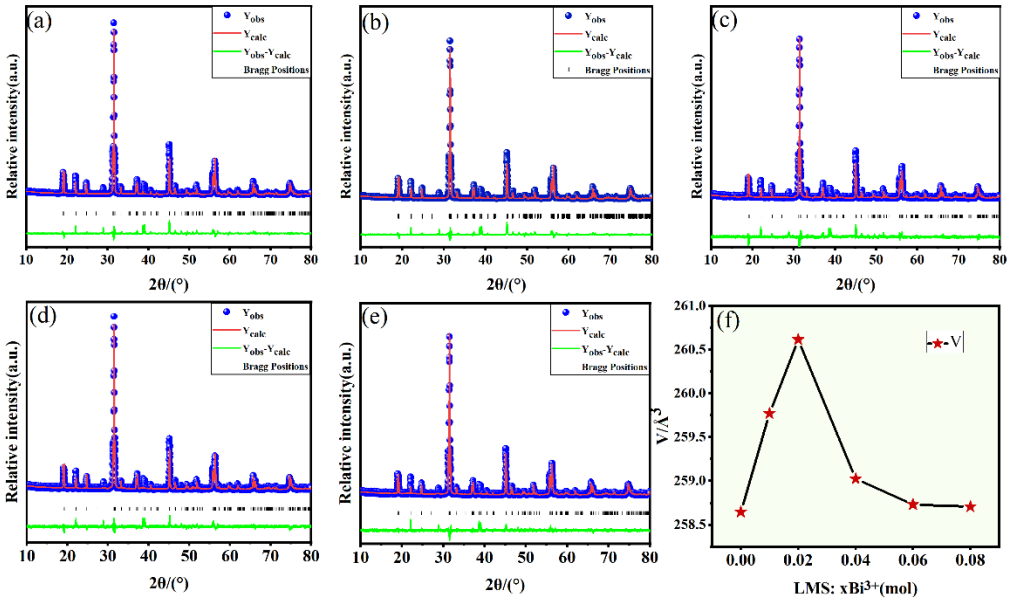

Figure. S1. (a) - (e) Refined maps of LMS: xBi^{3+}(x=0.01-0.08), respectively; (f) variation in cell volume.

Table S1. Cell parameters and refinement data of LMS: xBi^{3+} (x = 0.01-0.08).

Formula	$0.01Bi^{3+}$	$0.02Bi^{3+}$	$0.04Bi^{3+}$	$0.06Bi^{3+}$	$0.08Bi^{3+}$
Space group	*P2₁/n*	*P2₁/n*	*P2₁/n*	*P2₁/n*	*P2₁/n*
Cell-	a=5.6453	a=5.6503	a=5.6387	a=5.6369	a=5.6364
	b=5.7294	b=5.7369	b=5.7246	b=5.7225	b=5.72769
parameters(Å)	c=8.0313	c=8.0397	c=8.0242	c=8.0208	c=8.0203
Volume($Å^3$)	259.77	260.61	259.02	258.73	258.70
R_{wp}(%)	9.72	9.35	9.83	9.76	9.40
R_p(%)	6.43	6.01	6.51	6.27	5.98
χ^2(%)	2.44	2.19	2.59	2.37	2.55

Table S2. Cation bond length information in matrix LMS.

M-O bands	Distance(Å)	M-O bands	Distance(Å)
Mg1-O1	1.890	Mg2/Sn-O1	2.730
Mg1-O1	1.890	Mg2/Sn-O1	2.730
Mg1-O2	2.190	Mg2/Sn-O2	1.970
Mg1-O2	2.190	Mg2/Sn-O2	1.970
Mg1-O3	1.992	Mg2/Sn-O3	2.0228
Mg1-O3	1.992	Mg2/Sn-O3	2.0228
Mean value	2.024	Mean value	2.240

(Follow the above table)

M-O bands	Distance(Å)
La-O1	2.300
La-O1	2.350
La-O2	2.940
La-O2	2.440
La-O2	2.510
La-O3	3.470
La-O3	3.246
Mean value	2.750

Table S3. Cation bond length information in LMS: $0.02Bi^{3+}$.

M-O bands	Distance(Å)	M-O bands	Distance(Å)
Mg1-O1	2.403	Mg2/Sn-O1	2.170
Mg1-O1	2.403	Mg2/Sn-O1	2.170
Mg1-O2	1.927	Mg2/Sn-O2	2.124
Mg1-O2	1.927	Mg2/Sn-O2	2.124
Mg1-O3	2.032	Mg2/Sn-O3	2.041
Mg1-O3	2.032	Mg2/Sn-O3	2.041
Mean value	2.120	Mean value	2.111

(Follow the above table)

M-O bands	Distance(Å)
La-O1	3.170
La-O1	3.240
La-O2	2.481
La-O2	2.670
La-O2	2.980
La-O3	3.370
La-O3	2.480
Mean value	2.913

Table S4. “Tolerance factor” of LMS: xBi^{3+}.

LMS: xBi^{3+}	T_f
x=0	0.8400
x=0.01	0.8398
x=0.02	0.8395
x=0.04	0.8391
x=0.06	0.8386
x=0.08	0.8381