

Fig. S1: Observed, calculated and the difference in XRD patterns of  $\text{Bi}_2\text{WO}_6$ :  $\text{Zn}^{2+}$  particles: (a)  $\text{Bi}_2\text{WO}_6$ , (b)  $\text{Bi}_2\text{WO}_6$ : 1%  $\text{Zn}^{2+}$ , (c)  $\text{Bi}_2\text{WO}_6$ : 2%  $\text{Zn}^{2+}$  and (d)  $\text{Bi}_2\text{WO}_6$ : 4%  $\text{Zn}^{2+}$ , (e)  $\text{Bi}_2\text{WO}_6$ : 8%  $\text{Zn}^{2+}$ .

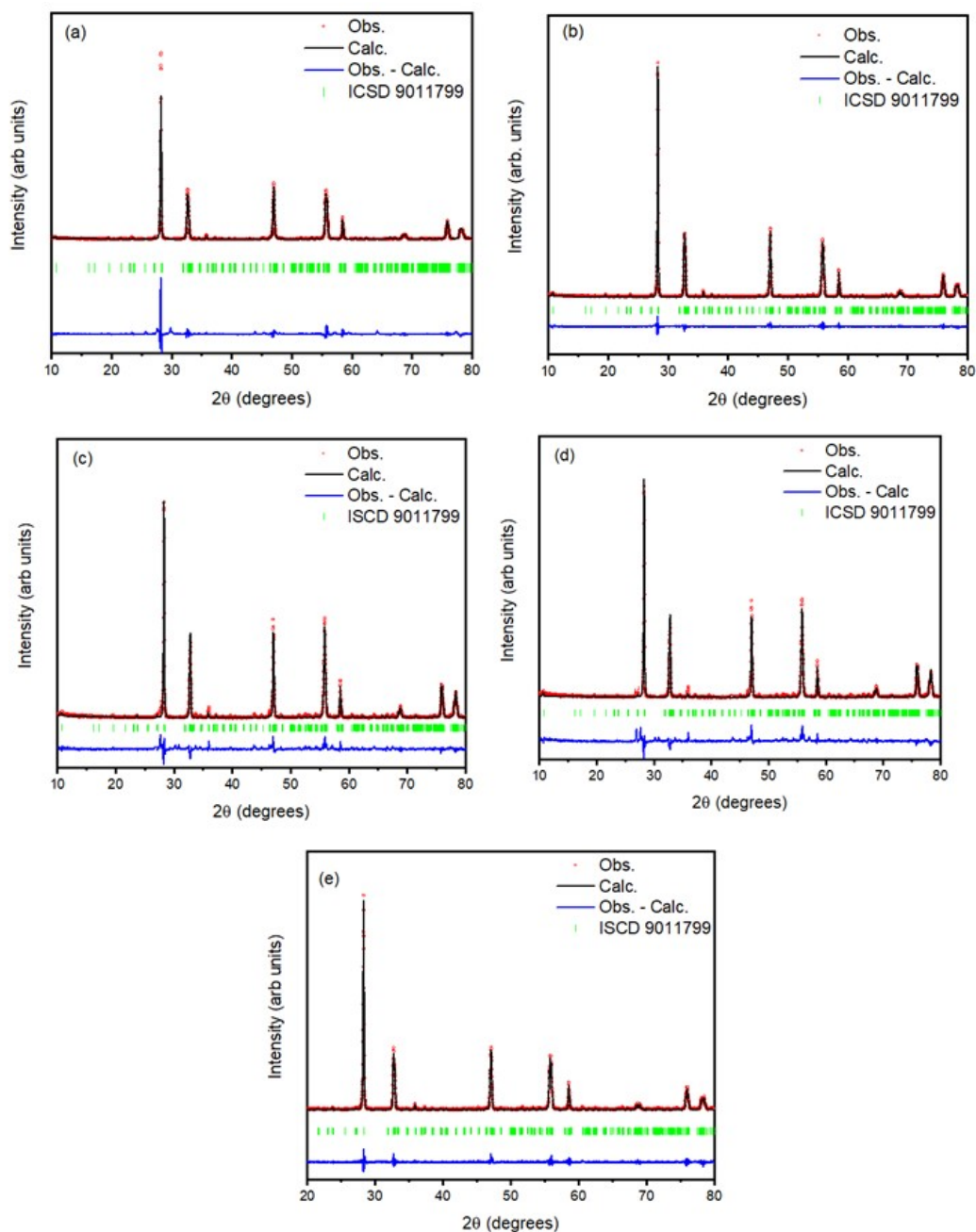


Table S1: Atomic position of  $\text{Bi}_2\text{WO}_6$ : x%  $\text{Zn}^{2+}$  (X = 1, 2, 4 and 8 mol%) samples

$\text{Bi}_2\text{WO}_6$

		x	y	z	Occ.	U	Site
(Bi)	Bi1	0.51830	0.42210	0.96480	1.000	0.006	4a
(Bi)	Bi2	0.48150	0.07780	0.98410	1.000	0.008	4a
(W)	W	0.00486	0.24990	0.00046	1.000	0.002	4a
(O)	O1	0.03821	0.12790	0.10860	1.000	0.011	4a
(O)	O2	0.25110	0.99650	0.26430	1.000	0.009	4a
(O)	O3	0.24390	0.50930	0.23380	1.000	0.005	4a
(O)	O4	0.67830	0.22780	0.19900	1.000	0.010	4a
(O)	O5	0.10890	0.29740	0.40860	1.000	0.012	4a
(O)	O6	0.54630	0.36680	0.58400	1.000	0.009	4a

$\text{Bi}_2\text{WO}_6$ : 1% Zn

		x	y	z	Occ.	U	Site
(Bi)	Bi1	0.52155	0.42180	0.97600	0.990	0.006	4a
(Bi)	Bi2	0.47970	0.07670	0.97360	0.990	0.008	4a
(W)	W	0.00620	0.24880	0.00220	1.000	0.002	4a
(O)	O1	0.05510	0.12050	0.09720	1.000	0.011	4a
(O)	O2	0.23850	0.99180	0.23830	1.000	0.009	4a
(O)	O3	0.28060	0.50640	0.19600	1.000	0.005	4a
(O)	O4	0.71480	0.23070	0.22000	1.000	0.010	4a
(O)	O5	0.13790	0.29920	0.41930	1.000	0.012	4a
(O)	O6	0.56350	0.36480	0.58800	1.000	0.009	4a
(Zn)	Zn1	0.52155	0.42180	0.97600	0.010	0.006	4a
(Zn)	Zn2	0.47970	0.07670	0.97360	0.010	0.008	4

### Bi<sub>2</sub>WO<sub>6</sub>: 2% Zn

		x	y	z	Occ.	U	Site
(Bi)	Bi1	0.52308	0.41890	0.97890	0.940	0.006	4a
(Bi)	Bi2	0.48870	0.08030	0.97280	0.940	0.008	4a
(W)	W	0.00270	0.25130	0.00208	1.000	0.002	4a
(O)	O1	0.00139	0.14190	0.10490	1.000	0.011	4a
(O)	O2	0.24420	1.00890	0.25450	1.000	0.009	4a
(O)	O3	0.25136	0.49950	0.25070	1.000	0.005	4a
(O)	O4	0.65820	0.20810	0.13460	1.000	0.010	4a
(O)	O5	0.08070	0.23790	0.61620	1.000	0.012	4a
(O)	O6	0.56966	0.37030	0.59581	1.000	0.009	4a
(Zn)	Zn1	0.52308	0.41890	0.97890	0.040	0.006	4a
(Zn)	Zn2	0.48870	0.08030	0.97280	0.040	0.008	4a

### Bi<sub>2</sub>WO<sub>6</sub>: 4% Zn

		x	y	z	Occ.	U	Site
(Bi)	Bi1	0.52308	0.41890	0.97890	0.940	0.006	4a
(Bi)	Bi2	0.48870	0.08030	0.97280	0.940	0.008	4a
(W)	W	0.00270	0.25130	0.00208	1.000	0.002	4a
(O)	O1	0.00139	0.14190	0.10490	1.000	0.011	4a
(O)	O2	0.24420	1.00890	0.25450	1.000	0.009	4a
(O)	O3	0.25136	0.49950	0.25070	1.000	0.005	4a
(O)	O4	0.65820	0.20810	0.13460	1.000	0.010	4a
(O)	O5	0.08070	0.23790	0.61620	1.000	0.012	4a
(O)	O6	0.56966	0.37030	0.59581	1.000	0.009	4a
(Zn)	Zn1	0.52308	0.41890	0.97890	0.040	0.006	4a
(Zn)	Zn2	0.48870	0.08030	0.97280	0.040	0.008	4a

### Bi<sub>2</sub>WO<sub>6</sub>: 8% Zn

		x	y	z	Occ.	U	Site
(Bi)	Bi1	0.52260	0.41817	0.98820	0.920	0.006	4a
(Bi)	Bi2	0.48530	0.08148	0.98306	0.920	0.008	4a

(W)	W	0.00270	0.24970	0.01961	1.000	0.002	4a
(O)	O1	0.12260	0.13830	0.11400	1.000	0.011	4a
(O)	O2	0.35910	1.03488	0.37790	1.000	0.009	4a
(O)	O3	0.21920	0.51500	0.29840	1.000	0.005	4a
(O)	O4	0.62680	0.24540	0.08790	1.000	0.010	4a
(O)	O5	0.09994	0.24720	0.58850	1.000	0.012	4a
(O)	O6	0.53390	0.36550	0.57110	1.000	0.009	4a
(Zn)	Zn1	0.52260	0.41817	0.98820	0.920	0.080	4a
(Zn)	Zn2	0.48530	0.08148	0.98306	0.920	0.080	4a

Fig. S2:  $\text{Bi}_2\text{WO}_6$  and  $\text{Bi}_2\text{WO}_6$ : 8%  $\text{Zn}^{2+}$  unit cells modeled using VESTA.

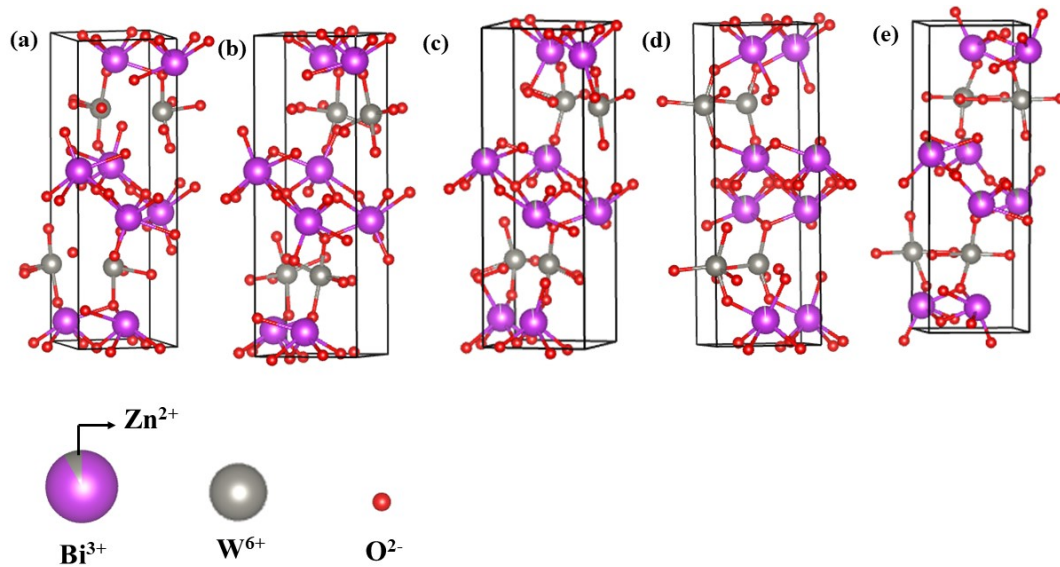
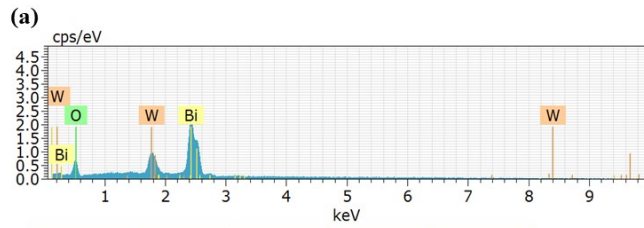
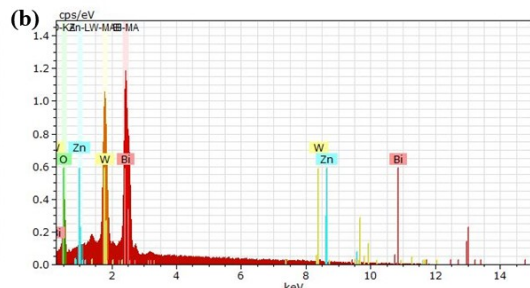
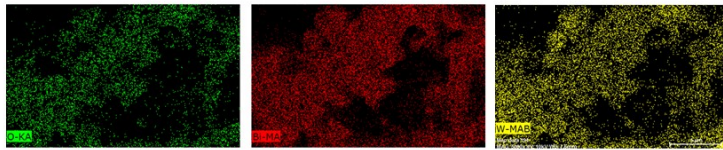
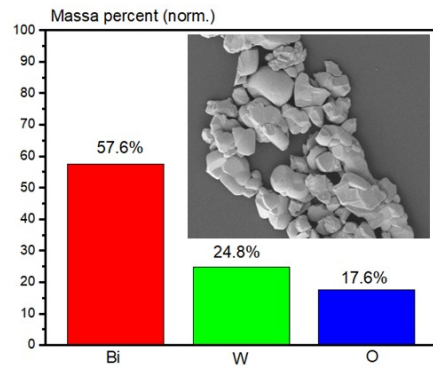


Fig. S3: EDS spectrum and elementary mapping, (a)  $\text{Bi}_2\text{WO}_6$  and (b)  $\text{Bi}_2\text{WO}_6$ : 8%  $\text{Zn}^{2+}$



Elements	AN	Series	nor. C [wt.%]	Atom C [at.%]
Bi	83	M-series	57.6	39.67
W	74	M-series	24.8	10.02
O	8	M-series	17.6	50.31
Total:			100.0	100.0



Elements	AN	Series	nor. C [wt.%]	Atom C [at.%]
Bi	83	M-series	54.3	33.85
W	74	M-series	26.4	12.17
O	8	K-series	14.0	51.62
Zn	30	L-series	5.3	2.36
Total:			100.0	100.0

