

Titanate Nanowires as One-Dimensional Hot Spot Generators for Broadband Au–TiO₂ Photocatalysis

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Table S1. Cell parameters for the as-synthesized sodium titanate nanowires, calculated using the Le Bail method (reliability factors: $R_p = 4.793$, $R_{wp} = 6.579$). *Reference values have been taken from the Crystallography Open Database (CIF files: 2310331 (Na₂Ti₃O₇), 4000748 (Na₂Ti₆O₁₃) and 2310730 (Na₂Ti₉O₁₉)).

PHASE	CELL PARAMETER	REFINED VALUE	REFERENCE VALUE*
Na ₂ Ti ₃ O ₇ (SPACE GROUP: P2 ₁ /M)	A (NM)	0.8670	0.8571
	B (NM)	0.3799	0.3804
	C (NM)	0.9292	0.9135
	B (°)	102.33	101.57
Na ₂ Ti ₆ O ₁₃ (SPACE GROUP: C2/M)	A (NM)	1.5109	1.5110
	B (NM)	0.3734	0.3744
	C (NM)	0.9367	0.9169
	B (°)	98.75	98.98
Na ₂ Ti ₉ O ₁₉ (SPACE GROUP: C2/M)	A (NM)	1.2241	1.2200
	B (NM)	0.3758	0.3780
	C (NM)	1.5658	1.5600
	B (°)	104.60	105.00

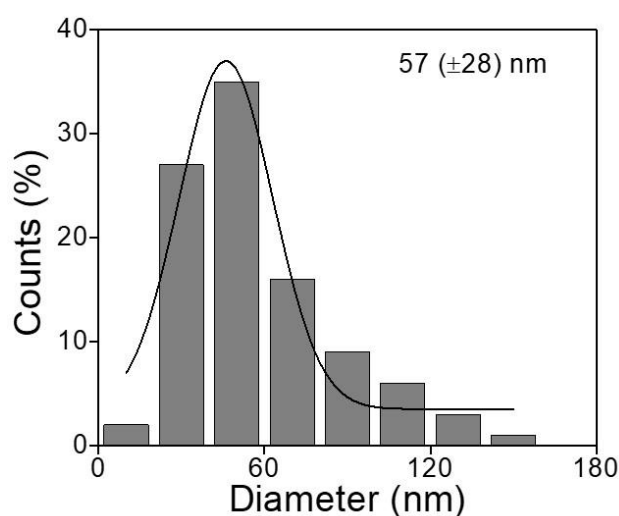


Figure S1. Size histogram representing the mean diameter of the TiNWs before functionalization.

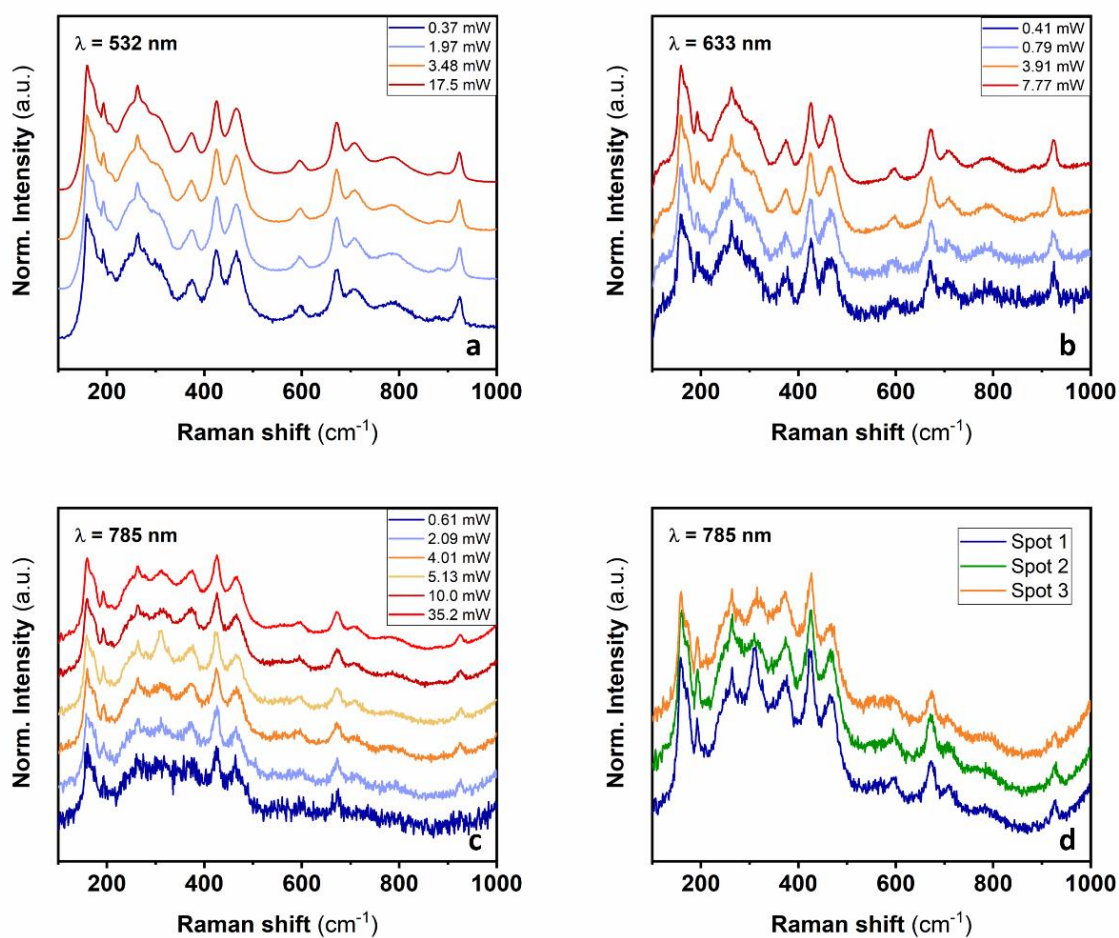


Figure S2. Raman spectra of the sodium titanate nanowires registered using variable laser powers under a 532 (a), 633 (b) or 785 nm (c) excitation wavelength. Raman spectra collected from different spots in the same sample, using a 785 nm excitation wavelength and a laser power of 5.13 mW (d). For all these measurements an acquisition time of 60 s has been used.

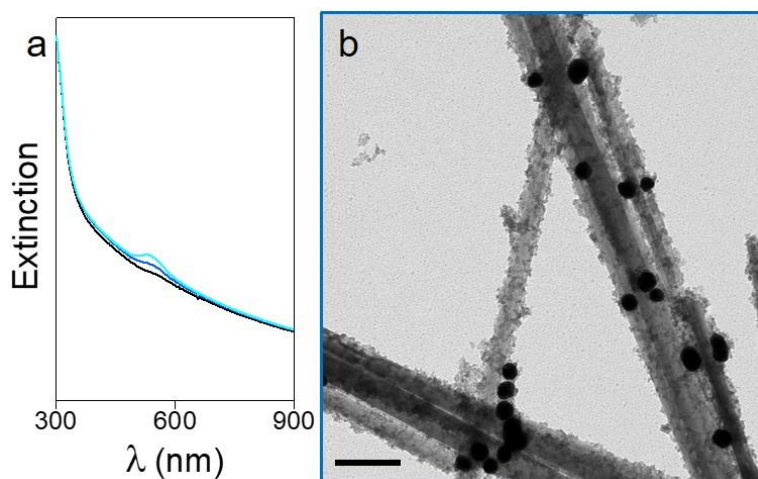


Figure S3. (a) Extinction spectra of the titanate nanowires functionalized with different amounts of Au spheres NPs and TiO₂ NPs. The Au/TiO₂ molar ratios are: 0.023 (black), 0.059 (blue) and 0.1 (cyan). (b) TEM image of the sample synthesized with the intermediate amount of plasmonic component. The scale bar is 200 nm.

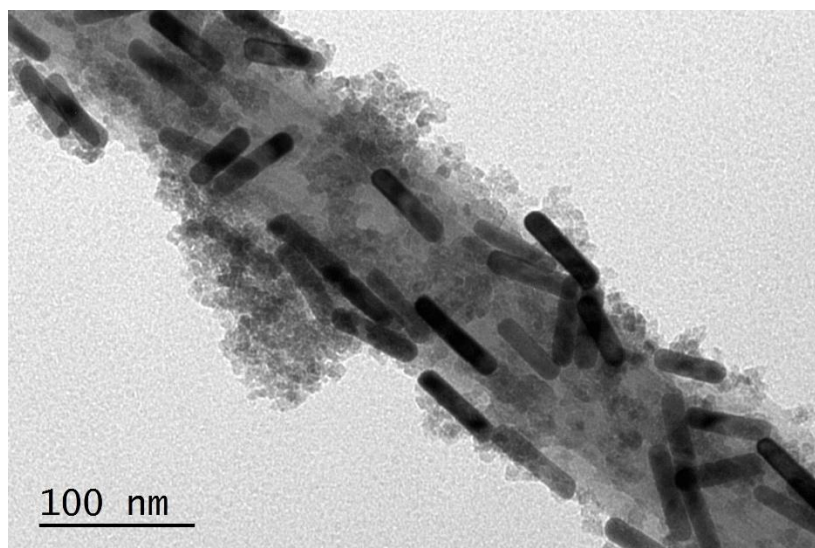


Figure S4. TEM image of TiNWs functionalized with TiO₂ NPs and Au NRs after the photocatalytic degradation of RhB (Au/TiO₂ molar ratio of 0.1).