## SUPPORTING INFORMATION

## Stable yellow ZnO mesocrystals with efficient visible light photocatalytic activity

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Peak position (eV)	ZnO-500		ZnO-800	
	Area	Height	Area	Height
	ratio	ratio	ratio	ratio
530.54	1	1	1	1
531.92	0.68	0.73	0.58	0.68
533.4	0.22	0.40	0.11	0.40

Table S1. Details of XPS peak information.



**Figure S1**. XPS spectra for F1s of the ZnO-500 and ZnO-800 samples obtained by calcination of Zn(OH)F precursor.



Figure S2. The UV-visible diffuse reflectance spectra of ZnO samples obtained at different annealing temperatures.



Figure S3. IR spectra of the obtained ZnO and ZnO-ref.



Figure S4. XRD pattern (a) and SEM image (b) of yellow ZnO-500 photocatalyst after being reused for five times.