

# **PUBLICATIONS**

**PHOTOCATALYTIC DEGRADATION OF EVAN'S BLUE IN AQUEOUS  
SOLUTION USING GRAPHITIC CARBON NITRIDE**

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**Abstract**

The photocatalytic degradation of Evan's blue was carried out using graphitic carbon nitride (g-C<sub>3</sub>N<sub>4</sub>) as a photocatalyst. The effect of various parameters such as amount of catalyst, pH, light intensity and concentration of the dye has been studied on the rate of reaction. It was observed that this photocatalytic process followed pseudo-first order kinetics. The optimum conditions for degradation of Evans blue were achieved as:

pH = 9.5, [Evans blue] =  $1.00 \times 10^{-4}$  M, g-C<sub>3</sub>N<sub>4</sub> = 0.10 g and light intensity = 60.0 mW cm<sup>-2</sup>

**Key Words:** Photocatalytic degradation, Evan's blue, Graphitic carbon nitride, Advanced oxidation, visible light.

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# Photocatalytic Degradation of Azure-A in Aqueous Solutions using Graphitic Carbon Nitride

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## Abstract

The photocatalytic degradation of Azure-A was studied using graphitic carbon nitride (g-C<sub>3</sub>N<sub>4</sub>) as a photocatalyst. The effect of various parameters such as amount of catalyst, pH, light intensity and concentration of the dye has been studied on the rate of degradation. Kinetic studies revealed that this photocatalytic process followed pseudo-first order kinetics. A tentative mechanism for the photocatalytic degradation of Azure-A involving hydroxyl radical has been proposed.

**Keywords:** Photocatalytic degradation, Azure-A, Graphitic carbon nitride.

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