# Supporting Information

# Photocatalytic degradation of paracetamol under simulated sunlight by four $TiO_2$ commercial powders: an insight into the performance of two sub-micrometric anatase and rutile powders and a nanometric brookite powder.

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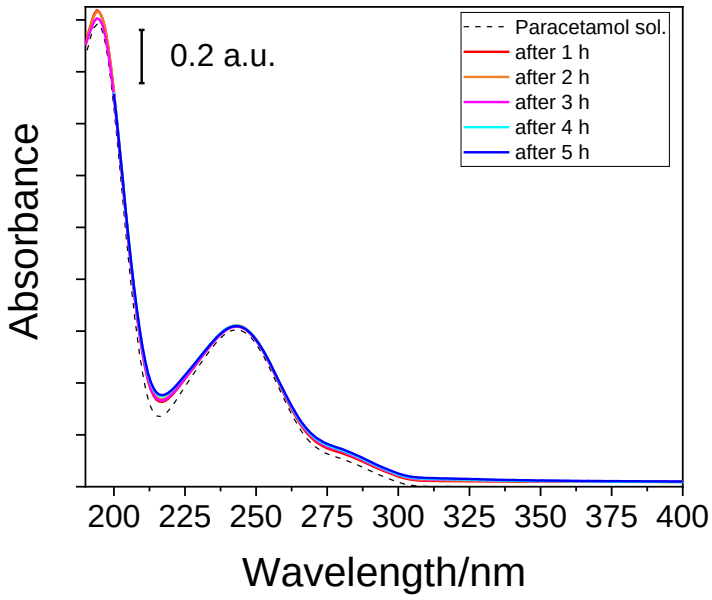


**Figure S.1**. UV-Vis spectra of the starting 0.01 mM paracetamol solution and of the supernatant aliquots withdrawn after 1, 2, 3, 4, and 5 h under solar illumination without any photocatalyst.

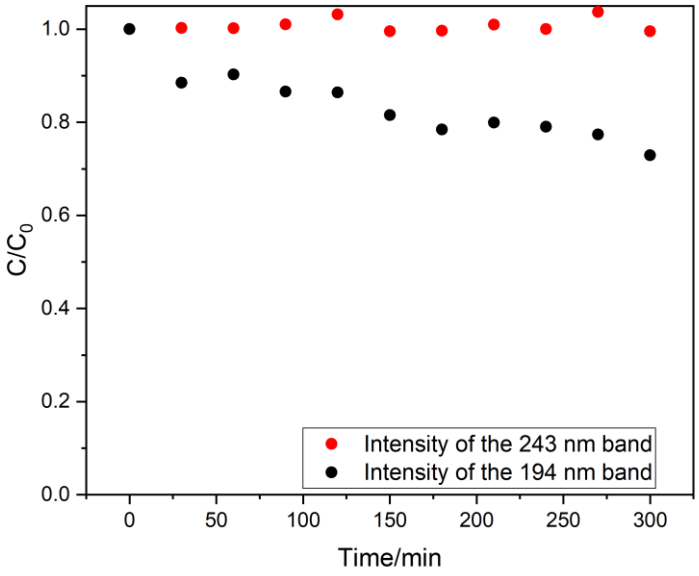


**Figure S.2**. Trends of the $C/C_0$ values as obtained from the UV-Vis spectra of the starting 0.01 mM paracetamol solution ($C_0$) and of the supernatant aliquots withdrawn at regular time intervals under solar illumination in the presence of the oxidized Comm_R sample.

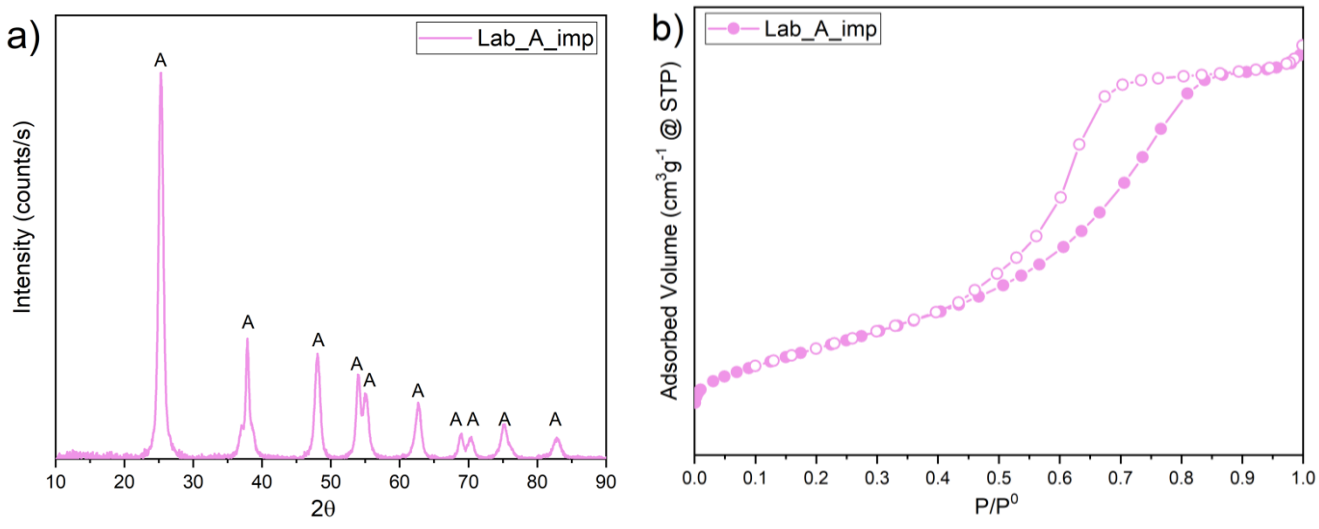


**Figure S.3**. a) XRD patterns of the Lab_A_imp sample, showing only the peaks of the anatase phase (A); b) $N_2$ adsorption/desorption isotherms at -196 °C of the Lab_A_imp sample, showing type IV isotherm, with a pronounced H2 type hysteresis loop, due to inkbottle inter-particle mesopores and a BET SSA = 105 $m^2\ g^{-1}$.

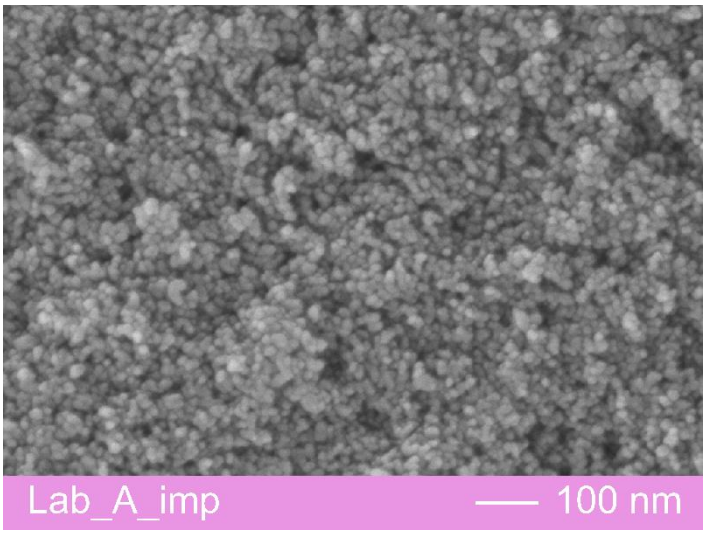


**Figure S.4**. Selected FESEM micrograph of the Lab_A_imp sample, showing the same morphology of the parent Lab_A sample.

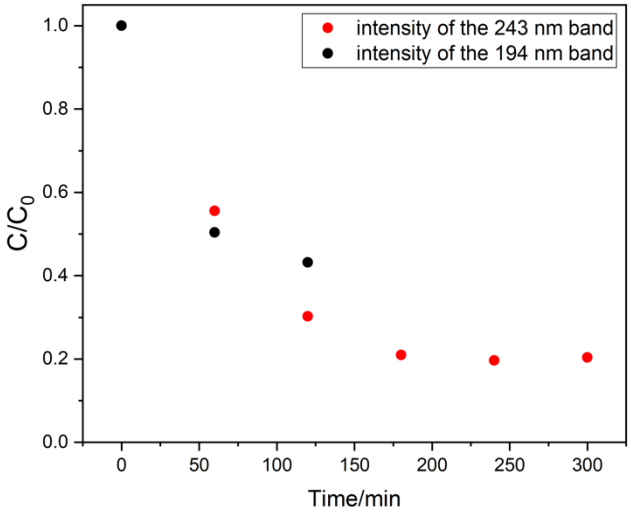


**Figure S.5**. Trends of the $C/C_0$ values as obtained from the UV-Vis spectra of the starting 0.01 mM paracetamol solution ($C_0$) and of the supernatant aliquots withdrawn at regular time intervals under solar illumination in the presence of 1 g $L^{-1}$ Lab_A_imp powder.