

Supporting Information

Novel Eu³⁺-activated Ba₂Y₅B₅O₁₇ red-emitting phosphors for white LEDs: High color purity, high quantum efficiency and excellent thermal stability

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Table S1:

The atomic coordinations, occupancies and isotropic displacement parameters as determined by Rietveld refinement for $\text{Ba}_2\text{Y}_5\text{B}_5\text{O}_{17}$

Atom	x	y	z	occ.	$U_{\text{iso}}(\text{\AA}^2)$	Wyck.
Ba1	0.33581	0.02396	0.18393	0.90943	-0.0062	8d
Y1	0.33581	0.02396	0.18393	0.90943	-0.0062	8d
Ba2	0.5	0.41124	0.75	0.18114	0.0024	4c
Y2	0.5	0.41124	0.75	0.18114	0.0024	4c
Y3	0.18134	0.04687	0.41484	1	-0.00589	8d
Y4	0.01594	0.76072	0.47898	1	0.01409	8d
B1	0.15432	0.51804	0.40532	1	-0.09	8d
O1	0.19449	0.37813	0.4037	1	-0.06707	8d
O2	0.15118	0.70069	0.39997	1	-0.01794	8d
O3	0.08387	0.45757	0.49893	1	0.0003	8d
B2	0.65421	0.5521	0.76958	1	0.0596	8d
O4	0.68239	0.41402	0.75251	1	0.0293	8d
O5	0.61361	0.35693	0.88268	1	0.01608	8d
O6	0.6953	0.57904	0.91649	1	0.03028	8d
O7	0.94272	0.93885	0.57988	1	-0.02678	8d
O8	0.0302	0.25278	0.67564	1	-0.00313	8d
O9	0.5	0.95211	0.25	1	-0.02375	4c
B3	0.0	0.63778	0.25	1	-0.08043	4c

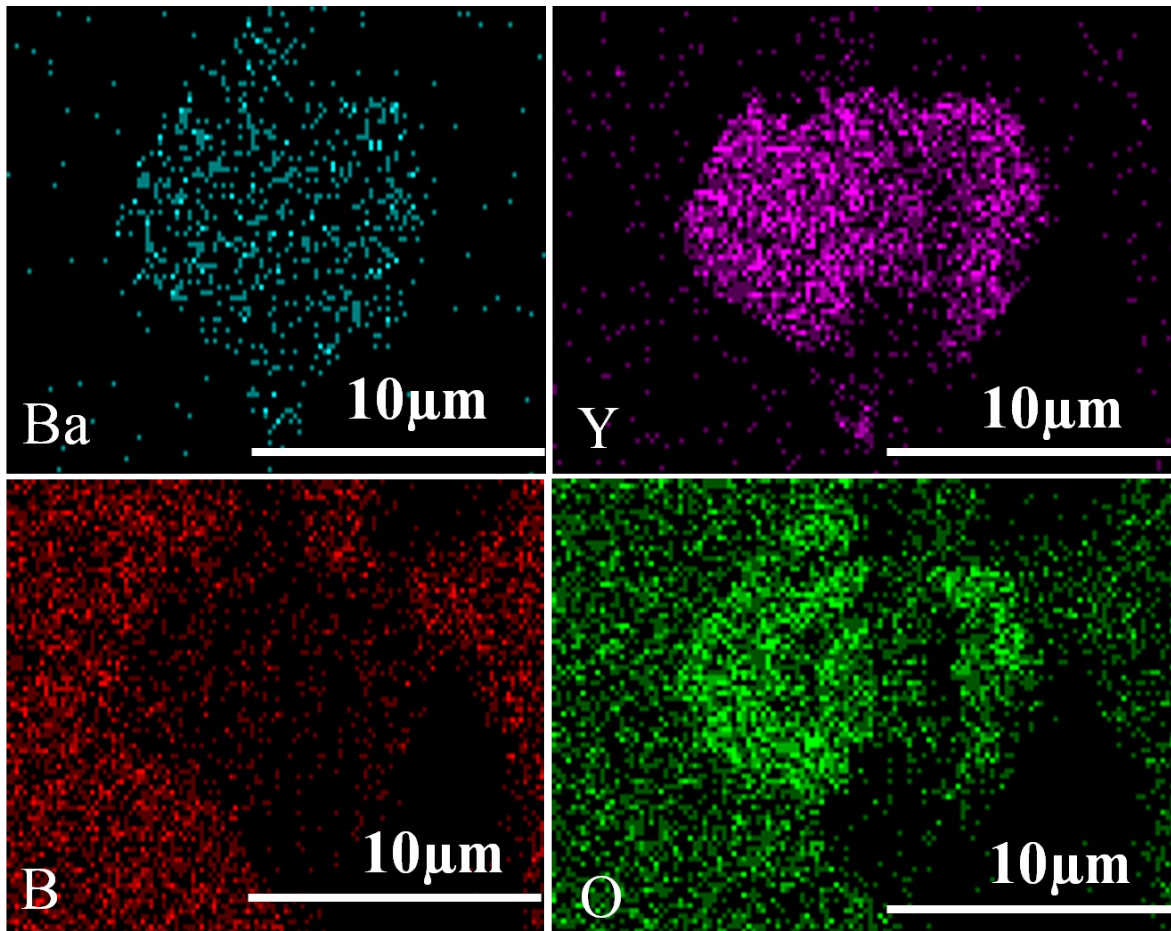


Fig. S1 : The elemental mapping of Ba/Y/B/O for the $\text{Ba}_2\text{Y}_{4.2}\text{Eu}_{0.8}\text{B}_5\text{O}_{17}$ phosphors