"CORE/SHELL" NANOCOMPOSITES BASED ON FERRITES AS PHOTOCATALYSTS FOR DEGRADATION OF THE WATER POLLUTANTS MALACHITE GREEN AND RHODAMINE B

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SUPPLEMENTARY INFORMATION

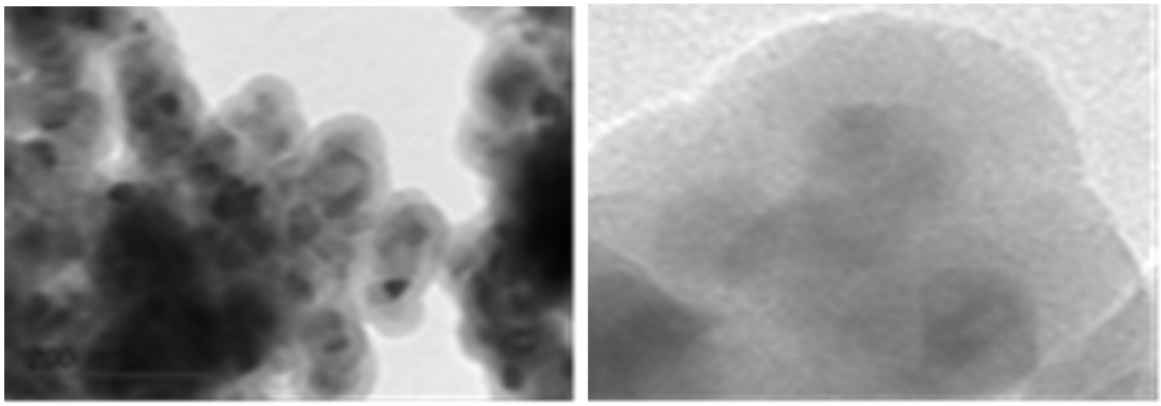


Figure S1. TEM-micrographs of the composite of the type core/shell $CoFe_2O_4/SiO_2$

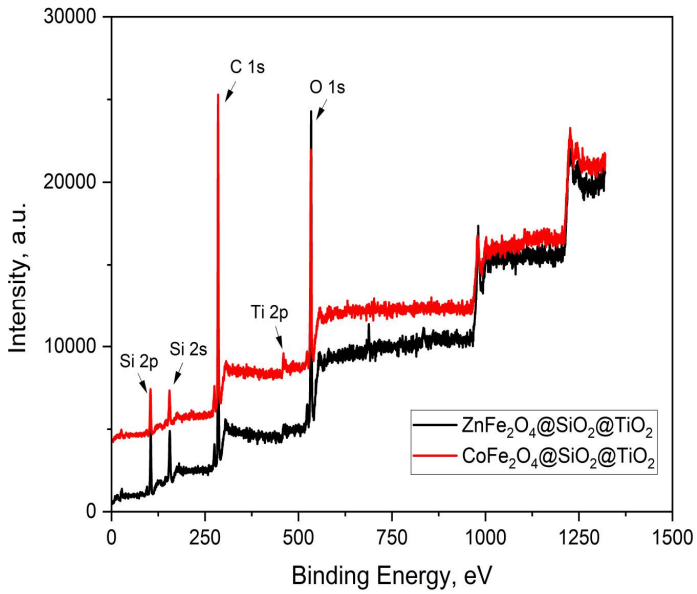


Figure S2. Low-energy-resolution wide-scan XPS spectra of "core-shell"composites $ZnFe_2O_4/SiO_2/TiO_2$(HT) and $CoFe_2O_4/SiO_2/TiO_2$(HT) (according the legend).

Table S1. Degradation of MG in model solution by TiO_2 and modified TiO_2 under UV irradiation

	Photo catalyst*	Catalyst dose, g L^{-1}	MG, mg L^{-1}	Irradiation, min	Degradation, %	Rate constant, $\times 10^{-3}$ min^{-1}	Ref.
1	TiO_2-A	0.66	5	60	100	6.0	[60]
2	TiO_2-A,R	0.66	5	120	60	6.5	[61]
3	TiO_2-A,R/TeO_2	0.66	5	120	60	7.2	[61]
4	TiO_2-A/B_2O_3	0.66	5	90	75	17.2	[60]
5	CNT/TiO_2	0.2	50	240	90	-	[62]
6	SiO_2/TiO_2	50	10	60	91	-	[63]
7	TiO_2 -A/Ag	films	5	240	96	5.2	[64]
8	$ZnFe_2O_4$/SiO_2/TiO_2-A	1	5	180	80	9.0	This work
9	$CoFe_2O_4$/SiO_2/TiO_2-A,R	1	5	180	39	2.6	This work

*- A – anatase, R – rutile, CNT – carbon nanotubes.

Table S2. Degradation of RhB in model solution by TiO_2 and modified TiO_2 under UV irradiation

	Photo catalyst*	Catalyst dose, g L^{-1}	RhB, mg L^{-1}	Irradiation, min	Degradation, %	Rate constant, $\times 10^{-3}$ min^{-1}	Ref.
1	TiO_2-A	0.1	10	30	59	17.0	[59]
2	TiO2-A,R	0.1	10	30	1.4	2.4	[59]
3	TiO_2-A,R	1	10			14.6	[65]
4	CS-TiO_2	1	10			28.7	[65]
5	$ZnFe_2O_4$/SiO_2/TiO_2-A	1	5	180	53		This work
6	$CoFe_2O_4$/SiO_2/TiO_2-A,R	1	5	180		1.11	This work

*- A – anatase, R – rutile.