Supporting information

Table S1. Summary of crystallite size, band gap energy, particle size and sharpness, derived for the UV-Vis absorption spectra, and the photocatalytic reactions of the reported anatase particles prepared in SBA-15.

Ref.	Crystallization temp./^{o}C	BJH pore diameter of SBA-15/nm	[a]Crystallite size/nm	[b]Band gap/eV	[c]Particle size/nm	[d]Sharpness/nm	Reaction
[1]	550	5.0	No peak	3.6	9.7	100	H_2 evolution from aqueous methanol
			No peak	3.6	9.7	119	
			4.5	3.5	13.0	119	
			18.0	3.3	>20.0	144	
[2]	550	7.5	6.2	3.8	5.8	UV-Vis absorption spectra were not given.	Oxidation of cyanide
			6.7	3.7	6.8		
			6.8	3.7	7.3		
			6.4	3.8	6.2		
			8.1	3.6	8.7		
			9.7	3.6	9.7		
[3]	500	6.5	No peak	No data	-	67	Oxidation of CO
			No peak		-	73	
			4.5		-	103	
			6.5		-	90	
[4]	550	8.0	8.7	No data	-	86	Decolorization of methylene blue
			15.0		-	100	
[5]	400	7.6	8.0	3.5	13.0	63	Decolorization of

			13.0	3.5	15.0	78	methyl orange
			23.0	3.4	20.0	78	
[6]	550	8.0	12.4	3.3	>20.0	114	Decolorization of methyl orange
			9.3	3.3	>20.0	119	
[7]	600	7.5	No peak	No data	-	106	Decolorization of methylene blue
	700		No peak		-	103	
	800		11.5		-	100	
[8]	500	6.2	No peak	3.6	9.0	75	-
			No peak	3.6	11.0	69	
			No peak	3.5	13.0	75	
			No peak	3.5	13.0	79	
[9]	400	7.5	No peak	3.9	5.5	Broad	Decomposition of Oetrogen
			No peak	3.8	6.5	Broad	
			No peak	3.8	7.0	Broad	
[10]	500	7.0	6.0	3.1	>20.	158	-
[11]	700	4.0	No peak	No data	-	64	Decolorization of methylene blue
			7.2		-	71	
			6.2		-	71	
			10.5		-	76	
			14.6		-	79	
[12]	400	5.2	4.4	3.6	9.0	100	Decolorization of methylene blue
			4.5	3.4	17.0	100	
			4.7	3.4	17.0	100	
[13]	550	5.9	4.4	No data	-	151	Decomposition of

			4.8		-	181	alizarin
			5.2		-	172	
			5.6		-	149	
			6.2		-	183	
[14]	550	8.0	No peak	2.9	>20.0	151	Oxidation of Phenol
			No peak	2.4	>20.0	151	
			No peak	2.0	>20.0	214	
			8.2[e]	2.0	>20.0	134	
[15]	550	6.5	No peak	3.6	9.5	140	Decolorization of methylene blue
			No peak	3.4	20.0	156	
[16]	500	9.4	3.7	No data	12.0	105	Decolorization of methylene blue, methyl orange, rhodamine B and oxidation of phenol
			4.8		14.0	107	
[17]	550	6.7	No peak	No data	-	119	Oxidation of Methanol
			6.3[e]		-	113	
[18]	300	7.0	No peak	No data	13.0	100	Decolorization of rhodamine 6G
			3.4		-	103	
			4.8		-	107	
This work	200	6.5	No peak	3.9	5.6	59	Decomposition of acetic acid
	300		No peak	4.0	4.9	55	
	400		Broad	4.0	4.9	53	
	500		Broad	4.0	4.9	53	
	600		Broad	4.1	4.3	54	

[a]The crystallite size of the anatase particle derived from the 101 diffraction of anatase from XRD pattern using Scherrer equation. [b]Band gap energy of the anatase particle was derived from the UV-Vis absorption spectra by Tauc plat and the linear interpolation. [c]The size of the anatase particles was derived from the shift of the band gab energy from band gap energy of a bulk anatase particle (3.2 eV). [d]The sharpness was defined as the width between the maximum absorption and the absorption edge, derived from UV-Vis absorption spectra.

Table S2. Summary of the crystallite size of the anatase particles prepared in porous supports, the porosity of the hybrids and the photocatalytic reactions.

Ref.	Host	Crystallization temp./^{o}C	BET surface area/$m^2\ g^{-1}$	Pore volume/$cm^3\ g^{-1}$	[a]Crystallite size/nm	Reaction
[19]	SBA-15 (BJH pore diameter of 4.0 nm)	As-syn	714	0.74	No data	Decolorization of methylene blue
		500	561	0.55	No data	
		600	504	0.53	5.0	
[20]	SBA-15 (BJH pore diameter of 9.4 nm)	300	556	0.18	3.3	Decolorization of methylene blue, methyl orange, rhodamine B and oxidation of phenol
		400	717	0.21	3.7	
		500	439	0.16	4.1	
		600	263	0.11	4.7	
[21]	Natural zeolite (BJH pore diameter of 1 nm)	As-syn	No data	No data	No data	Decomposition of toluene
		300	No data	No data	6.3	
		400	No data	No data	7.2	
		500	No data	No data	8.4	
		600	No data	No data	10.2	
[22]	Natural zeolite (BJH pore diameter of 1 nm)	As-syn	167	0.22	No data	Oxidation of SO_2
		300	119	0.23	No data	
		400	167	0.22	No data	
		500	115	0.26	No data	
[23]	Montmolionite (2:1 phyllosilicate, stacked plates)	As-syn	219	0.20	No data	Decolorization of methylene blue
		300	279	0.27	2.5	
		400	243	0.30	4.3	
		500	216	0.27	5.1	

		600	194	0.26	6.1	
[24]	Kaolinite (1:1 Phyllosilicate, hexagonal plate)	100	65	-	7.0	Decolorization of methylene blue
		600	34	-	19.0	
This work	SBA-15 (BJH pore diameter of 6.5 nm)	As-syn	439	0.52	-	Decomposition of acetic acid
		200	452	0.53	5.0	
		300	466	0.53	5.0	
		400	469	0.54	5.0	
		500	475	0.55	5.0	
		600	476	0.55	4.5	

[a]The crystallite size of the anatase particle derived from the 101 diffraction of anatase from XRD pattern using Scherrer equation.

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