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Trends in Catalytic Wet Peroxide Oxidation Processes

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Message from the Guest Editors

This Special Issue aims to report recent advances and future challenges in the field of catalytic wet peroxide oxidation. In this context, the subjects that will be preferably covered by this Special Issue are focused on the improvement of CWPO performance seeking for its industrial implementation: (i) the exploration of novel catalysts (nanocatalysts, free-metal and magnetic catalysts), paying special attention to their durability and reusability: (ii) the development of industrial-scale heterogeneous catalysts (robust structured catalysts); (iii) the intensification of CWPO by energetically-assisted approaches with light, microwave, or ultrasound; (iv) the determination of reaction kinetics and mechanisms: (v) the modelling and simulation of reactors; (vi) the application of CWPO to the treatment of real industrial wastewaters, pollutants of emerging concern, and pathogens inactivation (disinfection); (vii) the environmental impact of the process, considering both the aqueous and gas phases; and (viii) the economic evaluation and scale up challenges of CWPO.



