

Photocatalytic Degradation of MB-Dye by CZTS Catalyst

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Editor's note: Photocatalysis is an effective method for addressing wastewater issues, particularly in removing organic pollutants from textile industry outputs. Illiyas and Preetha developed copper zinc tin sulfide (CZTS) thin films using the spin coating technique and assessed their photocatalytic activity with a solution of methylene blue (MB) dye. The study found apparent rate constants of 0.00562 min^{-1} for a 2 cm^2 catalyst and 0.00674 min^{-1} for a 4 cm^2 catalyst, with degradation rates of about 46% and 60% after 120 minutes, respectively. These results highlight that photocatalytic degradation efficiency is influenced by both the thin film's surface area and the irradiation time.

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