catalysts

MDPI

Supplementary Materials

Bismuth Oxyhalides for NOx Degradation under Visible Light: The Role of the Chloride Precursor

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XRPD

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	11.72	7.5512	64.12	0.1000
2	26.01	3.4261	300.41	0.1000
3	32.68	2.7401	962.40	0.1000
4	33.42	2.6814	381.02	0.1000
5	40.83	2.2102	84.81	0.1000
6	46.85	1.9393	349.04	0.1000
7	48.57	1.8746	92.14	0.1000
8	49.43	1.8440	91.77	0.1000
9	54.26	1.6907	265.25	0.1000
10	58.64	1.5744	221.72	0.1000
11	60.44	1.5317	58.72	0.1000
12	68.34	1.3726	94.62	0.1000

Diffraction Pattern Graphics

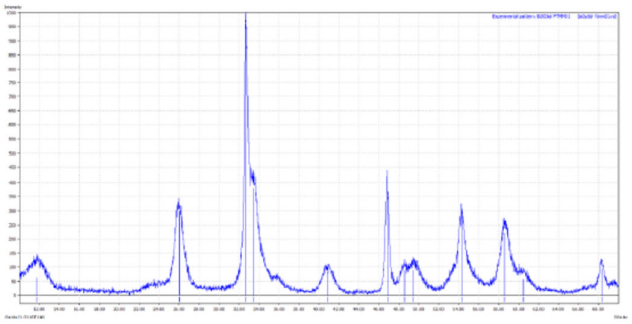

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Figure S1. XRPD pattern of sample 1.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	12.09	7.3219	618.51	0.1000
2	24.04	3.7015	164.54	0.1000
3	25.93	3.4367	496.20	0.1000
4	32.72	2.7368	983.45	0.1000
5	33.38	2.6845	632.52	0.1000
6	36.12	2.4867	165.96	0.1000
7	40.91	2.2059	142.23	0.1000
8	46.81	1.9409	342.22	0.1000
9	48.53	1.8761	111.87	0.1000
10	49.47	1.8426	148.05	0.1000
11	54.30	1.6895	302.26	0.1000
12	58.64	1.5744	261.66	0.1000
13	60.36	1.5336	67.21	0.1000
14	68.26	1.3740	97.05	0.1000

Diffraction Pattern Graphics

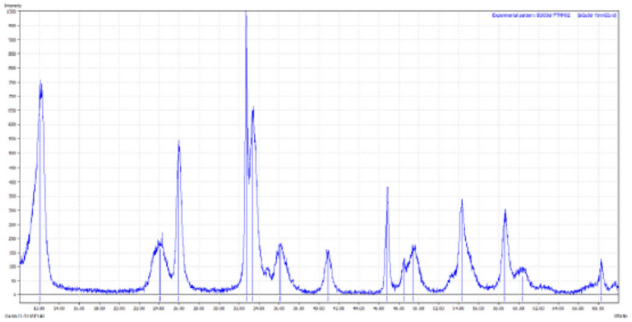

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Figure S2. XRPD pattern of sample 2.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	11.68	7.5776	267.20	0.1600
2	26.05	3.4208	362.97	0.1600
3	32.60	2.7468	879.47	0.1600
4	35.88	2.5032	41.26	0.1600
5	40.95	2.2038	93.18	0.1600
6	46.81	1.9409	365.81	0.1600
7	48.57	1.8746	66.48	0.1600
8	49.63	1.8369	86.87	0.1600
9	54.30	1.6895	269.72	0.1600
10	58.64	1.5744	216.82	0.1600
11	68.30	1.3733	87.15	0.1600

Diffraction Pattern Graphics

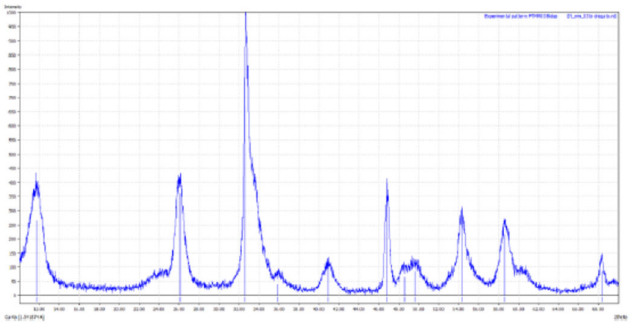

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Figure S3. XRPD pattern of sample 3.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	11.92	7.4220	875.47	0.1000
2	23.84	3.7328	182.73	0.1000
3	25.84	3.4474	291.65	0.1000
4	32.60	2.7468	581.84	0.1000
5	33.21	2.6974	447.42	0.1000
6	36.04	2.4922	160.98	0.1000
7	40.83	2.2102	94.11	0.1000
8	46.64	1.9473	245.10	0.1000
9	48.40	1.8806	80.06	0.1000
10	49.47	1.8426	119.93	0.1000
11	54.14	1.6942	245.03	0.1000
12	58.56	1.5764	206.58	0.1000
13	60.28	1.5355	57.57	0.1000
14	68.14	1.3762	73.53	0.1000

Diffraction Pattern Graphics

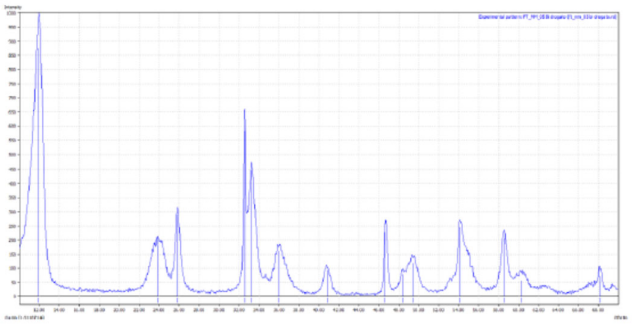

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Figure S4. XRPD pattern of sample 4.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	11.80	7.4990	797.63	0.1000
2	23.80	3.7391	163.87	0.1000
3	32.60	2.7468	194.24	0.1000
4	33.26	2.6942	95.29	0.1000
5	36.04	2.4922	111.11	0.1000
6	46.72	1.9441	77.43	0.1000
7	54.26	1.6907	45.38	0.1000

Diffraction Pattern Graphics

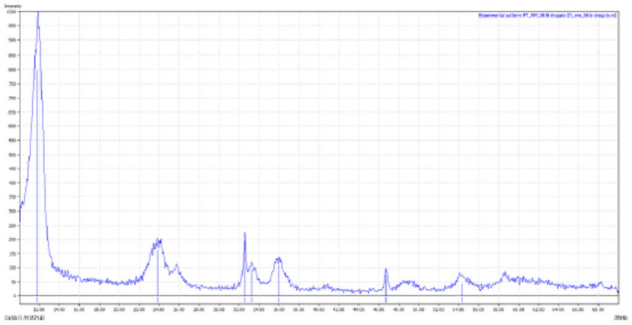

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Figure S5. XRPD pattern of sample 5.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	11.84	7.4732	409.77	0.1000
2	23.80	3.7391	122.92	0.1000
3	25.80	3.4528	582.64	0.1000
4	32.64	2.7435	927.96	0.1000
5	33.26	2.6942	690.54	0.1000
6	36.04	2.4922	94.51	0.1000
7	40.75	2.2144	131.54	0.1000
8	46.72	1.9441	288.48	0.1000
9	49.39	1.8454	132.27	0.1000
10	54.18	1.6930	257.37	0.1000
11	58.56	1.5764	211.34	0.1000
12	68.22	1.3748	61.85	0.1000

Diffraction Pattern Graphics

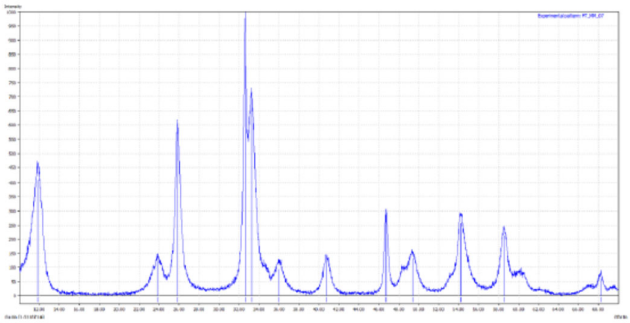

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Figure S6. XRPD pattern of sample 6.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	12.09	7.3219	903.37	0.1000
2	24.17	3.6829	227.72	0.1000
3	25.89	3.4420	305.88	0.1000
4	32.64	2.7435	604.33	0.1000
5	33.46	2.6782	596.51	0.1000
6	34.81	2.5773	58.61	0.1000
7	36.24	2.4786	166.96	0.1000
8	40.83	2.2102	112.32	0.1000
9	46.77	1.9425	200.80	0.1000
10	48.40	1.8806	68.34	0.1000
11	49.55	1.8397	167.82	0.1000
12	54.34	1.6883	230.06	0.1000
13	54.79	1.6755	194.69	0.1000
14	58.64	1.5744	176.15	0.1000
15	60.44	1.5317	74.22	0.1000
16	68.22	1.3748	64.12	0.1000

Diffraction Pattern Graphics

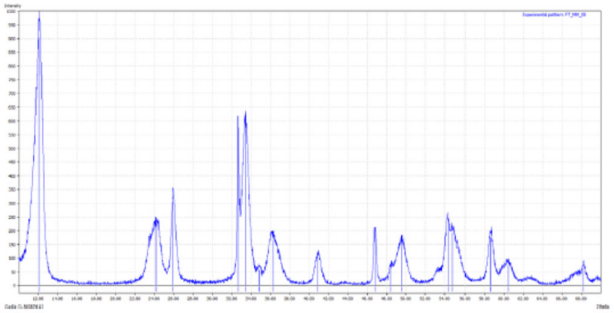

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Figure S7. XRPD pattern of sample 7.

Peak List

No.	2theta [°]	d [Å]	I/I0	FWHM
1	12.05	7.3466	895.86	0.1000
2	23.47	3.7905	146.04	0.1000
3	24.25	3.6707	162.24	0.1000
4	25.84	3.4474	441.18	0.1000
5	32.56	2.7502	753.44	0.1000
6	33.21	2.6974	616.01	0.1000
7	34.61	2.5920	64.96	0.1000
8	35.96	2.4977	140.61	0.1000
9	40.71	2.2166	120.66	0.1000
10	46.64	1.9473	287.98	0.1000
11	48.32	1.8836	87.79	0.1000
12	49.35	1.8469	134.55	0.1000
13	54.14	1.6942	264.73	0.1000
14	54.46	1.6848	166.03	0.1000
15	58.48	1.5784	217.84	0.1000
16	60.24	1.5364	69.27	0.1000
17	68.14	1.3762	87.84	0.1000

Diffraction Pattern Graphics

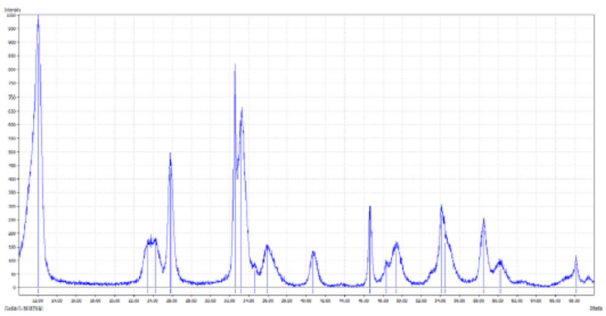

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Figure S8. XRPD pattern of sample 8.

DRS

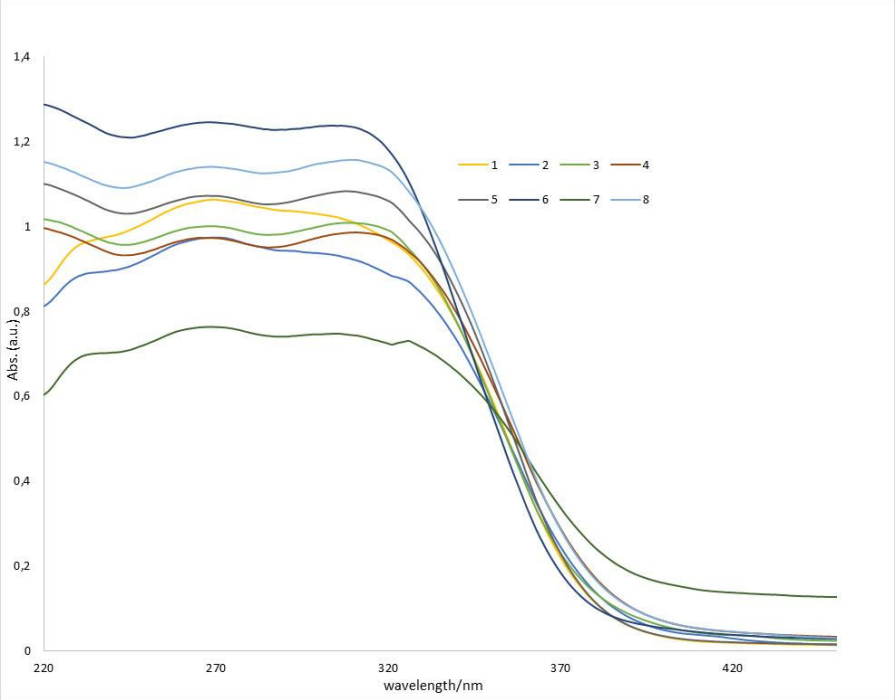

Figure S9. DRS spectra of samples **1**-**8.**

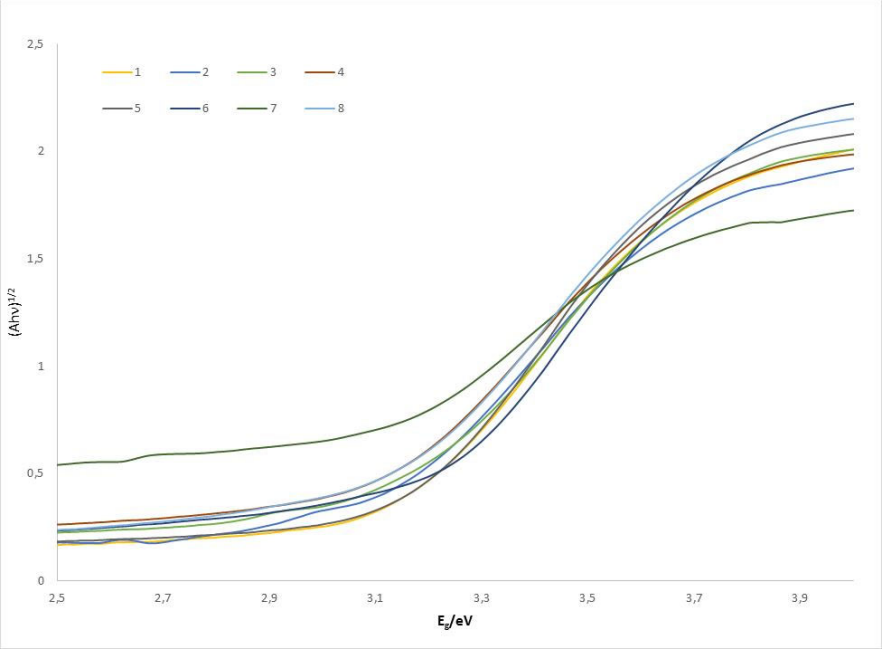

Figure S10. $(Ah\nu)^{1/2}$ values *vs* photoenergy for samples **1**-**8.**

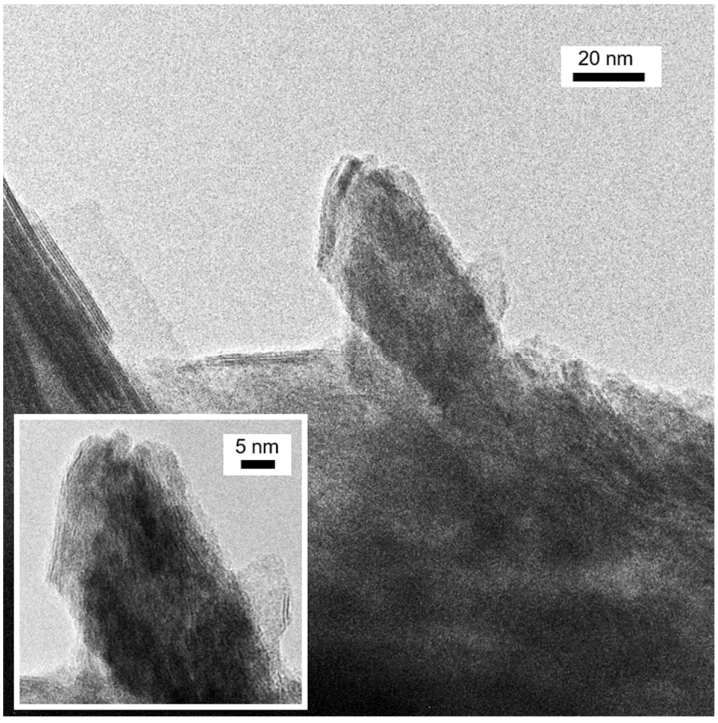

Figure S11. TEM-HRTEM images of sample **5.**