Response Letter and Summary of Changes

We thank the reviewers for their helpful comments and suggestions to improve the manuscript. Changes were made in the revised manuscript (highlighted in yellow for easy identification) according to the reviewers’ comments. The following summarizes our responses to the points raised.

Reviewers Comments:

Reviewer 1:

- The target of the manuscript is evaluation of thermal treated TiO$_2$ photocatalysts for water purification in order to establish essential factors that lead to increase the photocatalytic activity. This target is important and actual. So, the manuscript is dedicated to an actual problem of chemistry, water purification technologies. However, there are some problems in the manuscript that should be corrected.

1. In line 91 is written: The sample band gap ($E_g$) was calculated by Eq. 3. However, there is not Eq. 3 in the manuscript.

   - This mistake has been corrected.

2. On Figures 6, $K_{app}$ (min$^{-1}$) is better to show separately in order to avoid confusion with right axes values.

   - This comment has been amended in the manuscript.

3. Figure 7, If the intensities on the Figure are present in a.u. the relations between intensities should be relative. So, the highs of the peaks should be compared.

   - This comment has been amended in the manuscript.