

**Hybrid Bismuth Oxyhalides@gypsum as Self-Cleaning Composites:  
Novel aspects of sustainable photocatalytic technology for solar  
environmental cleanup**

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*Supplementary information*

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**Table S1:** TOC tests results of the Naphthalene contaminated  $\text{BiOCl}_{0.8}\text{Br}_{0.2}$ @gypsum samples. The analysis shows 7.34%W of organic carbon before treatment and only 0.41%W after illumination

**Analysis Name** Naphth-Hani.adb

Template Name Naphthalene\_2.tdb

Method Name N / A

Operator Administrator

Date Tuesday, April 21, 2015  
Time 10:45

Start Oven Temp. 1052 °C  
Start Cooler Temp. 1 °C

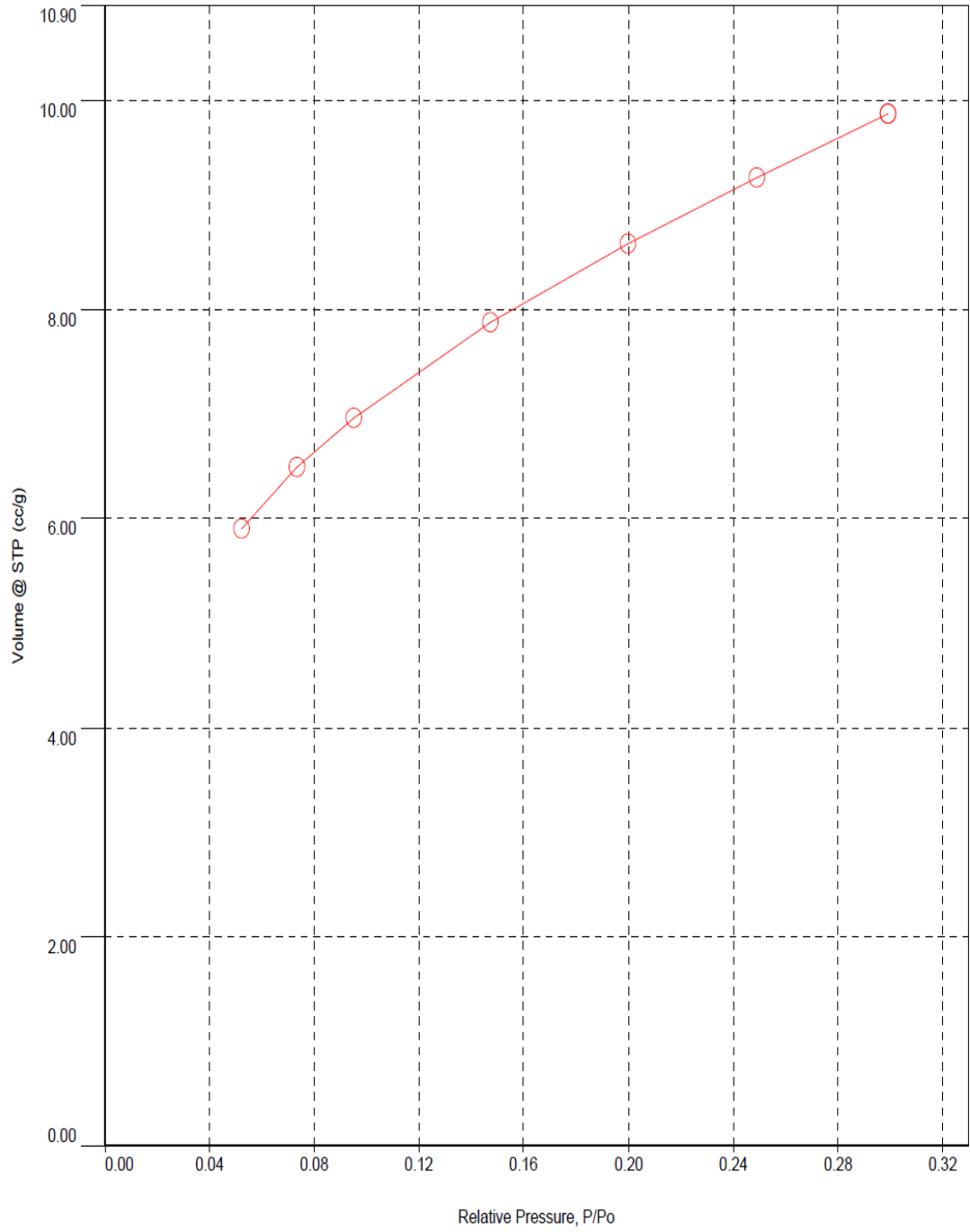
Version 1.73 Release  
Info

**Element** **Integration Time**  
Carbon 300 s

SampleTimeTC 600 s  
SampleTimeIC 250 s

No	Type	FileName	Date/Time	Max. Area	Max Cont.	Order	Correlation	R-squared	Sel.	Range
1	TC	TCHR1	Dec 10 2014, 7:39	5938144	39.032	1	0.99696	0.99392	Yes	High
		A2: 0	AI: 155360.345537063		AO: 45589.999112087					
2	IC	ICHR2	Dec 10 2014, 9:37	4815568	31.174	1	0.99879	0.99758	Yes	High
		A2: 0	AI: 156773.147367749		AO: 59565.2907027456					
3	IC	ICLR2	Dec 10 2014, 9:14	5189985	1.4388	1	0.99538	0.99077	Yes	Low
		A2: 0	AI: 3526068.30828969		AO: -613874.999999989					
4	TC	TCLR1	Dec 10 2014, 8:17	3563242	1.00912	1	0.96710	0.93528	Yes	Low
		A2: 0	AI: 3936174.45291626		AO: 613226.986797435					
5	IC	ICHR3	Feb 17 2015, 9:32	1672576	10.791	1	0.99960	0.99921	Yes	High
		A2: 0	AI: 153262.106439902		AO: -19161.8525846356					
6	TC	TCHR2	Feb 22 2015, 9:50	1416074	8.83456	1	0.99937	0.99873	Yes	High
		A2: 0	AI: 161015.658987825		AO: -8383.09200853162					

Inj. Order	Position	Type	Identification	Range					
1	1	Unknown	1	High					
		Injection Type	Conc.(%)	Area	Weight				
		<b>TC</b>	<b>7.34</b>	<b>7752845</b>	<b>656 mg</b>				
	Sample	Injection Time	Conc.(%)	Area	Curve	Oven	Cooler	Edited	Selected
	1	4/21/2015 10:46:07	7.34	7752845	6	1052	2	E	Yes
2	2	Unknown	2	High					
		Injection Type	Conc.(%)	Area	Weight				
		<b>TC</b>	<b>0.41</b>	<b>765053</b>	<b>1158 mg</b>				
	Sample	Injection Time	Conc.(%)	Area	Curve	Oven	Cooler	Edited	Selected
	1	4/21/2015 10:56:27	0.41	765053	6	1049	1	E	Yes



**Figure S1.** BET surface area isotherm ( $A_{ds}$ ) for  $\text{BiOCl}_{0.8}\text{Br}_{0.2}$  semiconductor