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Discussions

Interactive comment on "Photocatalytic degradation of Dyes in Water by Analytical Reagent Grade Photocatalysts – A comparative study" *by* Dnyaneshwar R. Shinde et al.

Anonymous Referee #1

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Manuscript dwes-2017-20 Title: Photocatalytic degradation of Dyes in Water by Analytical Reagent Grade Photocatalysts – A comparative study Authors: Dnyaneshwar R. Shinde, Popat S. Tambade*, Manohar G. Chaskar, Kisan M. Gadave In order to find efficient and low cost photocatalyst for dye degradation in aqueous solution, this paper evaluates photocatalytic activity of the Analytical Reagent (AR) grade ZnO, TiO2, SnO2, and Degussa P-25. The Photocatalytic experiments were carried out in a specially designed flat slurry reactor (FSR) and determined under optimized condition of pH of the dye solution (pH=9), different kinds of photocatalysts are used to degradate industrial dyes crystal violet (CV), basic blue (BB) and methyl red (MR) in aqueous solution under solar irradiation. In addition, the structures and characters of all the cat-

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Discussion paper

alysts were evaluated by XRD, SEM, UV-vis spectrometer, and so on. The topic of the manuscript is interesting. However, the manuscript is not well written and organized due to poor English. Several illogical express and many editorial mistakes can be found in the paper. Therefore, the manuscript has to be refined due to concerns cited below.

Major comments: Technical comments 1)Page1.The abstract does not cover the main points of the manuscript. In the article, the photocatalytic activity experiments and results are foremost. I strongly suggest the author to rewrite it with logical organization. 2)Page 10ïijŐYou mentioned that "When rate constants represented in Table 1 are compared with percentage adsorption (Table 3), it is . . .", Table 1 is XRD data, so the comparing is meaningless. Please revise it. 3)The photolytic degradations of dyes as control are not provided, which is very important for the mechanism analysis. For example, photosensitization is related with the light intake and photolytic degradation of dyes. 4)The pH conditions of the experiments are not clear. If the pH means a initial pH, the change of pH during the experiments should be provided. Otherwise, the buffer solution used should be clarified. Editorial comments Some, not all, of the editorial mistakes are shown below: 5)Page 1. 18th line .Should use "ZnO surface is loaded with silver metal" instead of "silver metal loaded of on ZnO surface". 6)Page 2. 24th line. Should use "is reported to be responsible for the photocatalystic activity " instead of "are reported to be responsible for the photocatalysitc activity". 7)Page 8. 26th line. Should use"and needs a large amount of UV radiation to excite electron–hole pairs in this catalyst " instead of"and need a large amount of UV radiation to excite electron–hole pairs in this catalyst ". 8)Page 8. 27th line. Should use"Degussa P-25 has the lowest band gap"instead of "Degussa P-25 have the lowest band gap". 9)Page 9. 8th line, "and due to this it shows more photocatalytic activity than anatase",sentence structure should be modificated. 10)page 11. 21th line, shoud use"and helps to reduce rate of .."instead of "and help to reduce rate of..".

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