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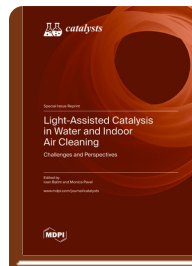
## **Light-Assisted Catalysis in Water and Indoor Air Cleaning: Challenges and Perspectives**

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The detrimental effects of environmental pollution on human health, combined with global climate change, make it a critical contemporary problem. Despite the fact that water covers more than 71% of the Earth's surface, ensuring access to high-quality drinking water for everyone is a major concern that societies are encountering in the 21st century. Utilizing renewable solar light and a catalyst to mineralize various harmful chemicals present in indoor air and water sources into benign small molecules, such as H<sub>2</sub>O and CO<sub>2</sub>, is an attractive approach. In this context, photocatalytic processes have consistently offered smart, green, and eco-friendly scale-up methods for environmental remediation. Numerous photocatalysts have proven to be successful in achieving the mineralization of chlorinated pollutants, organic contaminants, dyes, or antibiotics. An analysis of the existing literature reveals the need for research studies to focus on developing efficient photocatalysts capable of mineralizing contaminants into non-toxic CO<sub>2</sub>. Only such photocatalytic materials should be envisaged for environmental remediation. This Special Issue, titled "Light-Assisted Catalysis in Water and Indoor Air Cleaning: Challenges and Perspectives", is a collection of ten papers, including three reviews and seven research articles. The aim of this Special Issue is to present recent advancements in the photocatalytic removal of pollutants, elucidating the main factors contributing to their mineralization and the implication of reactive oxygen species (ROS) through dedicated experiments.



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