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Titre du l'article / ou bien communication:

Gliding arc plasma assisted photocatalytic degradation of anthraquinonic acid green 25 in solution with TiO₂

Date de publication :

Jour/mois/année :

2007

Nom de journal :

Applied Catalysis B: Environmental

Numéro de série / ou bien collection :

3-4

Numéro de volume :

72

Identification :

ISSN/ ou bien ISBN :

0926-3373

Type :

Article/ ou bien communication

Article

Langue de l'article : Anglais

Mot clé :

Glidarc, dye, photocatalyst, decolourization , TiO₂

Résumé :

Anthraquinonic acid green 25 (AG 25) removal was investigated by plasma chemistry using non-thermal gliding arc at atmospheric pressure. The gaseous species formed in the discharge, and especially OH radicals, induce strong oxidizing effects in the target solution. The removal of the dye was carried out in the absence and presence of TiO₂ as photocatalyst. The decolourization of AG 25 was followed by UV-vis spectrometry (at 643 nm), while the degradation was followed by COD measurements. The effects of operating variables such as initial concentration of AG 25 and catalyst concentration were investigated. Experiments were carried out to optimise the amount of TiO₂. The results showed that maximum degradation was attained for 2 g L⁻¹ TiO₂ concentration. At this optimum concentration, the dye (80 µM) was totally decolourized within 15 min of plasma-treatment time, and 93% removal of initial COD was ...