

Supplementary

An Easy-made, Economical and Efficient Carbon-doped Amorphous TiO₂ Photocatalyst Obtained by Microwave Assisted Synthesis for the Degradation of Rhodamine B

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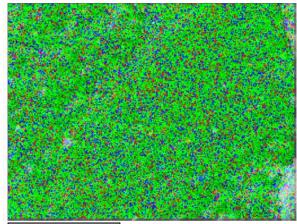
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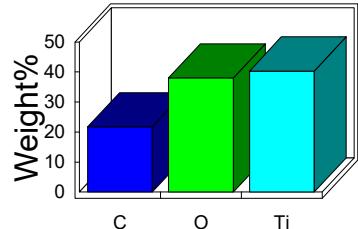
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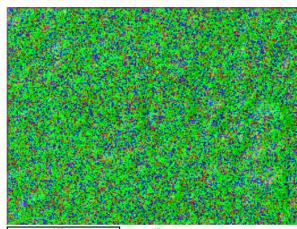
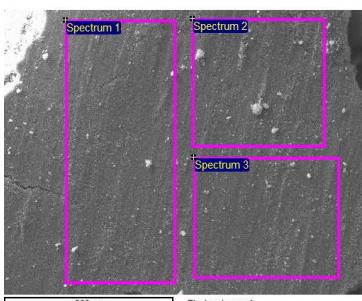
DTiB-01



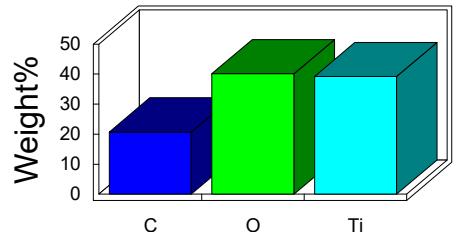
Quantitative results



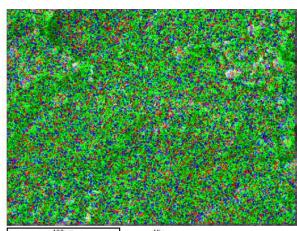
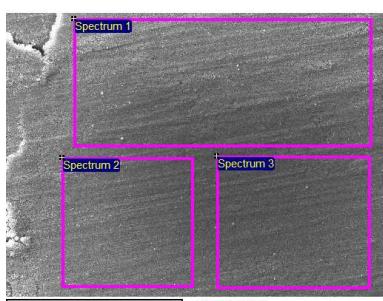
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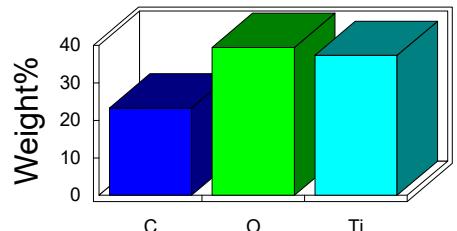
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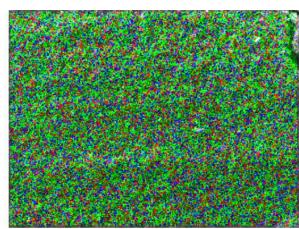
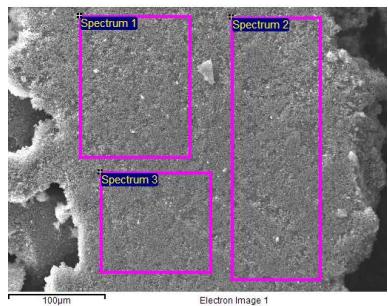
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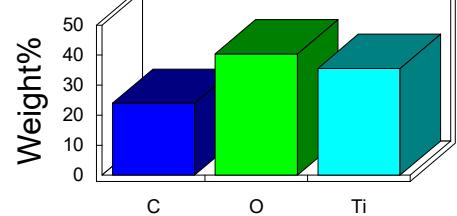
Quantitative results



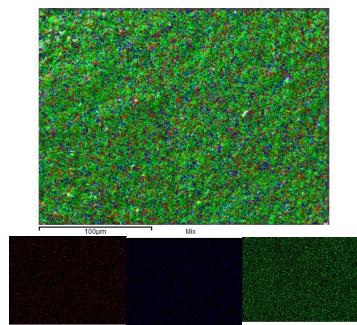
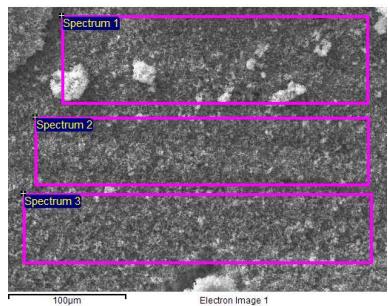
DTiB-04



Quantitative results



DTiB-05

C O
Ti

Quantitative results

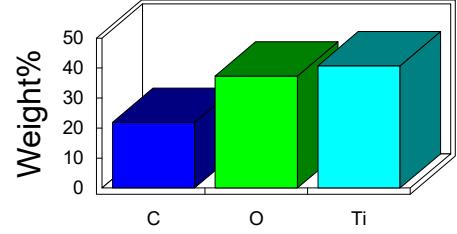


Figure S1. Elemental mapping from the EDS analysis of all the photocatalyst samples prepared in this work.

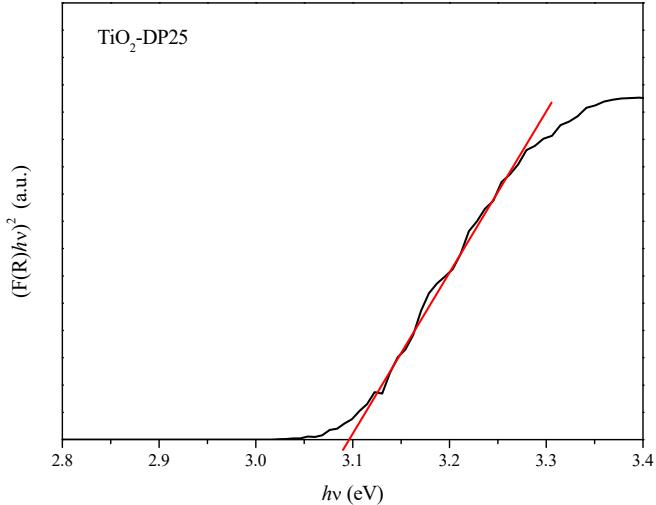


Figure S2. The relation between energy ($h\nu$, eV) and $(F(R)h\nu)^2$ for TiO_2 -DP25.

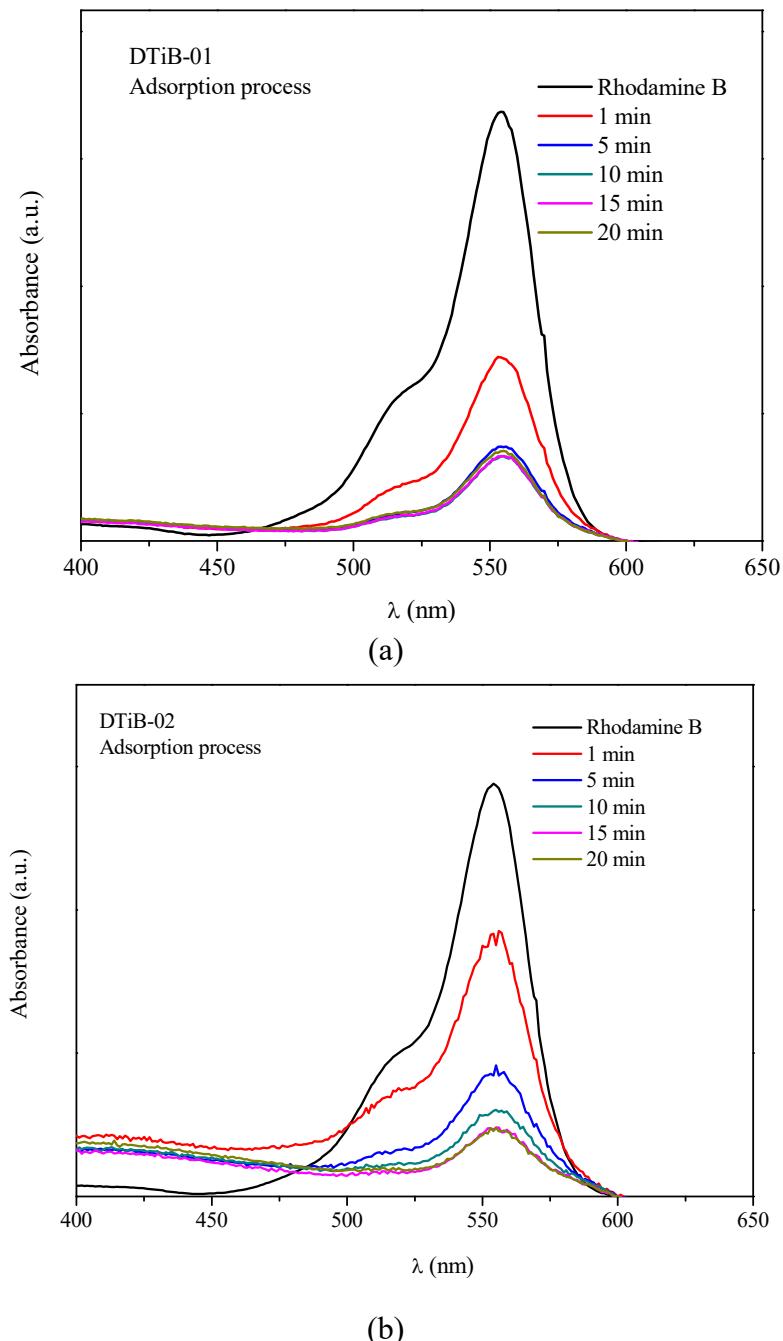


Figure S3. UV-vis spectra for the monitoring of the absorption of Rhodamine B in the dark onto the catalyst surface for the CD-aTiO₂ samples prepared.

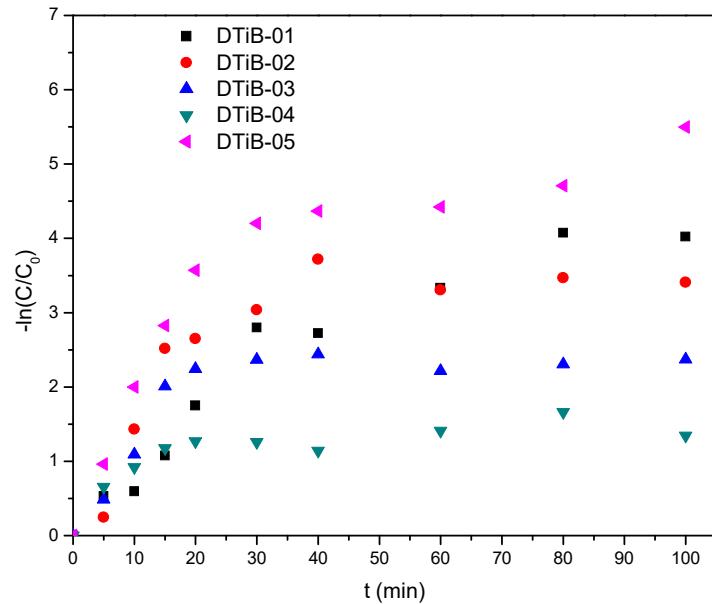


Figure S4. $-\ln(C/C_0)$ vs t plot in which it is apparent that the Rhodamine B degradation data do not fit for a pseudo first order kinetic equation.

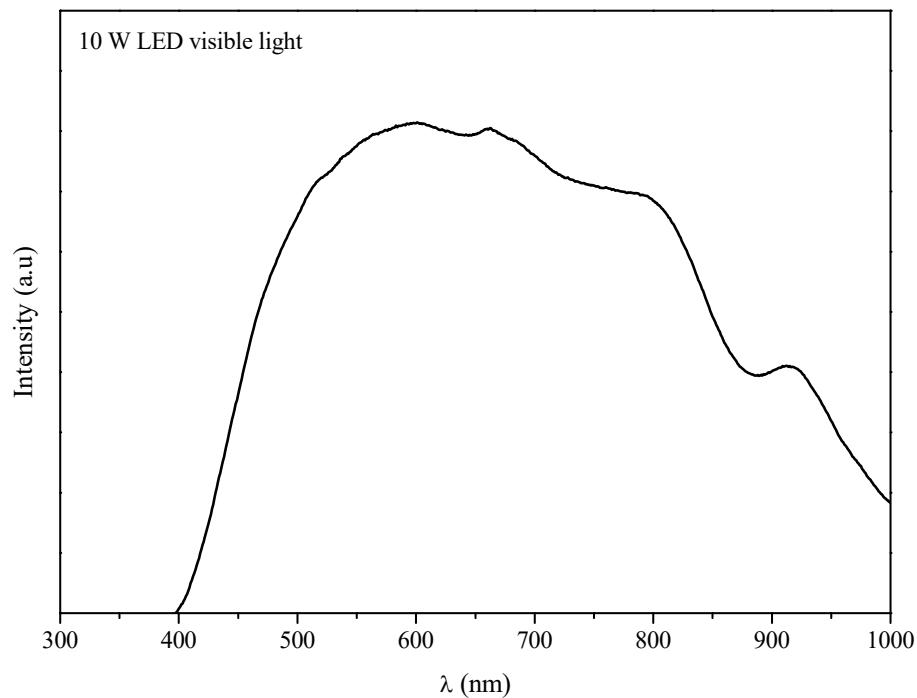


Figure S5. Emission spectrum for the lamp used in the photocatalytic experiments with visible light.

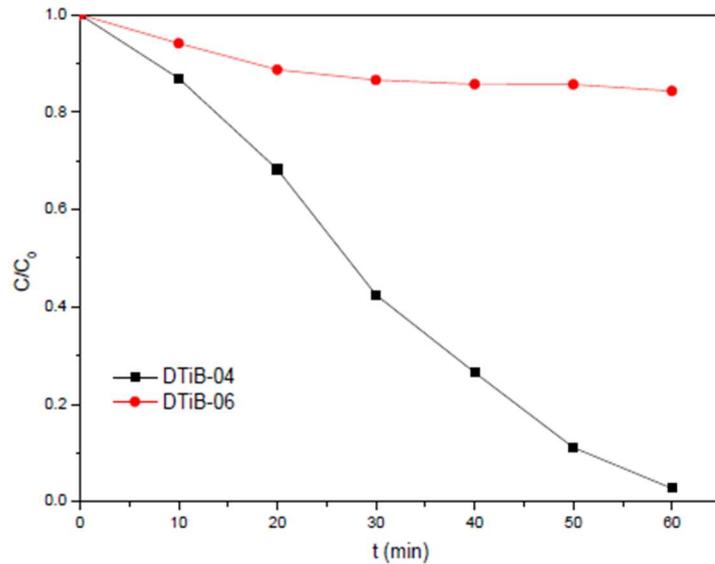


Figure S6. Comparison of the Rhodamine B solution (20 mg/L) degradation using a carbon doped TiO₂ photocatalyst (DTiB-04) and another TiO₂ material without carbon (DTiB-06).

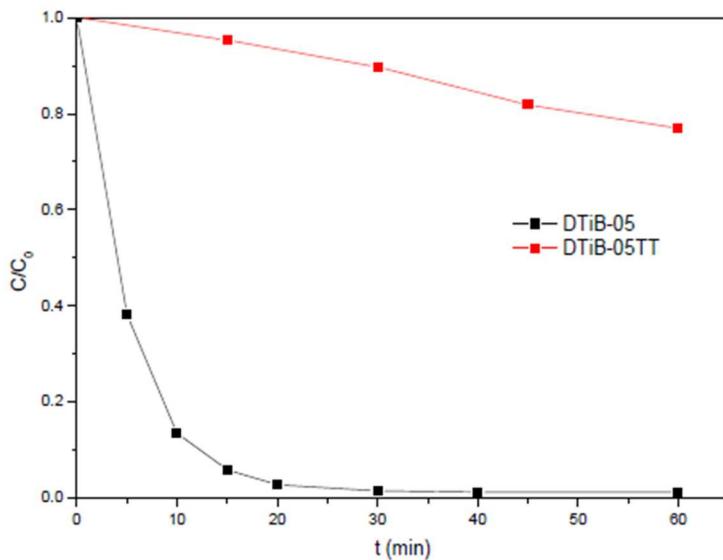


Figure S7. Rhodamine B solution (5 mg/L) degradation plots for the DTiB-05 and the DTiB-05TT photocatalysts.



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