Electronic Supplementary Material (ESI) for RSC Advances.

Single Step Hydrothermal Synthesis of Beyerite, $CaBi_2O_2(CO_3)_2$ for the Fabrication of UV-Visible Light Photocatalyst $BiOI/CaBi_2O_2(CO_3)_2$

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Table S1 Crystallographic (PXRD) parameters of $CaBi_2O_2(CO_3)_2$

	$CaBi_2O_2(CO_3)_2$
Crystal system	Orthorhombic
Space group	*Immm*
Lattice constants:	
a (Å)	3.76283(5)
b (Å)	3.75493(8)
c (Å)	21.6611(5)
Cell volume ($Å^3$)	306.053(8)
Formula weight	610.05
Z	2
Density (calc.)	6.61 g cm^{-3}
Radiation	CuK_α
cc range	20 - 70˚
No. of data points	1500
No. of reflections	53
No. of parameters	32
Agreement factors:	
R_p	0.0275
R_{wp}	0.0386
χ^2	9.655

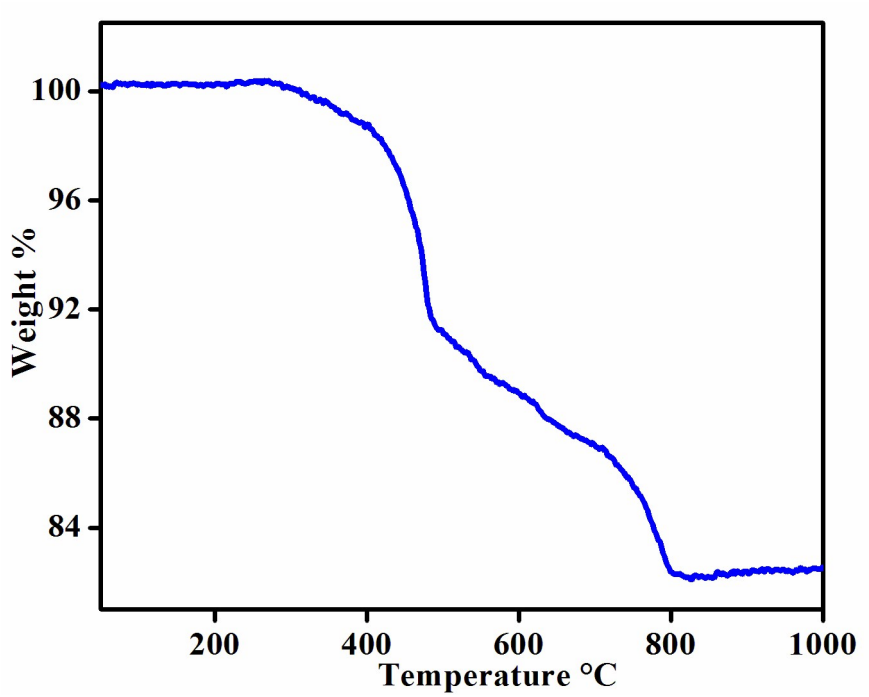

Fig. S1 Thermogravimetic trace of CBCS1

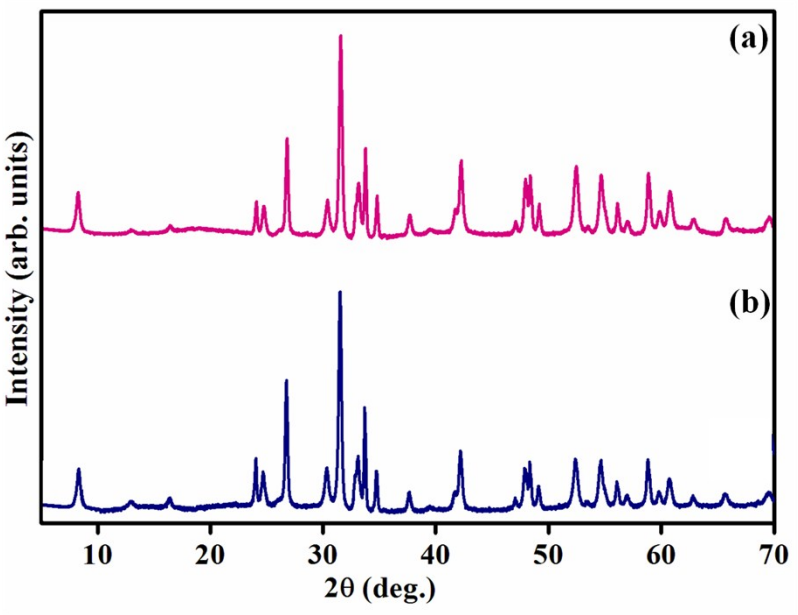

Fig. S2 PXRD patterns of $BiOI/CaBi_2O_2(CO_3)_2$, (a) before and (b) after photocatalysis of Rh B

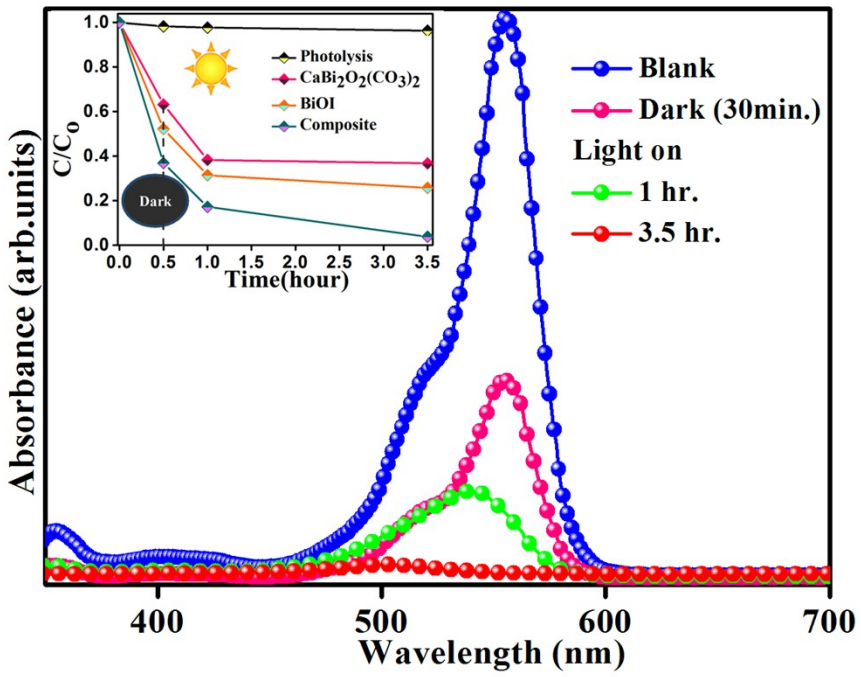

Fig. S3 Temporal changes in absorbance spectra of Rh B dye (10^{-5} M) under visible irradiation (inset shows the plot of concentration vs time (min)).