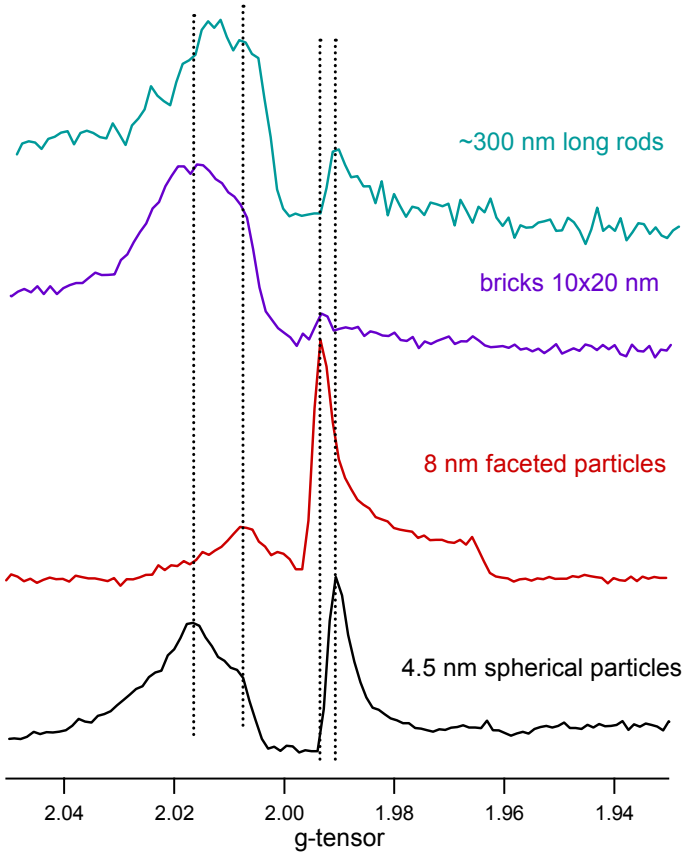
N. M. Dimitrijevic, Z. V. Saponjic, B. M. Rabatic, O. G. Poluektov, T. Rajh, "The Effect of Size and Shape of Nanocrystalline TiO_2 on Photogenerated Charges, an EPR Study"

Supporting information:

I. Field-swept echo spectra of anatase nano-object under 355 nm illumination obtained with Bruker Elexsys E580 spectrometer equipped with a dialectric MD4 cavity and an Oxford CF935 helium flow cryostat with ITC-5025 temperature controller. The first ($\pi/2$) and second (π) pulse durations were 16 and 32 ns, respectively. Changing the time between pulses (τ) from 100 to 400 ns did not affect spectra.



II. g-tensor values and spin-spin relaxation times of photogenerated charges in anatase nano-objects.

Table 1: EPR Parameters of the g Matrix for Paramagnetic Species formed upon Band Gap Excitation of Anatase Nano-objects

Nano-objects	Electrons, $(Ti^{3+})_{latt}$			Holes, $(Ti4^{+}O\bullet)_{surf}$		
	$g_{\perp}$	$g_{\parallel}^{1}$	$g_{\parallel}^{2}$	g_z	g_y	g_x
Spherical particles (< 10 nm)	1.990	1.961	1.958	2.007	2.014	2.024
Faceted particles (< 10 nm)	1.993	1.964	-	2.007	2.015	2.024
Rods (50x300 nm)	1.990	1.961		2.007	2.014	2.024
Brick-like particles (10x20)	1.993	1.964	-	2.007	2.015	2.024

Table 2: Spin-spin (T_2) Relaxation Times for Paramagnetic Species at 7 K Formed upon Band Gap Excitation of Anatase Nano-objects

Nano-objects	Electrons, $(Ti^{3+})_{latt}$	Holes, $(Ti^{4+}O\bullet)_{surf}$
Spherical particles (4.5 nm)	(155 ± 4) ns	(2.2± 0.2) μs
Spherical particles (~10 nm)	(155 ± 4) ns	(2.2± 0.2) μs
Faceted particles (< 10 nm)	(1.5 ± 0.2) μs	(1.5± 0.3) μs
Rods (50x300 nm)	(2.0± 0.3) μs	(2.2± 0.3) μs
Brick-like particles (10x20 nm)	(2.0± 0.3) μs	(1.5± 0.1) μs