

# Novel plate-stratiform nanostructured $\text{Bi}_{12}\text{O}_{17}\text{Cl}_2$ with visible-light photocatalytic performance

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## Details on XRD experiments:

As shown in Figure S1, the  $\text{Bi}_{12}\text{O}_{17}\text{Cl}_2$  particle size ranges from 0.5  $\mu\text{m}$  to 8  $\mu\text{m}$ . The sample powder was laid flat on a glass substrate with an area of 1  $\text{cm}^2$ . During the XRD experiments, the slit width, step size, and dwell time per step are 0.5 radian, 0.0167 radian, and 8.255 s, respectively. Jade 5.0 software was used to analyze diffraction data.

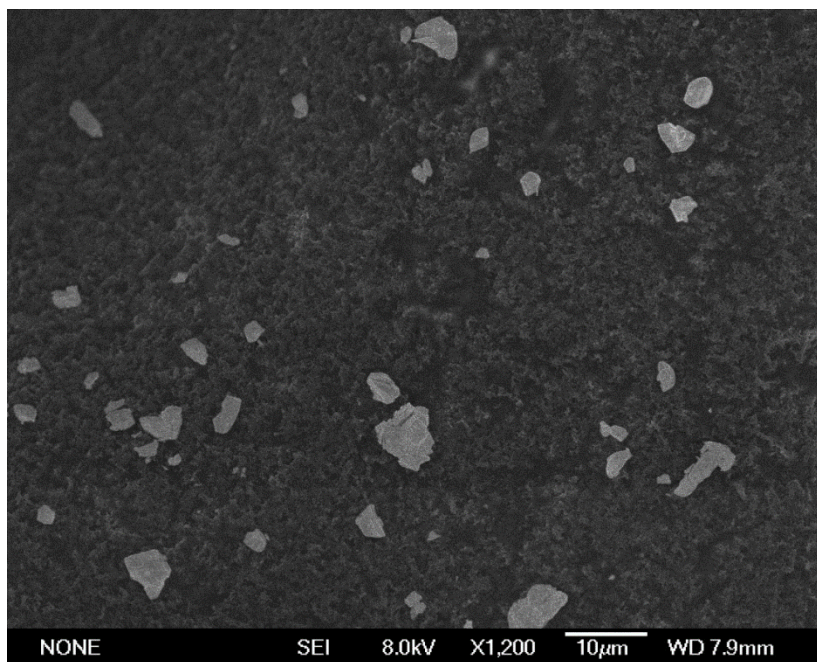


Figure S1. Low magnification SEM image of nanostructured  $\text{Bi}_{12}\text{O}_{17}\text{Cl}_2$ .

TABLE SI. Peaks details of XRD data.

$2\theta$ (°)	$d_{\text{cal}}$ (Å)	$I_{\text{obs}}$	FWHM	$h$	$k$	$l$	$2\theta$ (°)	$d_{\text{cal}}$ (Å)	$I_{\text{obs}}$	FWHM	$h$	$k$	$l$
10.057	8.7951	19	0.133	0	0	4	35.693	2.5154	20	0.109	0	0	14
15.106	5.8649	9	0.141	0	0	6	37.223	2.4155	6	0.132	2	1	2
20.172	4.4020	15	0.117	0	0	8	45.434	1.9962	31	0.205	2	0	12
23.232	3.8286	12	0.131	1	1	1	47.202	1.9255	36	0.132	2	2	0
24.320	3.6598	10	0.134	1	1	3	49.310	1.8480	10	0.202	2	0	14
26.377	3.3788	37	0.161	1	1	5	53.679	1.7074	7	0.585	3	0	7
29.199	3.0707	100	0.190	1	1	7	54.920	1.6718	17	0.248	3	1	5
30.457	2.9349	58	0.118	0	0	12	56.501	1.6287	25	0.217	3	1	7
32.633	2.7440	16	0.240	1	1	9	58.558	1.5763	10	0.303	3	1	9
32.888	2.7233	60	0.188	2	0	0							

TABLE SII. Un-indexed XRD peaks.

$2\theta$ (°)	$d_{\text{cal}}$ (Å)	$I_{\text{obs}}$	FWHM
28.621	3.1188	8	0.268
40.997	2.2014	6	0.133
50.500	1.8072	5	0.114
57.232	1.6096	8	0.301