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New Trends in Photo(Electro)catalysis: From Wastewater Treatment to Energy Production

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Message from the Guest Editor

Remediation of wastewater, up to a level acceptable for discharge into receiving waterbodies, involves an ever-growing demand of energy, so effective and low energy use demand treatment processes that are highly desirable

This Special Issue aims to focus on new trends in photo-electrocatalysis, not only for aspects related to possible advances in materials science, but also to new possible applications of the technology. Actually, we may consider the different philosophies that have been prevailing in these last few years: rather than considering the wastewater treatment process as just a way to destroy or remove organics from waste, the pollutants may be considered as a source of energy, so that the electrons produced by the oxidative process could be recovered and possibly used to obtain new chemicals and fuels.

Thus, research on new morphologies and structures, which allow more photoactive, visible responsive, and stable materials will be welcome, as well as studies on combined processes in which photo- or photo-electrochemistry contributes to an increase in the sustainability of the whole process, in terms of lowering costs and achieving the most valuable final products.