Electronic Supplementary Information

The size effect on the energy transfer in Bi^{3+}-Eu^{3+} co-doped $GdVO_4$ nanocrystals

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Table S1 The dependence of the $^5D_0$ level of Eu^{3+} luminescence lifetime (τ) and quantum yield (η) upon different excitation wavelength (λ_{exc}) on concentration of Bi^{3+} in $GdVO_4$: 5 mol% Eu^{3+}, x mol% Bi^{3+} annealed at 800°C

x (mol%)	λ_{exc} = 266 nm (O^{2-} - V^{5+}) CT		λ_{exc} = 330 nm (Bi^{3+} - V^{5+}) CT		λ_{exc} = 396 nm Eu^{3+} *f-f*	
	τ (ms)	η (%)	τ (ms)	η (%)	τ (ms)	η (%)
0	0.80	3.4	-	-	0.75	0.3
1	1.07	3.4	0.84	7.0	0.52	1.4
10	0.68	2.9	0.59	10.7	0.63	1.1

Table S2 The dependence of the $^5D_0$ level of Eu^{3+} luminescence lifetime (τ) and quantum yield (η) upon different excitation wavelength (λ_{exc}) on annealing temperature ($t_{anneal.}$) in $GdVO_4$: 5 mol% Eu^{3+},1 mol% Bi^{3+}

$t_{anneal.}$ (°C)	λ_{exc} = 266 nm (O^{2-} - V^{5+}) CT		λ_{exc} = 330 nm (Bi^{3+} - V^{5+}) CT		λ_{exc} = 396 nm Eu^{3+} *f-f*	
	τ (ms)	η (%)	τ (ms)	η (%)	τ (ms)	η (%)
750	1.16	2.6	0.92	5.2	0.59	1.2
800	1.07	3.4	0.84	7.0	0.52	1.4
900	0.35	4.2	0.59	10.7	0.64	3.4