Supplementary Materials

The results of elemental analysis as attained by the ICP-OES technique are shown in Table S1 and the results as attained by SEM-EDX analysis are given in Table S2.

Table S1. Chemical composition of the two clinoptilolites (wt.%) obtained by ICP-OES analysis.

Sample	Al	Ca	Fe	K	Mg	Mn	Na	Pb	Si	As	Sn	Ti
CLI	12.73	4.81	1.72	1.06	1.27	0.027	0.37	0.009	35.27	0.004	0.001	0.12
Zeodigest	9.64	2.43	1.65	2.25	1.12	0.054	5.96	0.007	32.72	0.0001	0.0008	0.16

Table S2. Average elemental composition (wt.%) of CLI and SnO_2-containing clinoptilolite obtained by the EDX analysis.

Sample	O	Mg	Al	Si	Na	K	Ca	Fe	Sn
CLI	54.87	0.87	6.34	33.21	–	0.88	2.67	1.16	–
SnO_2CLI05	56.02	–	4.73	35.62	0.13	0.08	0.08	0.30	3.04
SnO_2CLI15	54.53	–	4.03	31.23	0.09	0.04	0.11	0.10	9.89
SnO_2CLI25	53.65	–	3.61	27.54	0.05	0.04	0.12	0.07	14.93

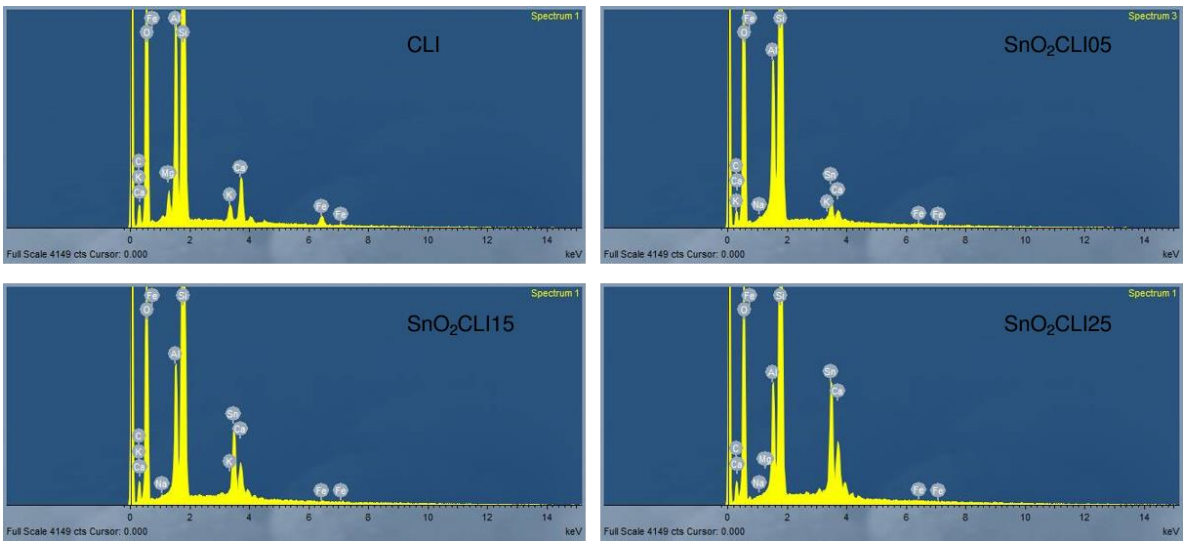

Figure S1. EDX spectra of the as-synthesized SnO_2 and SnO_2-containing composites.

Table S3. Parameters of the nearest coordination shells around Sn atoms in Sn-modified CLI zeolites and reference SnO_2 compound with rutile crystal structure: N - the number of neighbour atoms, R - distance, σ2 -

Debye-Waller factors, and R-factor - the goodness of fit parameter. The amplitude reduction factor and a shift of energy origin of photoelectron were fit in all the samples, the average obtained values were S02 = 0.96 ± 0.09 eV and ΔEo= 2 ± 3 eV. Uncertainty of the last digit is given in parentheses.

Sn neighbour	N	R (Å)	σ2 (Å2)	R-factor
		SnO_2 (rutile)		
O	4	2.059(1)	0.0033(3)	
O	2	2.064(1)	0.0033(3)	
Sn	2	3.198(1)	0.0024(3)	0.0040
O	4	3.604(2)	0.020(5)	
Sn	8	3.723(3)	0.0040(2)	
O	4	3.806(3)	0.020(5)	
		SnO2CLI25		
O	4	2.04(1)	0.005(1)	
O	2	2.05(1)	0.005(1)	
Sn	1.0(2)	3.20(1)	0.003(1)	0.0049
O	2.0(2)	3.60(1)	0.020(5)	
Sn	4(1)	3.72(1)	0.005(1)	
O	2.0(2)	3.81(1)	0.020(5)	
		SnO2CLI15		
O	4	2.04(1)	0.005(1)	
O	2	2.05(1)	0.005(1)	
Sn	1.0(2)	3.19(1)	0.003(1)	0.010
O	2.0(2)	3.59(1)	0.020(5)	
Sn	2.4(8)	3.71(1)	0.004(1)	
O	2.0(2)	3.79(1)	0.020(5)	
		SnO2CLI05		
O	4	2.0431)	0.006(1)	
O	2	2.04(1)	0.006(1)	
Sn	1.4(6)	3.22(1)	0.007(2)	0.012
O	2(1)	3.59(1)	0.020(5)	
Sn	1.2(6)	3.70(1)	0.007(2)	
O	0.6(4)	3.79(1)	0.020(5)	

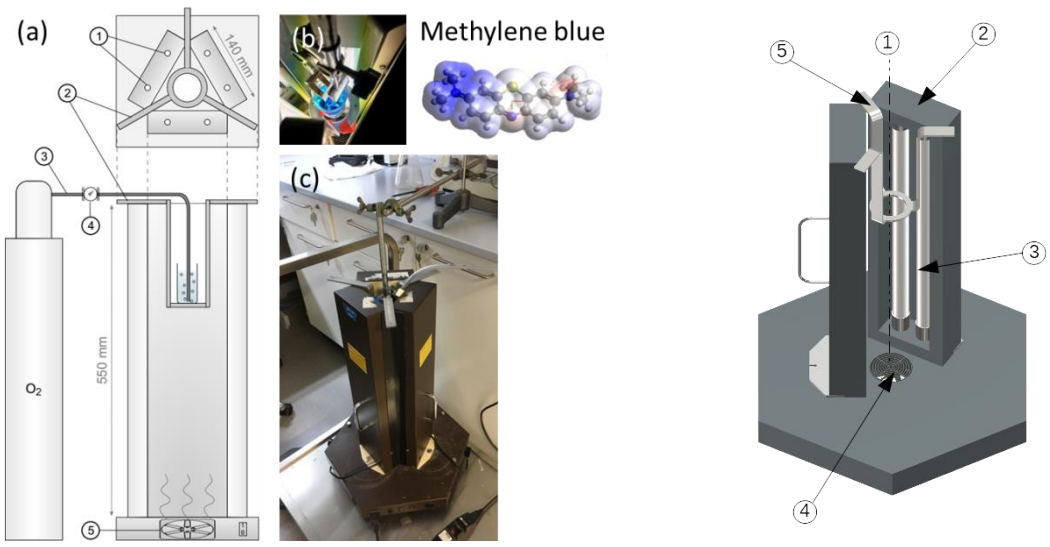

Figure S2. A sketch of the photocatalytic set-up (a), a closer look at the internal part of the reactor (b) and a photograph of the whole set-up (c). On the right; a 3D model of the reactor with one side open.