Supplementary Materials

Novel synthesis of bismuth oxyiodide/graphitic carbon nitride nanocomposite with enhanced visible-light photocatalytic activity

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Table S1. Energy gap of BiO_xI_y/ g-C_3N_4 photocatalysts.

Energy gap (E_g, eV)										
Bismuth oxyiodide Weight (%)	pH									
	1		4		7		10		13	
0	2.57		2.57		2.57		2.57		2.57	
5	1.66	2.22	1.32	2.19			2.45		2.51	
10	1.69	1.95	1.54	2.32			2.29		2.44	
25	1.69		1.45	1.61			2.27		2.19	
50	1.71		1.70				1.98		2.38	
75	1.72		1.68				2.13		2.02	
90	1.72		1.68				2.07		2.00	
95	1.74		1.70				2.18		2.01	
100	1.71		1.70		2.09		2.12		2.06	

Table S2. Physical and chemical properties of as-prepared samples.

pH	BiO_xI_y/g-C_3N_4 (wt%)	S_{BET} (m^2/g)	Pore volume (cm^3/g)	Pore diameter (nm)
	g-C_3N_4	17.61	0.172	35.63
1	BiOI/g-C_3N_4 (95)	8.31	0.088	28.97
1	BiOI	3.51	0.024	22.37
4	BiOI/$Bi_6O_5(OH)_3(NO_3)_5$•$2H_2O$ /g-C_3N_4 (95)	7.04	0.095	52.67
4	BiOI/$Bi_6O_5(OH)_3(NO_3)_5$•$2H_2O$	8.08	0.096	36.10
7	$Bi_7O_9I_3$/g-C_3N_4 (10)	10.26	0.108	31.62
7	$Bi_7O_9I_3$	6.65	0.057	27.39
10	$Bi_7O_9I_3$/Bi_5O_7I/g-C_3N_4 (95)	20.39	0.150	25.18
10	$Bi_7O_9I_3$/Bi_5O_7I	5.74	0.065	37.74
13	Bi_5O_7I/g-C_3N_4 (95)	30.94	0.182	19.67
13	Bi_5O_7I	0.44	0.006	44.68

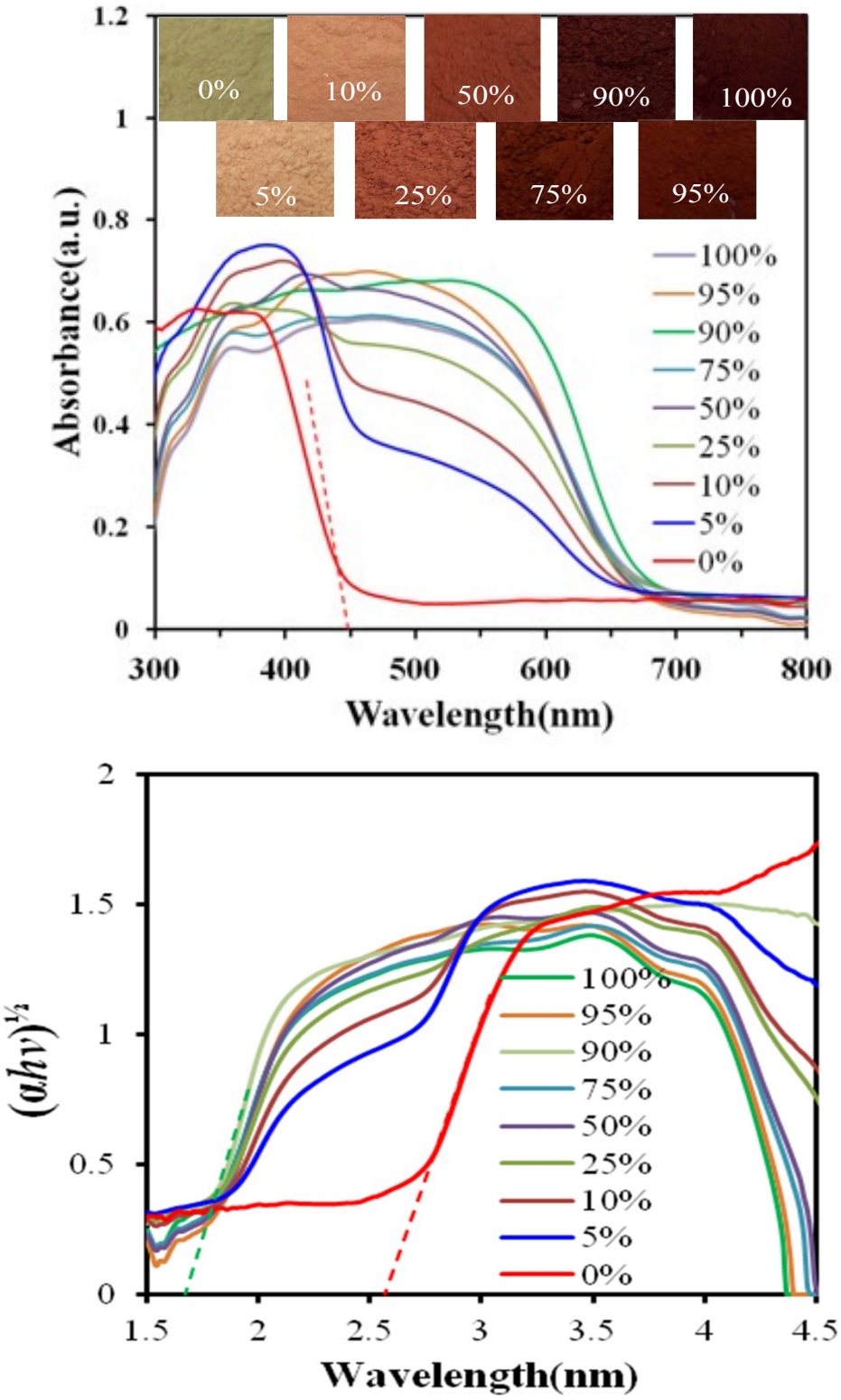

Figure S1. DRS patterns of as-prepared BiOI/g-C_3N_4 samples under pH 1.

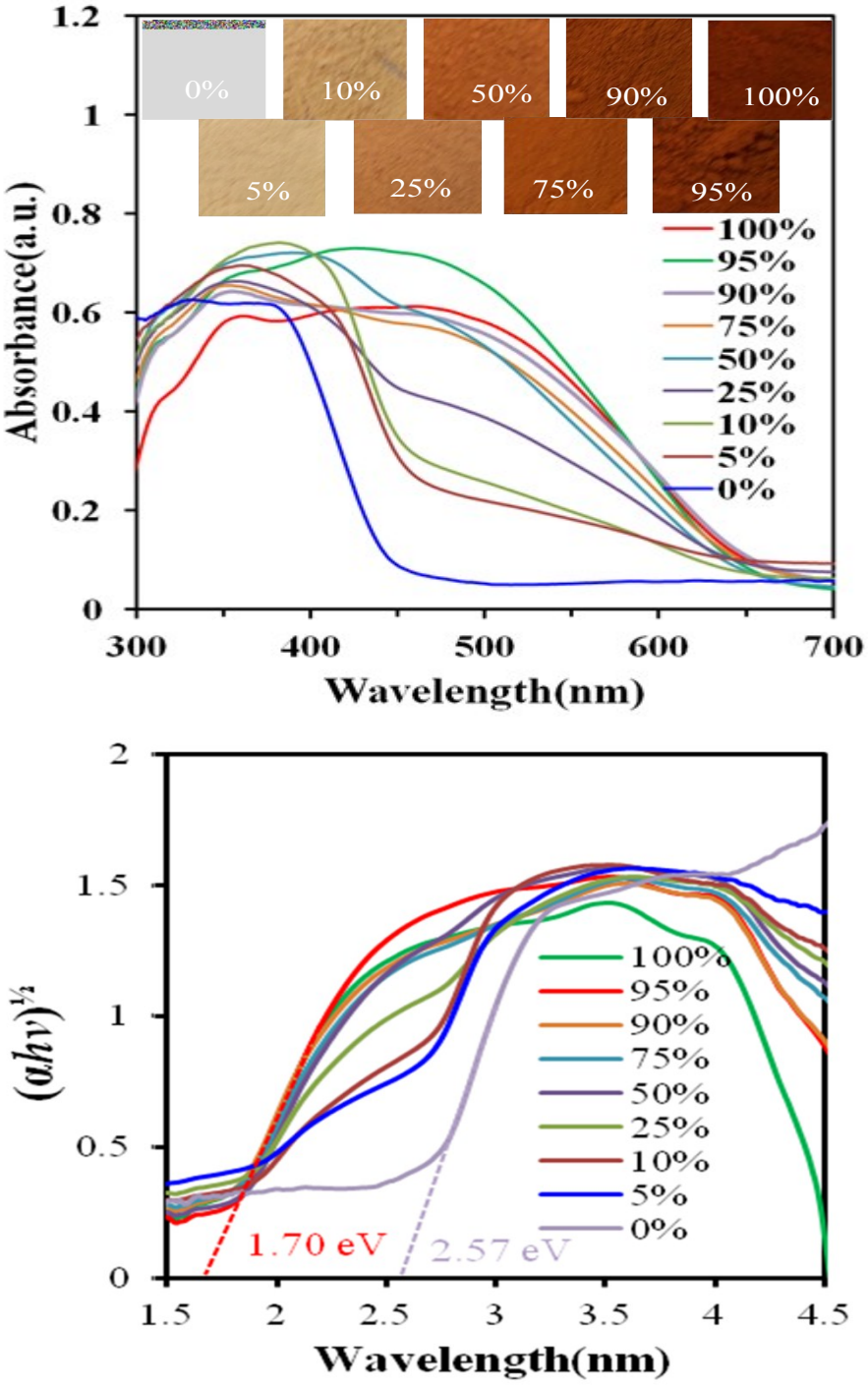

Figure S2. DRS patterns of as-prepared BiOI/g-C_3N_4 samples under pH 4.

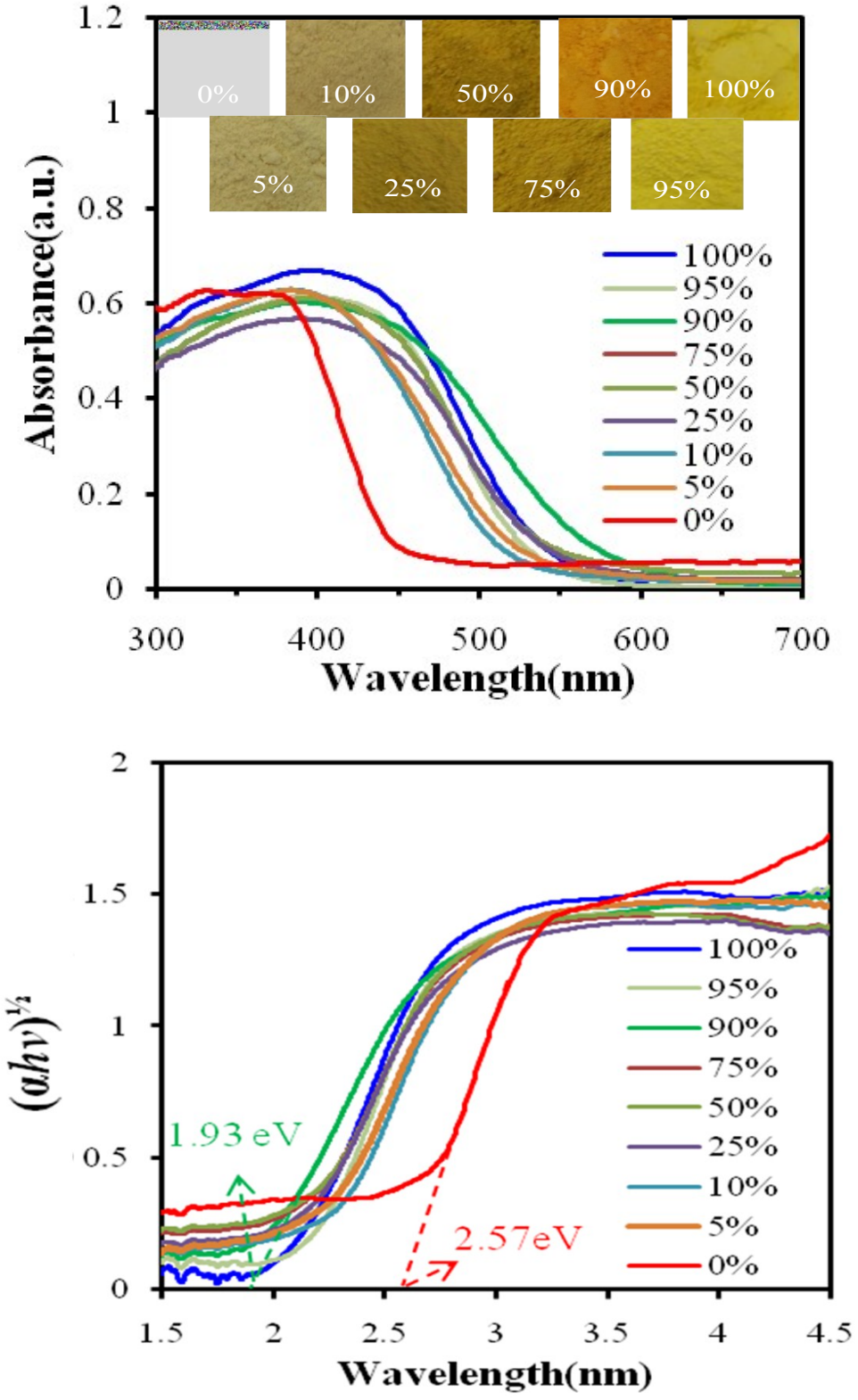

Figure S3. DRS patterns of as-prepared $Bi_7O_9I_3$/g-C_3N_4 samples under pH 7.

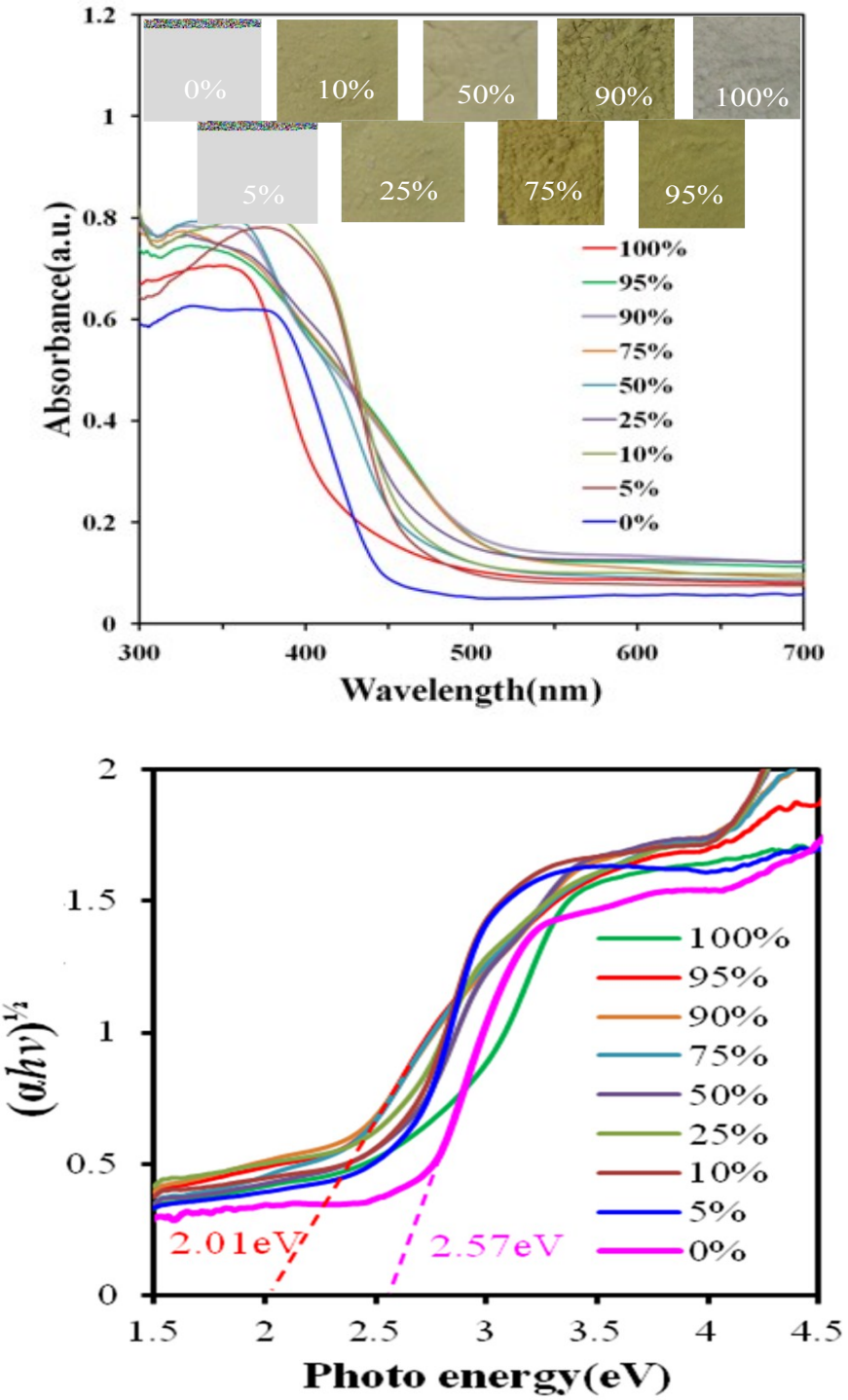

Figure S4. DRS patterns of as-prepared Bi_5O_7I/g-C_3N_4 samples under pH 13.

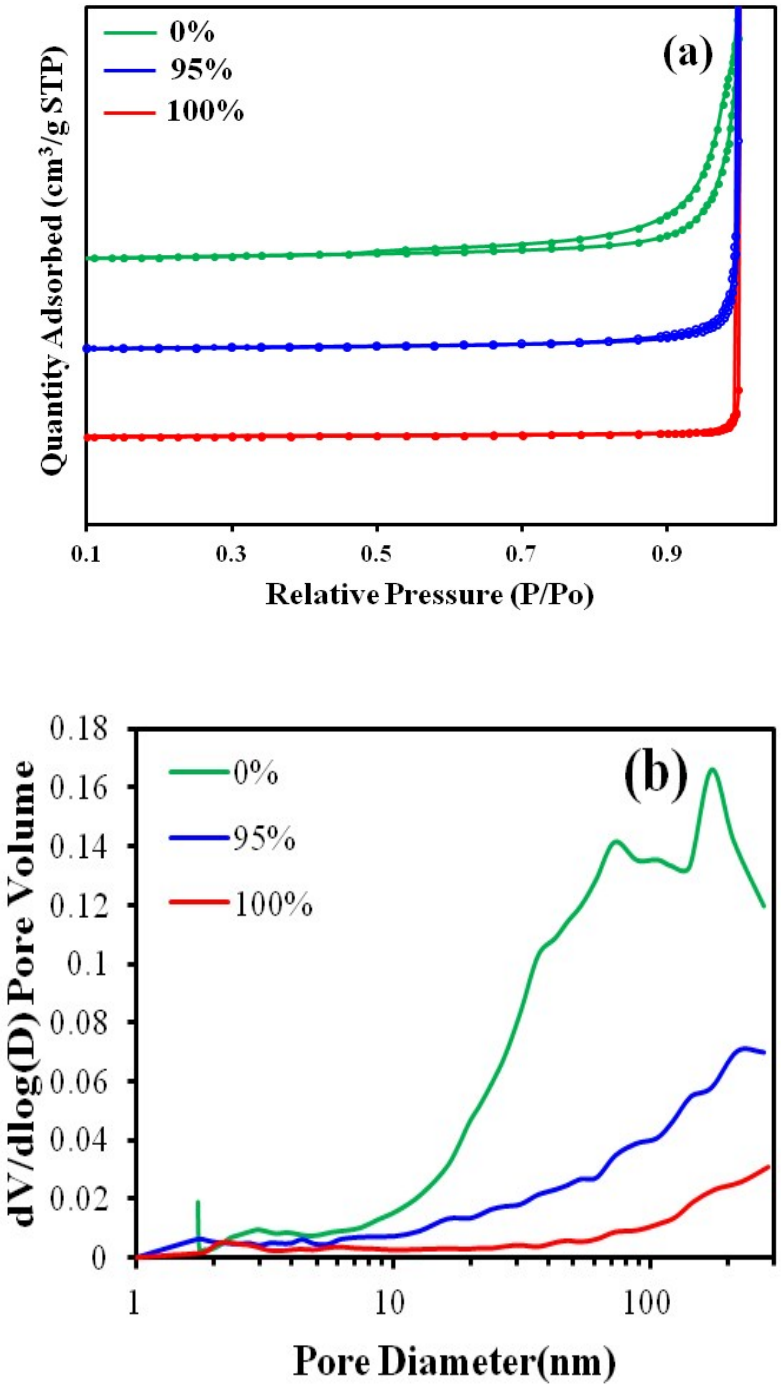

Figure S5. (a) N_2 adsorption-desorption isotherm and (b) pore size distribution of BiOI/g-C_3N_4 at pH 1.

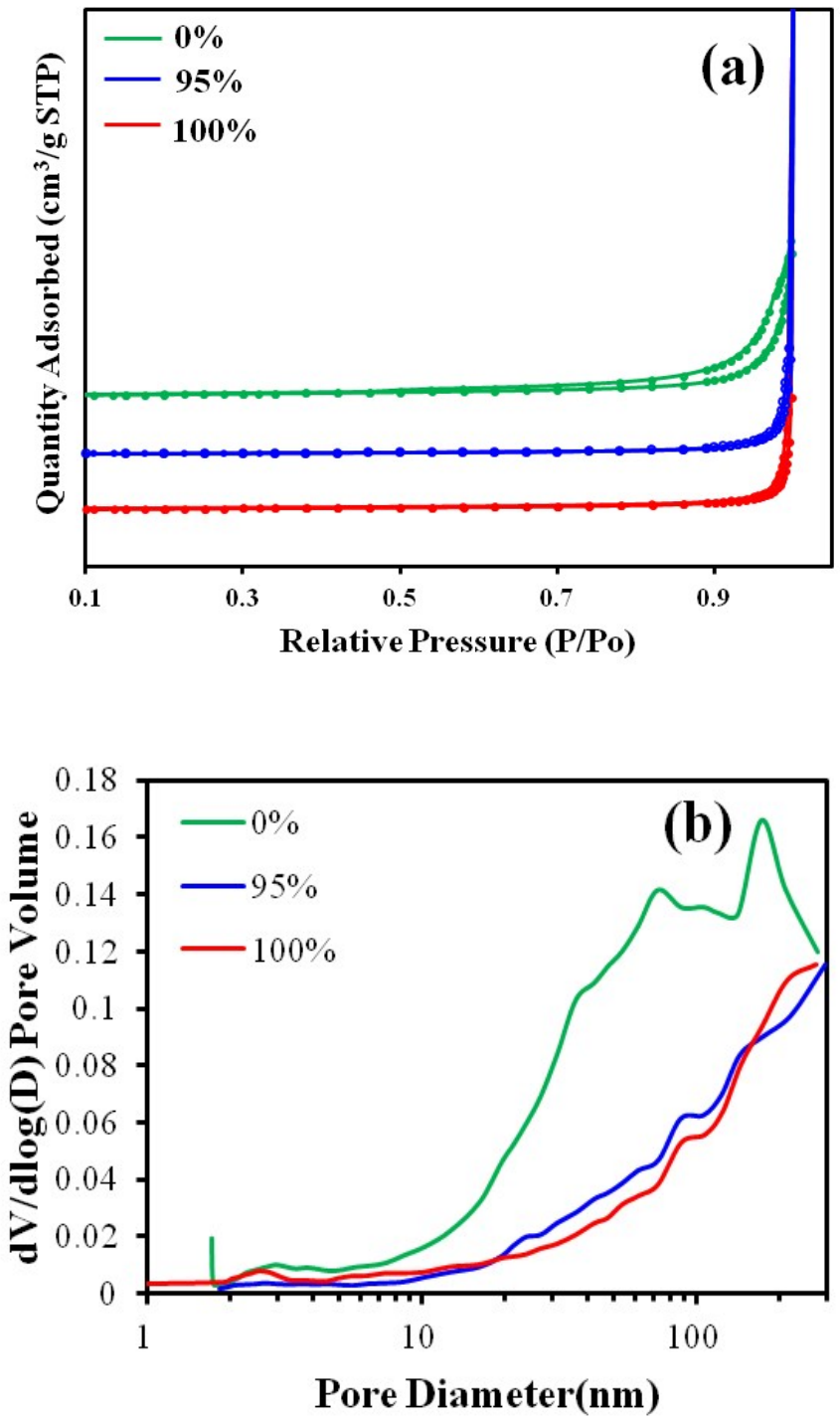

Figure S6. (a) N_2 adsorption-desorption isotherm and (b) pore size distribution of BiOI/g-C_3N_4 at pH 4.

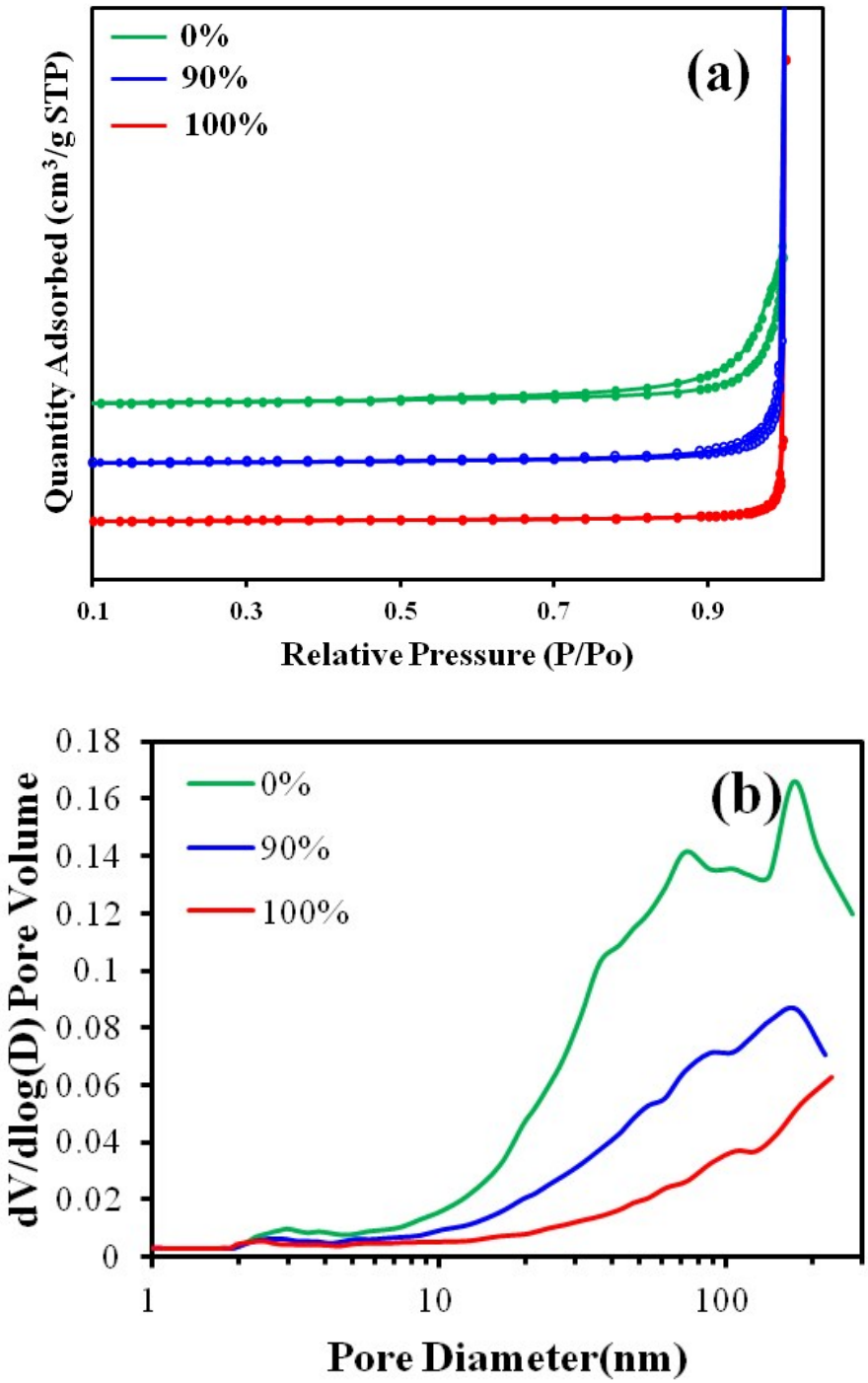

Figure S7. (a) N_2 adsorption-desorption isotherm and (b) pore size distribution of $Bi_7O_9I_3$/g-C_3N_4 at pH 7.

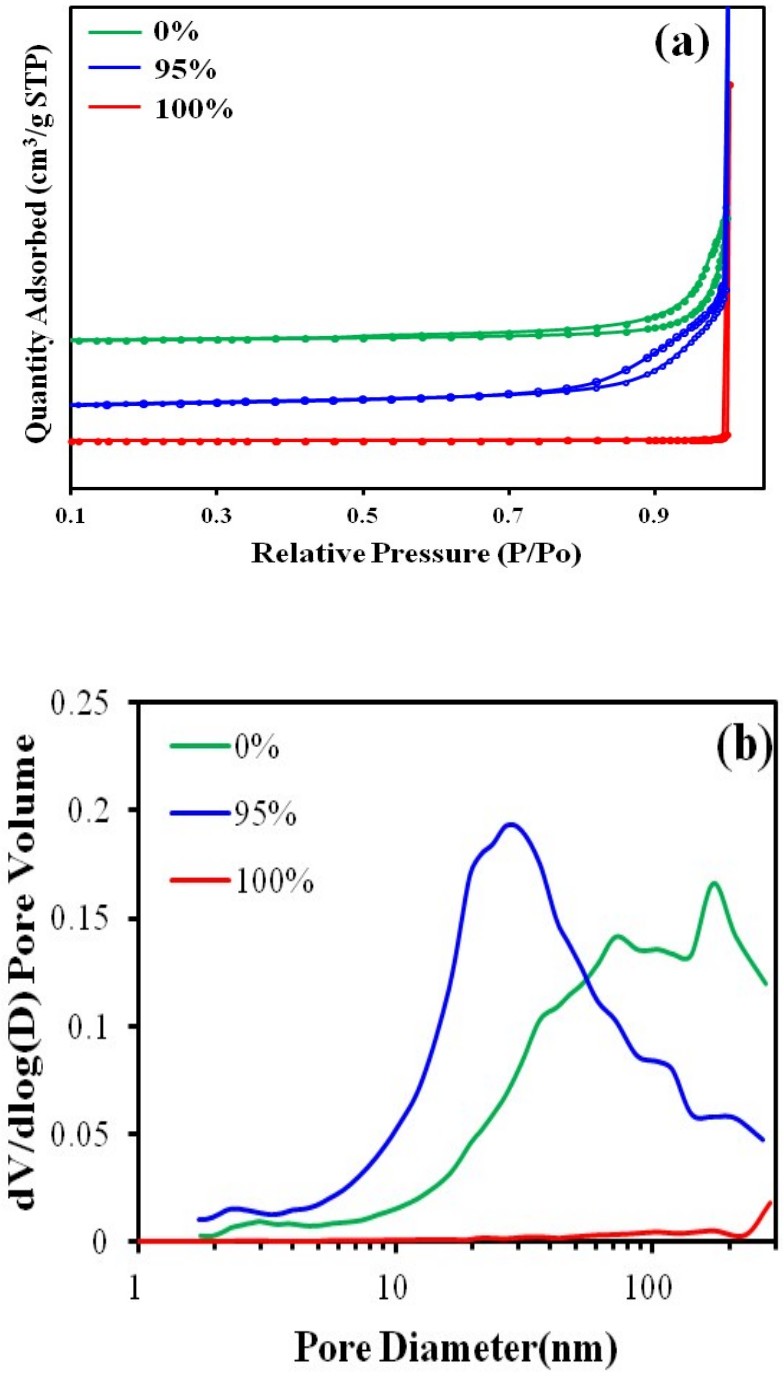

Figure S8. (a) N_2 adsorption-desorption isotherm and (b) pore size distribution of Bi_5O_7I/g-C_3N_4 at pH 13.