

Supporting information

RSC Advances

Remarkable Flux Effect of Li-Codoping on Highly Enhanced Luminescence of Orthosilicate Phosphors, $\text{Ba}_2\text{SiO}_4:\text{Eu}^{2+}$ for NUV-LEDs: Autonomous Impurity Purification by Eutectic Li_2CO_3 Melts

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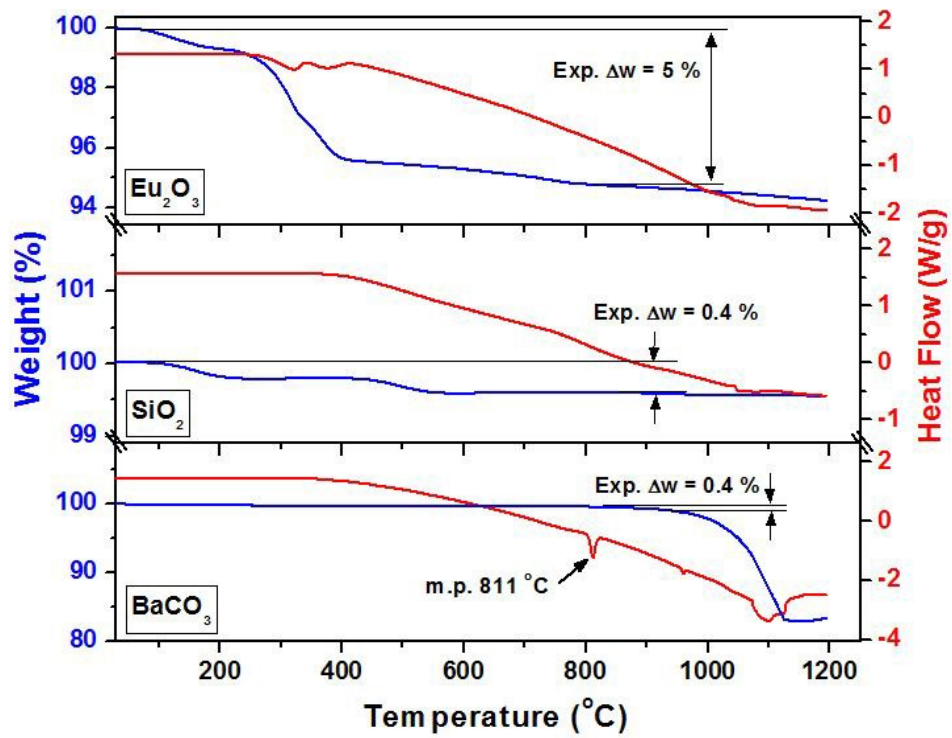


Figure S1. TG/DSC curves of BaCO_3 , SiO_2 , and Eu_2O_3 starting materials.

Table S1. Trace Elements of SiO₂-Starting Chemicals Determined by ICP-MS

element	SiO ₂ (Aldrich, 99.995%) (ppm)	SiO ₂ (Aldrich, 99.6%) (ppm)	SiO ₂ (Aldrich, 99.6%) ^a (ppm)
Al	4.307	3891.49	2288.07
K	0.307	1312.78	186.48
Fe	0.591	478.16	102.28
P	2.102	199.76	35.05
Ti	1.917	193.88	174.14
Ca	0.531	177.03	56.32
Sr	0.045	162.48	35.16
Mg	0.112	152.81	77.92
Zn	0.978	118.60	228.38
Na	1.416	75.76	34.72
S	ND	28.21	11.24
B	0.732	25.61	36.30
Cu	0.183	24.73	47.95
Ba	0.000	22.93	4.63
Zr	0.129	14.83	19.38
Mn	0.022	10.08	7.59
V	ND	5.13	2.34
Cr	0.047	4.00	2.75
Pb	0.010	3.64	1.13
Li	0.302	2.51	4.77
Ga	0.034	2.17	0.72
Co	0.003	1.72	1.71
Nb	0.018	1.45	2.46
Ni	0.109	1.38	1.84
Σ(As and 10 elements)	0.753	2.65	1.54
SiO₂ purity (%)	99.998	99.310	99.664

^a SiO₂ (Aldrich, 99.6%) was treated with aqua regia