundamental understanding and practical applications of plasma technologies within environmental and process engineering. Original research articles, reviews, and case studies related to the design, optimization, modeling, and implementation of plasma-assisted systems for sustainability-driven applications are welcome. Topics of interest include but are not limited to:

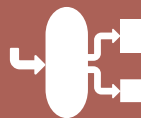
- Plasma-assisted water and wastewater treatment
- Plasma-based air pollution control and VOC abatement
- Plasma-based CO₂ reduction
- Plasma-based atmospheric nitrogen fixation
- Resource recovery from industrial, agricultural, or municipal wastes
- Plasma-assisted synthesis and valorization of fuels or materials
- Plasma-assisted synthesis of nanoparticles for environmental applications
- Plasma-catalysis and plasma-chemical reaction mechanisms
- Modeling, simulation, and process optimization of plasma systems
- Integration of plasma processes with renewable energy and circular economy frameworks
- Techno-economic and life cycle assessments of plasma-based processes

Guest Editors

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