

Preparation of titanium dioxide photocatalyst loaded onto activated carbon support using chemical vapor deposition : A review paper

Abstract

Various methods to prepare and characterize TiO₂ photocatalyst loaded onto activated carbon (AC) support have been developed over the last decade. This photocatalyst has been used in a variety of investigations, i.e. from water decontamination to direct pollutant degradation in aqueous and gas phase systems using UV irradiation and lately with the assistance of ultrasonic sound waves. Chemical vapor deposition (CVD) method is one of the most promising and well-researched methods for deposition of catalysts onto supports. Given its advantage, from an engineering and fundamental aspect, CVD method also has commercial applications. A detailed search of published reports of these investigations was carried out and analyzed in this paper with focus on CVD techniques, activated carbon support and sonication. (c) 2008 Elsevier B.V. All rights reserved.