

**Recent Advances in Photocatalyst for Photocatalytic Degradation of Organic Pollutants:
Short Review**

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Abstract

Wastewater from industries that predominantly consist of organic pollutants significantly contributes to water pollution and harms the environment, which should be urgently solved. Among available wastewater treatment technologies, photocatalysis has attracted much interest because of its high efficiency, cleanliness, and sustainability. Various metal oxides photocatalysts have been explored, but each of the metal oxides photocatalyst has its limitation, such as agglomeration, rapid electron-hole recombination, and photo corrosion. Thus, practical design and facile synthesis of photocatalysts are still significant challenges. Due to that, various researchers have introduced and studied photocatalyst modification, such as doping with noble metal or non-noble metal, crystal facet engineering, surface modification, dye sensitization, and Z-scheme photocatalyst system to enhance the photocatalyst's catalytic properties. It was also reported that modifying the photocatalyst's catalytic properties would able to enhance the degradation of organic pollutants. In this review article, the recent advances in photocatalysts for photocatalytic degradation of organic pollutants are reported. The future prospect and conclusions are also discussed. This review is expected to provide an in- depth understanding of photocatalyst development, thus accelerating the evolution of the photodegradation field for pollutant degradation.

Keywords: Wastewater; Photocatalysis; Photocatalyst; organic compounds.