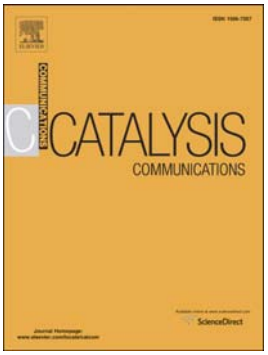

Decoloration of organic dyes in aqueous phase by catalytic hydrotreatment

A.H. Pizarro

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Decoloration of organic dyes in aqueous phase by catalytic hydrotreatment

A. H. Pizarro*

[1] Abengoa Research, Campus Palmas Altas, C/ Energía Solar 1, 41014 Seville, Spain

* Corresponding author. Tel.: +34-954970503; Fax: +34-91497

E-mail address: alejandro.herrero@abengoa.com (A.H. Pizarro)

Abstract

The catalytic hydrotreatment of organic dyes has been carried out in aqueous solution under ambient-like conditions (25 ºC, 1 atm) using a commercial Pd/γ-Al_2O_3 catalyst. The treatment leads to the total decoloration of the prepared aqueous solutions. The total decoloration of the resulting effluents was attributed to catalytic reaction with an important contribution of adsorption in some cases. The results obtained demonstrate that hydrotreatment could be potentially used to eliminate completely colour from industrial effluents that contain different type of organic dyes such as methine, anthraquinone, indigo, iminoquinone dyes and carotenes.

Keywords: discoloration; organic dyes; Pd; indigo; anthraquinone; methine