Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting information

Novel persistent and tribo-luminescence from bismuth ion pairs doped strontium gallate

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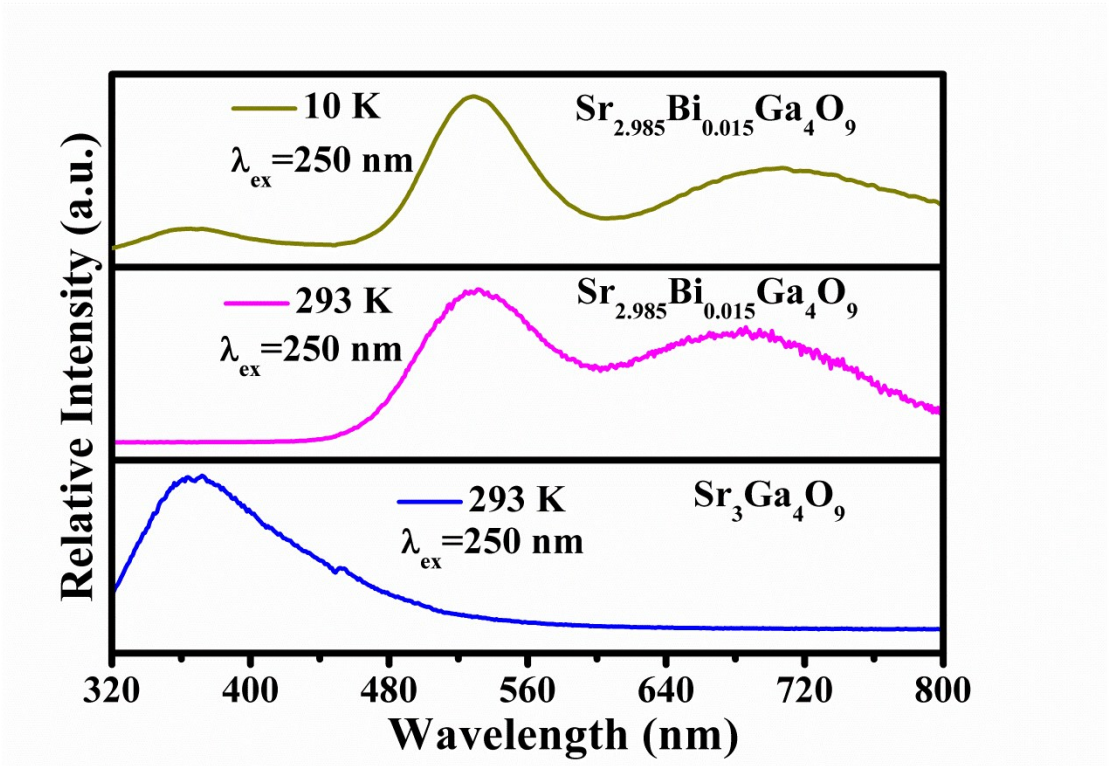

Figure S1. The emission spectra of $Sr_3Ga_4O_9$: Bi^{3+} and $Sr_3Ga_4O_9$ at 10 and 293 K.

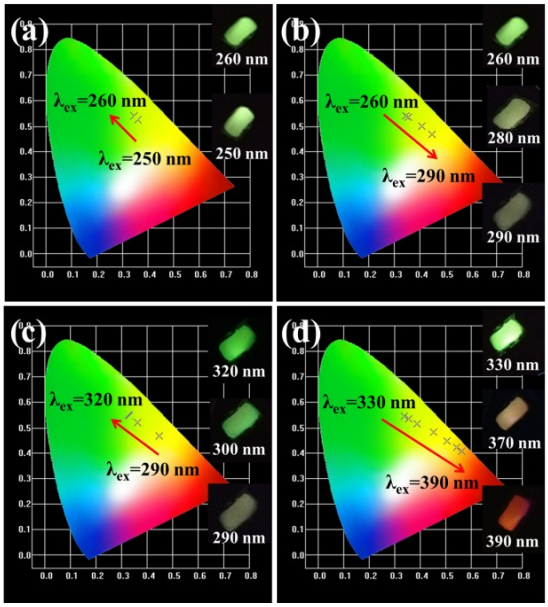

Figure S2. CIE color coordinates and long persistent luminescence photographs of $Sr_{2.985}Bi_{0.015}Ga_4O_9$ sample excited at 250-390 nm.

Table S1.CIE color coordinates (x,y) for the $Sr_{2.985}Bi_{0.015}Ga_4O_9$ phosphor under 250-430 nm Excitations

Number(NO.)	λ_{ex}=	CIE(x,y)values	Number(NO.)	λ_{ex}=	CIE(x,y)values
1	250	(0.3602,0.5262)	11	350	(0.3879,0.5138)
2	260	(0.3442,0.5401)	12	360	(0.4518,0.4824)
3	270	(0.3554,0.5359)	13	370	(0.5044,0.4463)
4	280	(0.4075,0.5003)	14	380	(0.5416,0.4225)
5	290	(0.4464,0.4664)	15	385	(0.5431,0.4169)
6	300	(0.3631,0.5211)	16	390	(0.5619,0.4082)
7	310	(0.3312,0.5477)	17	400	(0.5657,0.4051)
8	320	(0.3284,0.5496)	18	410	(0.5617,0.4076)
9	330	(0.3371,0.5452)	19	420	(0.5542,0.4131)
10	340	(0.3545,0.5355)	20	430	(0.5441,0.4203)

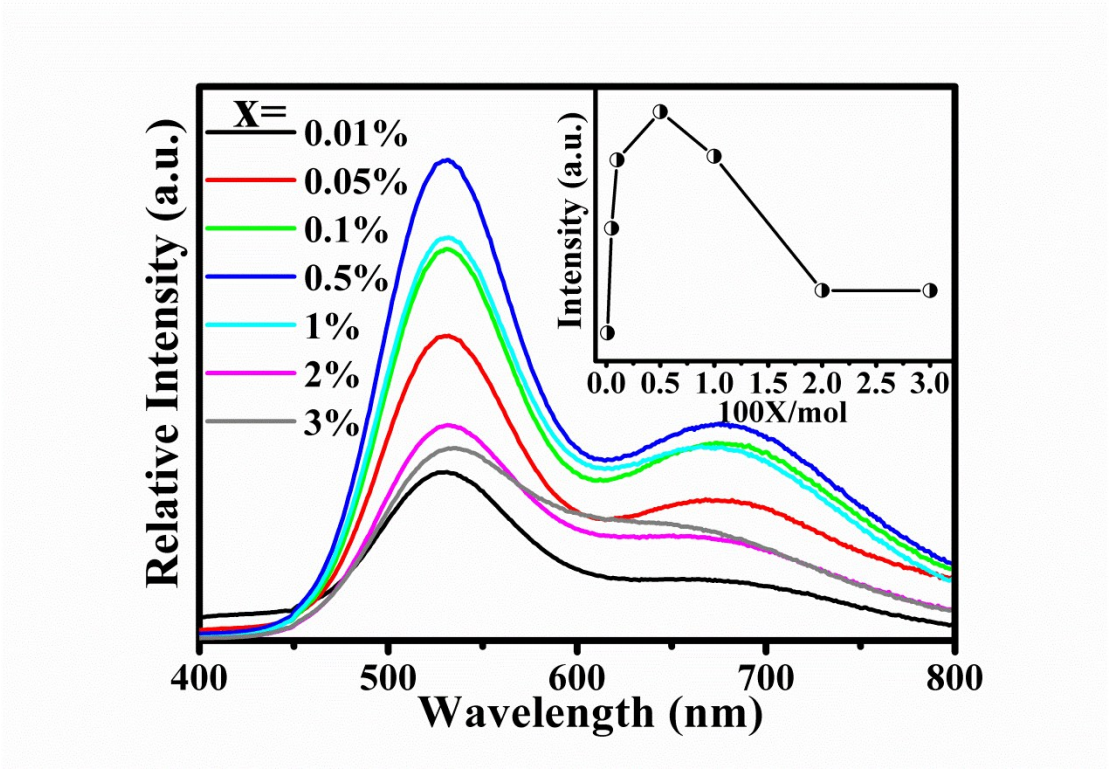

Figure S3. The photoluminescence of $Sr_{3(1-x)}Bi_{3x}Ga_4O_9$ (x = 0.01%-3%) under 320 nm excitation. The inset shows the relationship between the integral photoluminescence intensity of $Sr_{3(1-x)}Bi_{3x}Ga_4O_9$ and x.