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Title:	Wastewater treatment with the advent of TiO ₂ endowed photocatalysts and their reaction kinetics with scavenger effect
Authors:	Adak, Mrinal K. (/jspui/browse?type=author&value=Adak%2C+Mrinal+K.)
Keywords:	Wastewater treatment Photocatalyst Photo-Fenton TiO ₂ Kinetic study
Issue Date:	2021
Publisher:	Elsevier
Citation:	Journal of Molecular Liquids, 338, 116479.
Abstract:	In the view of long-term water sustainability and worldwide problems of environmental pollution, new and novel scientific studies on modern technologies and advance scientific processes, deep understanding of the mechanistic aspects of the processes and the circumstances affecting it, exhaustive research on the photocatalyst based wastewater treatment hold a great promise. Over the last decade, photonmediated titanium dioxide, photo-Fenton processes, and their modifications have been widely investigated as an efficient, robust, and attractive photocatalytic system for wastewater treatment, however, the correlation between TiO ₂ based composites, treatment processes and photocatalytic performances remains still under debate. This review provides an overview of the development of TiO ₂ based photocatalytic systems and new functionalized photocatalysts, their kinetic studies, and role of scavengers related to the advance and modified processes in wastewater treatment. Furthermore, the treatment of real wastewater in industrial sector and the futuristic cost-effective alternative with high catalytic capacity have also been delineated.
Description:	Only IISERM authors are available in the record
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