PHOTOCATALYTIC REDUCTION OF AROMATIC AMINES USING BIMETALLIC PHOTOCATALYST

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ABSTRACTS

PHOTOCATALYTIC REDUCTION OF AROMATIC AMINES USING BIMETALLIC PHOTOCATALYST

Aromatic amines are very useful in the production of various products such as polymers, rubbers, agricultural chemicals and others. However, due to difficulty in removing this compound, some irresponsible parties choose to discharge aromatic amines into the soil, water, and atmosphere, causing significant disruptions to organisms and the environment. Therefore, bimetallic photocatalyst which is referred to the combination of two distinct metals are proposed as the material for the reduction of aromatic amines. This alternative potentially replace traditional less eco-friendly reduction methods and inspire researchers to investigate new metal combinations, ratios and structural configurations in order to design and synthesize catalyst with greater impact. Besides, due to the difficulty to analyze the different types of aromatic amines, designing and optimizing bimetallic photocatalysts and determining the suitable ratio of these two metals, a thorough investigations is required to implement this approach. To overcome the problems, we must discover solutions for each research questions about the approach to implement strategies for enhancing photocatalytic activity of bimetallic photocatalysts with a priority on charge separation, transfer efficiency and light absorption, comparison of the performance of bimetallic photocatalysts with monometallic photocatalysts and analyzing the environmental impact of using bimetallic photocatalysts in the reduction of aromatic amines.

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