

From adsorbent to photocatalyst: the sensitization effect of SnO₂ surface towards dye photodecomposition

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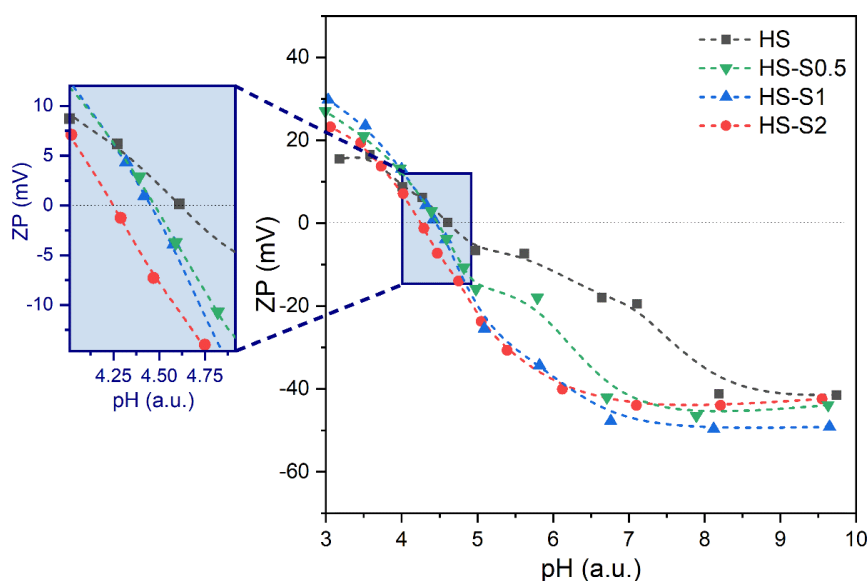


Figure S1. Zeta potential (ZP) of the analyzed samples (HS, HS-S0.5, HS-S1, and HS-S2) in aqueous solutions as a function of pH.

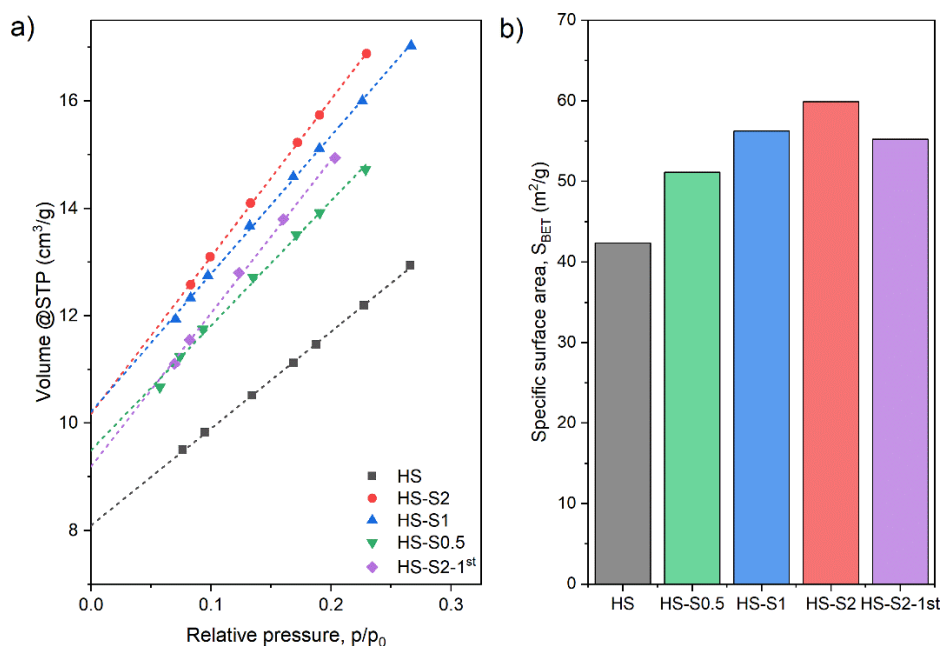


Figure S2. (a) BET surface area plots, (b) chart representing the obtained specific surface area values (HS-S2-1st – a sample collected after the first cycle of IC photodecomposition).

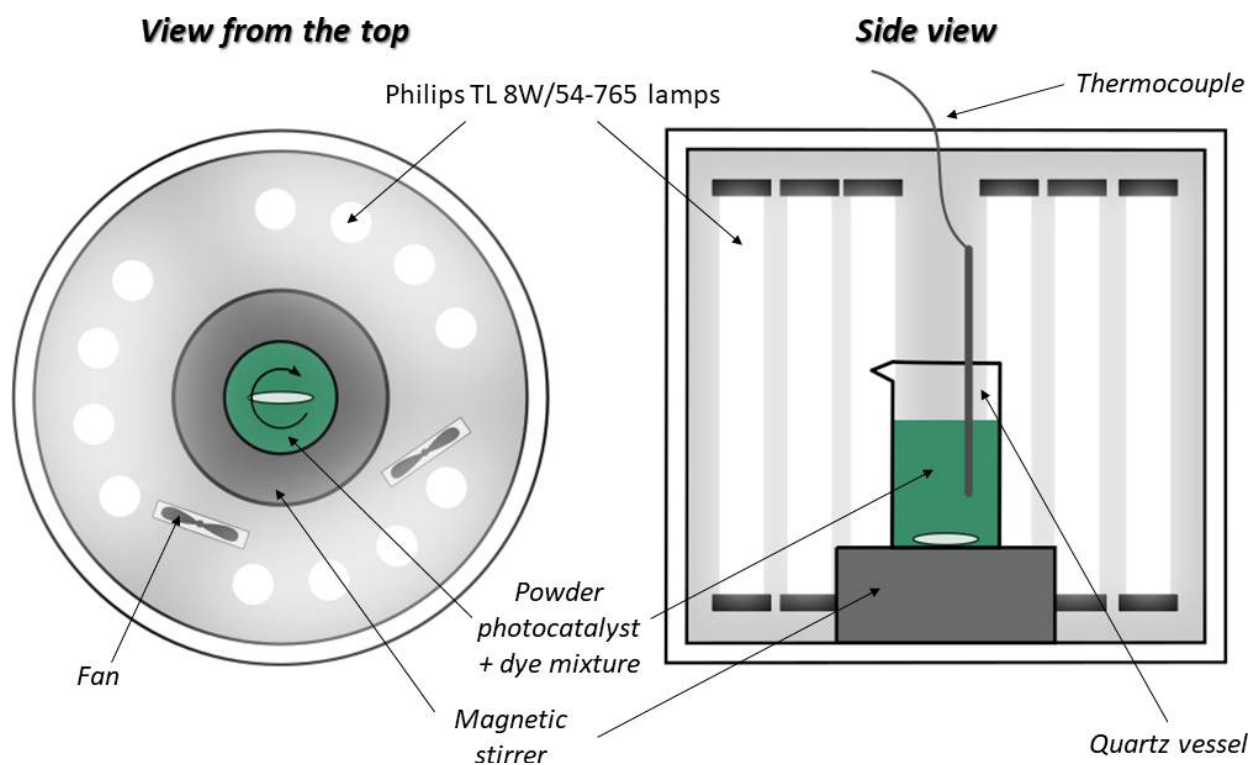


Figure S3. Schematic representation of the experimental setup for adsorption/photocatalytic measurements (for adsorption tests, the light was turned off).

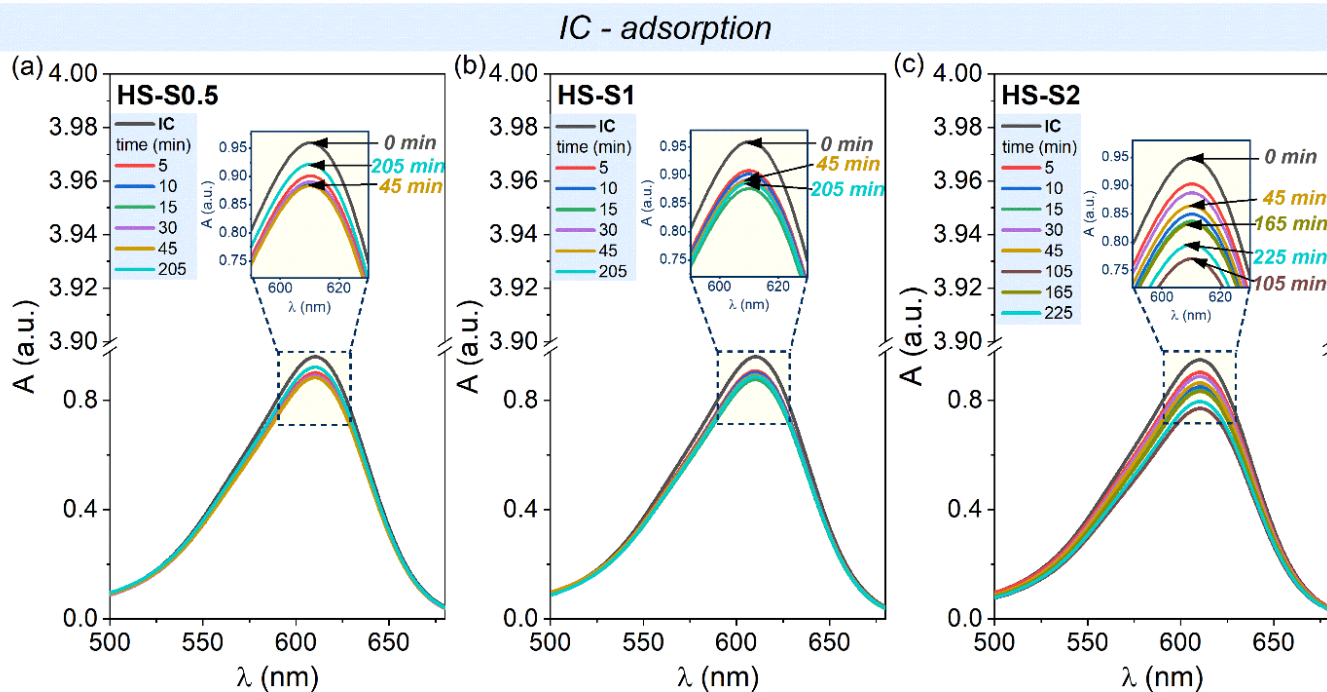


Figure S4. Changes in the absorbance of indigo carmine (IC) solutions collected after various time intervals during adsorption tests for: (a) HS-S0.5, (b) HS-S1, (c) HS-S2.

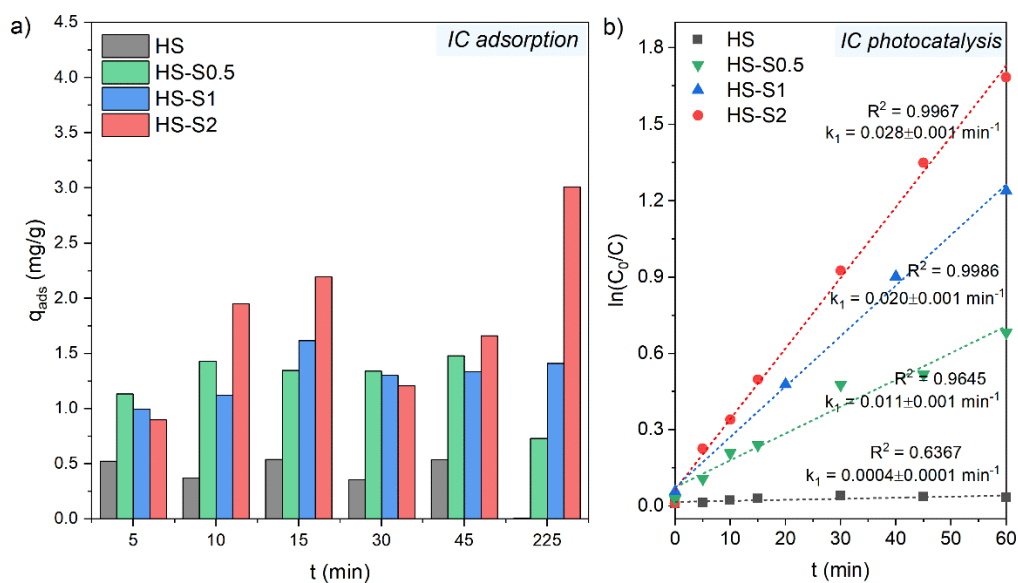


Figure S5. (a) Chart representing the changes in the amount of the adsorbed dye (q_{ads}) after different periods of time, (b) pseudo-first-order kinetic plots for the IC decomposition.

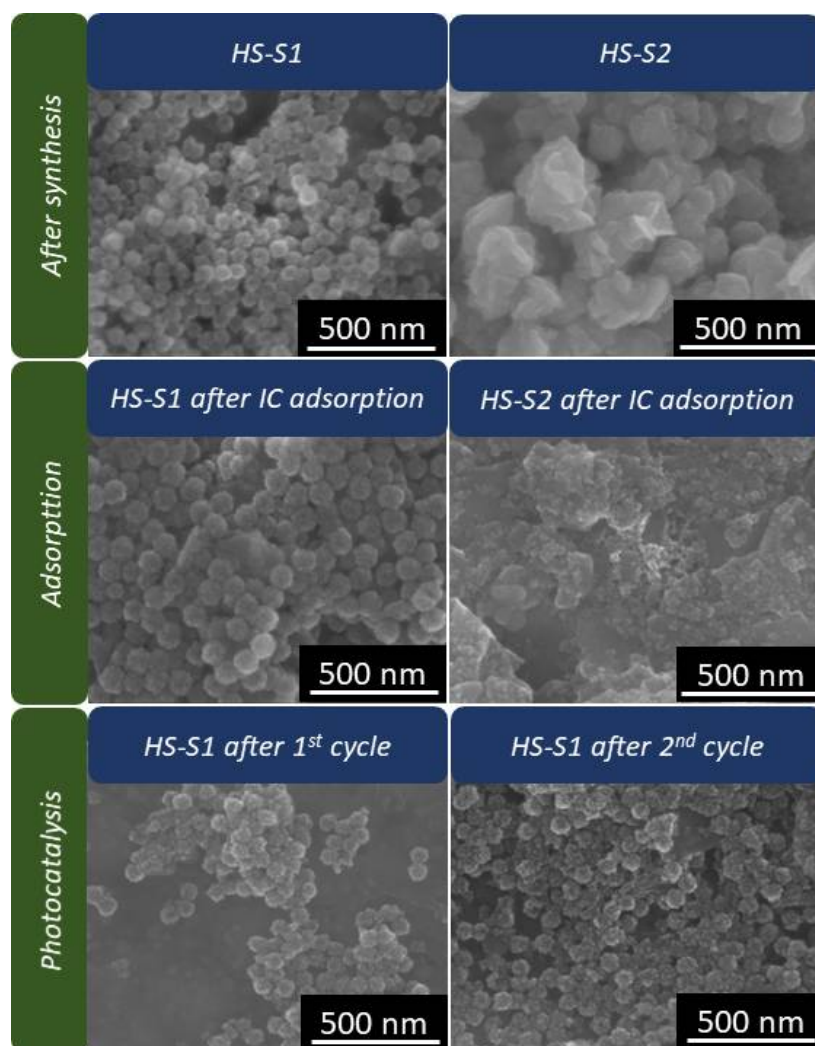


Figure S6. SEM images representing the as-synthesized HS-S1 and HS-S2 samples, the powders collected after 45 min of indigo carmine (IC) adsorption process (HS-S1, HS-S2), and HS-S1 collected after the first/second cycle of IC photodecomposition.

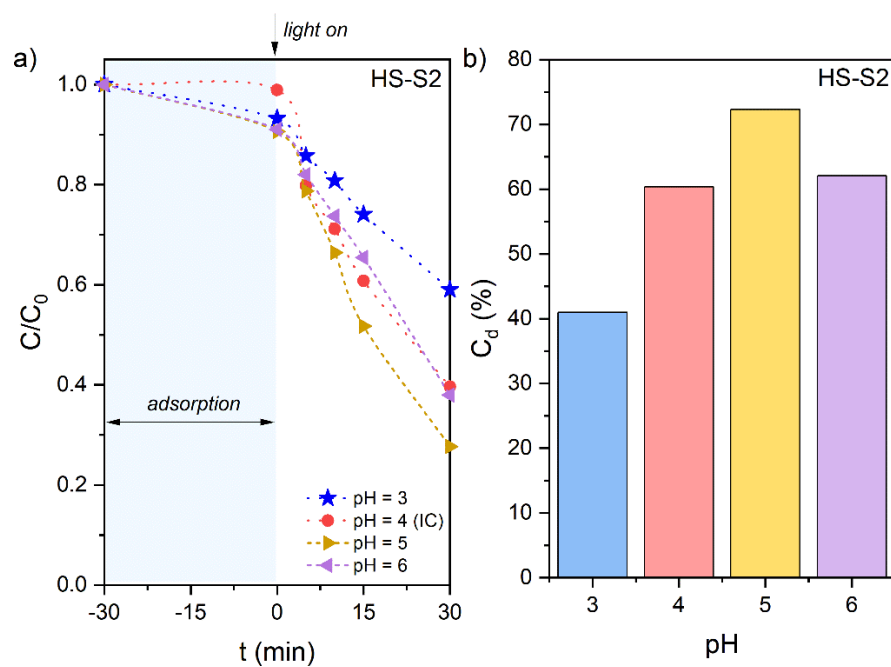


Figure S7. The effect of solution pH on the photocatalytic performance of HS-S2 S2 (C_d – the amount of decomposed dye).