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(57) Abstract :
The present invention relates to the field of nanotechnology and more specifically a novel cost-effective method for synthesizing hematite nanoplatelets and hematite-ZnO core-shell nanospindles with superior performance parameters for photocatalytic applications. The present invention is related to the synthesis and characterization of hematite-based core-shell nanostructures. These nanostructures exhibit superior performance parameters, environmental friendliness, and biocompatibility, making them suitable for various photocatalytic applications. The invention aims to address the problem of removing organic contaminants, particularly dyes, from wastewater.

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