nanomaterials

Synthesis of a Rationally Designed Multi-Component Photocatalyst Pt:SiO_2:TiO_2(P25) with Improved Activity for Dye Degradation by Atomic Layer Deposition

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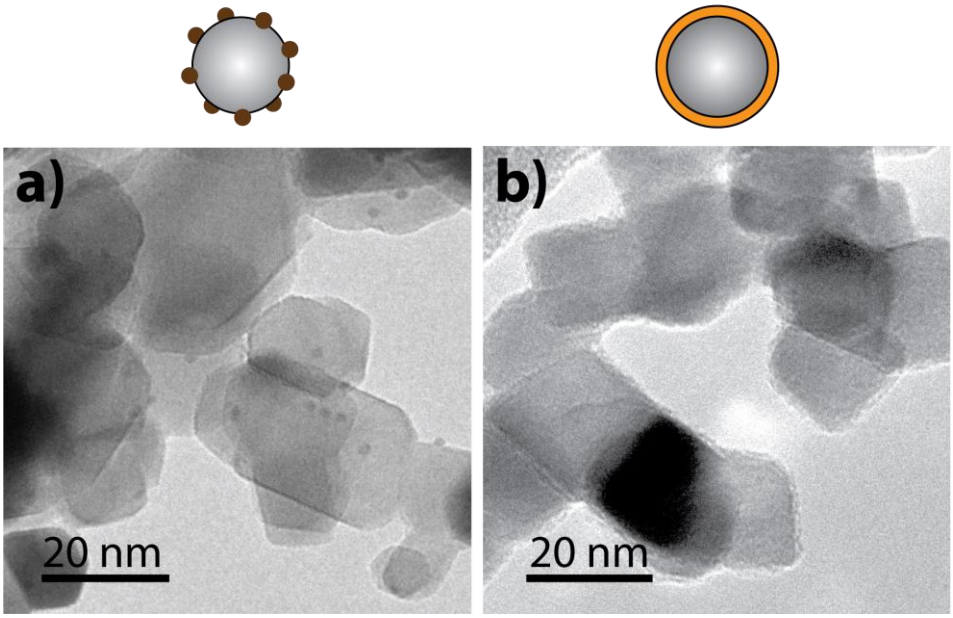

Figure S1. TEM pictures of mono modified catalysts; (**a**) Pt:TiO_2(P25) (0.34 wt % Pt), (**b**) SiO_2:TiO_2(P25) (1.7 wt % Si).

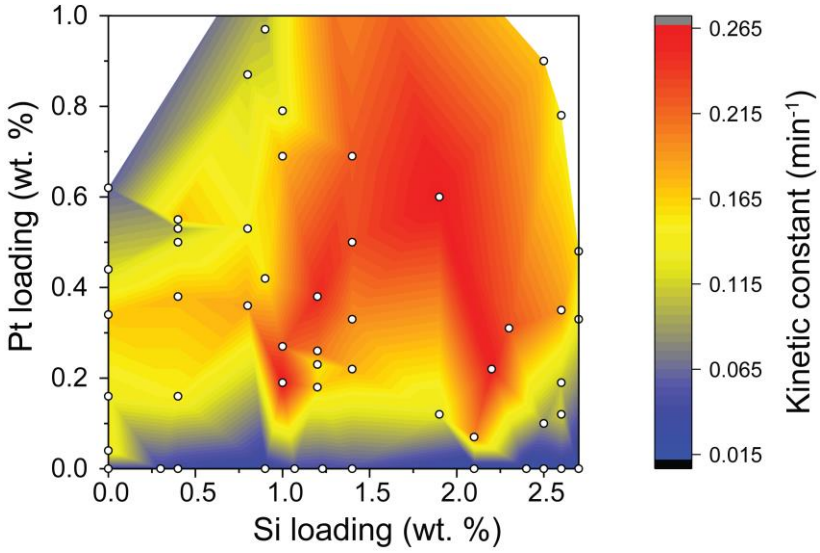

Figure S2. Contour plot for the unfitted photocatalytic activity degrading Acid Blue 9 with the multicomponent material Pt:SiO_2:TiO_2(P25).

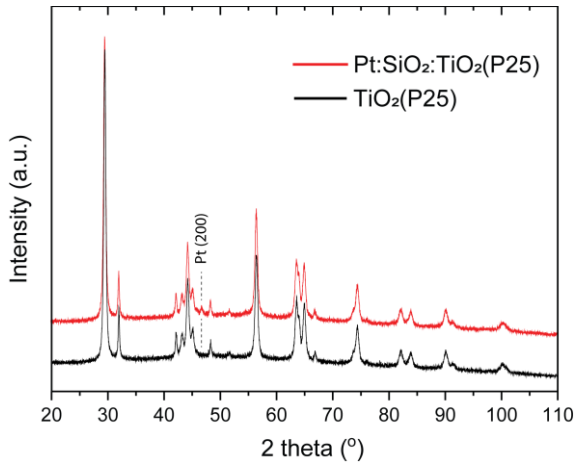

Figure S3. XRD pattern of bare TiO_2(P25) (black) and Pt:SiO_2:TiO_2(P25) (red) with the characteristic phase composition for anatase/rutile mixed phase TiO_2(P25) nanopowder.

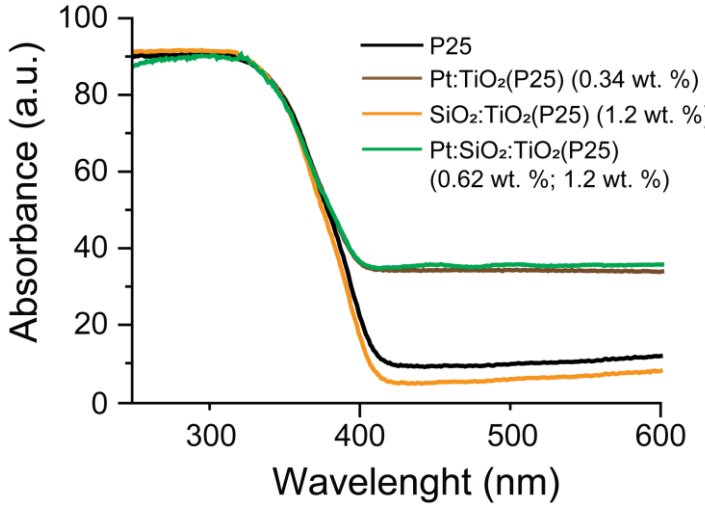

Figure S4. UV/Vis DRS spectra of the deposited catalysts with TiO_2 (P25) as a reference (black), SiO_2:TiO_2(P25) (orange), Pt: TiO_2(P25) (brown), Pt:SiO_2: TiO_2(P25) (green).

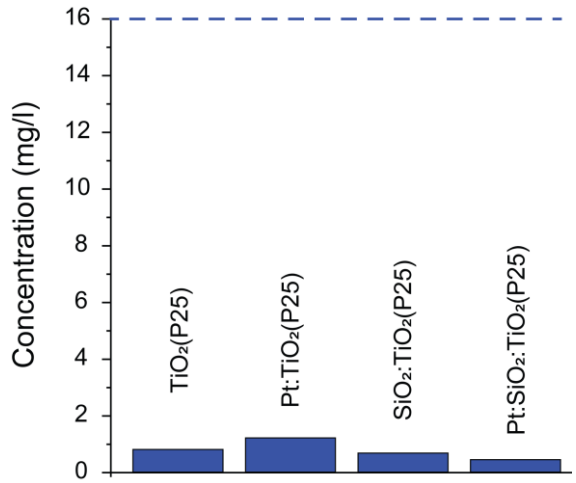

Figure S5. Adsorbed Acid Blue 9 on the catalyst surface after reaching the adsorption desorption equilibrium. The dashed line represents the original concentration of Acid Blue 9 in the solution as described in the Experimental section.