Supplementary Materials for:

Regarding the Nature of Charge Carriers Formed by UV or Visible Light Excitation of Carbon-Modified Titanium Dioxide

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![Image](image1.png)

**Figure S1.** Determination of the bandgap of K-7000 and UV100 via the Tauc plot.

![Image](image2.png)

**Figure S2.** Kinetic profile for the formation of formaldehyde upon the photocatalytic oxidation of methanol (C_0 = 100 µM) under visible light irradiation in the presence of K-7000.
Figure S3. Photolysis and photocatalytic conversion (in the presence of K-7000) of chlorpromazine under visible light irradiation.

Figure S4. Absorption spectrum of a 100 µM aqueous solution of chlorpromazine (black line), and emission spectrum of the employed light source (blue line).

Figure S5. Photocatalytic conversion of chlorpromazine to the main product chlorpromazine sulfoxide in the presence of K-7000 under visible light irradiation.
Figure S6. Photocatalytic conversion of chlorpromazine under visible light irradiation in the presence of K-7000 and Hombikat UV100.

Figure S7. (a) Transient absorption decays of K-7000 observed at 550 nm and (b) transient absorption spectra of K-7000 measured at 100 ns after the laser excitation in an Ar atmosphere and in the presence of chlorpromazine after excitation with 455 nm.