Electronic Supplementary Material (ESI) for CrystEngComm

Supporting information

Monodisperse $YVO_4:Eu^{3+}$ Submicrocrystals: Controlled Synthesis and Luminescence Properties

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Table S1 The reaction yields under different synthetic conditions.

C (mmol/40 mL)	EG(mL)	pH	T (^oC)	Yield (%)
0.1	30	4.20	180	87
0.3	30	4.20	180	88
0.5	30	4.20	180	89
0.8	30	4.20	180	87
1.5	30	4.20	180	85
0.3	5	4.20	180	93
0.3	10	4.20	180	90
0.3	20	4.20	180	88
0.3	40	4.20	180	85
0.3	30	3.47	180	88
0.3	30	12.00	180	78
0.3	30	12.80	180	73
0.3	30	12.00	140	75
0.3	30	12.00	160	80
0.3	30	12.00	200	82

C is the reactants concentration (V/Y=1:1).

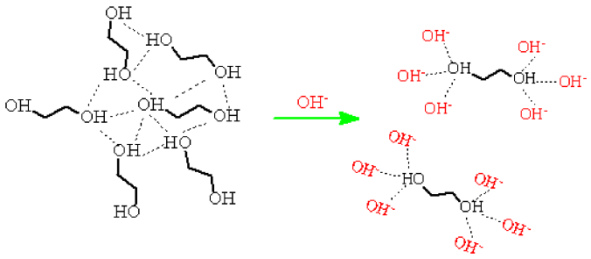

Figure S1 Schematic illustration of "OH^-" atmosphere.

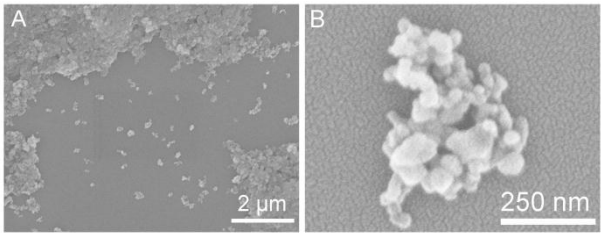

Figure S2 SEM images of samples prepared without EG at pH value of 12.00

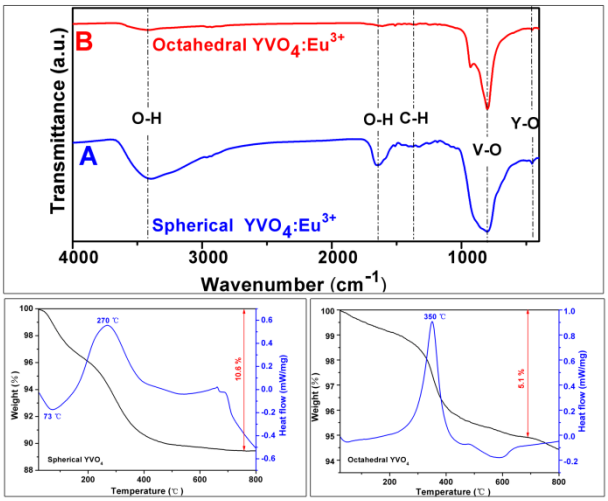

Figure S3 FT-IR spectra (the up one) and TGA-DSC curves (the down two) of the obtained spherical and octahedral $YVO_4:Eu^{3+}$.

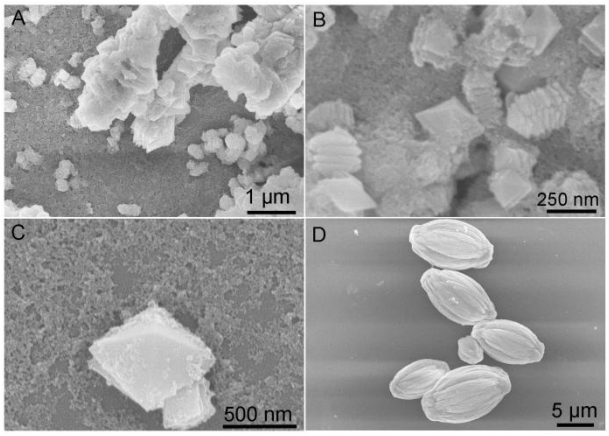

Figure S4 SEM images of samples prepared at different temperatures of (A) 140 ^{o}C, (B) 160 ^{o}C, (C) 170 ^{o}C and (D) 200 ^{o}C with reactants concentrations of 0.3 mmol/40 mL and pH values of 12.00.

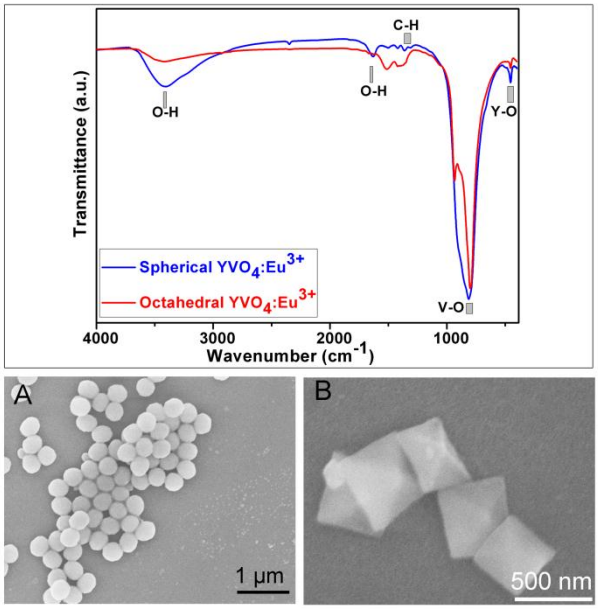

Figure S5 FT-IR spectra and corresponding SEM images of the post-calcined (at 500 ^{o}C) spherical and octahedral $YVO_4:Eu^{3+}$.

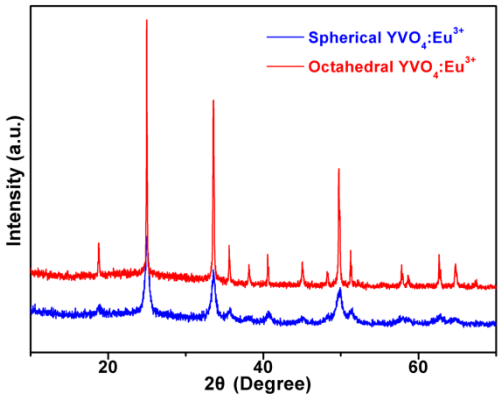

Figure S6 XRD patterns of the post-calcined (at 500 ^{o}C) spherical and octahedral $YVO_4:Eu^{3+}$.

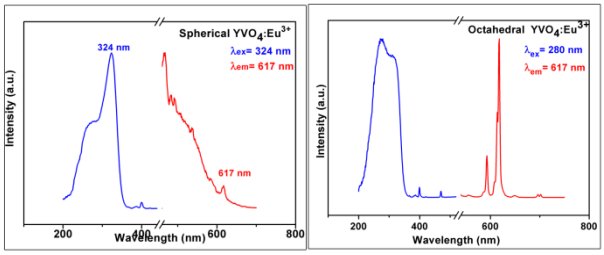

Figure S7 Excitation and emission spectra of the spherical and octahedral $YVO_4:Eu^{3+}$ without post-calcined treatment.