Electronic Supplementary Information (ESI)

Facile synthesis of monodisperse $SrAl_2O_4:Eu^{2+}$ cage-like microspheres with excellent luminescence quantum yield

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Characterization: The contents of real doped Eu^{2+} in the final product are characterized by Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES, PerkinElmer, Optima 7000 DV, America).

Table S1 Nominal and measured concentration of Eu^{2+} in $SrAl_2O_4$ microspheres.

Nominal Eu^{2+} concentration (in mol %)	Measured Eu^{2+} concentration (in mol %)
0.5	0.14
1	0.31
5	1.67
10	3.17
15	5.03

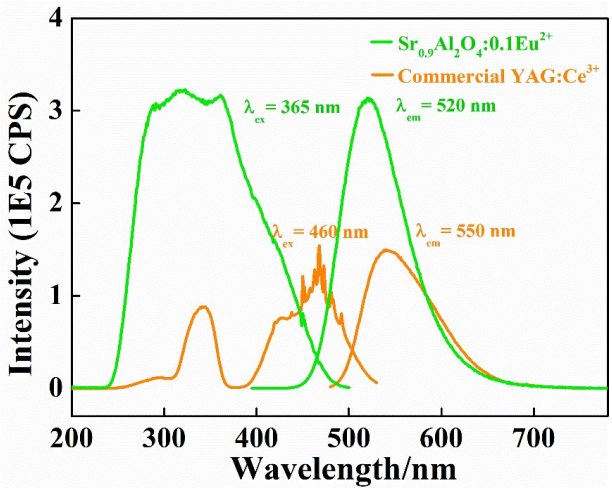

Fig.S1 Excitation and emission spectra of $Sr_{0.9}Al_2O_4:0.1Eu^{2+}$ cage-like microspheres and commercial $YAG:Ce^{3+}$ phosphors.

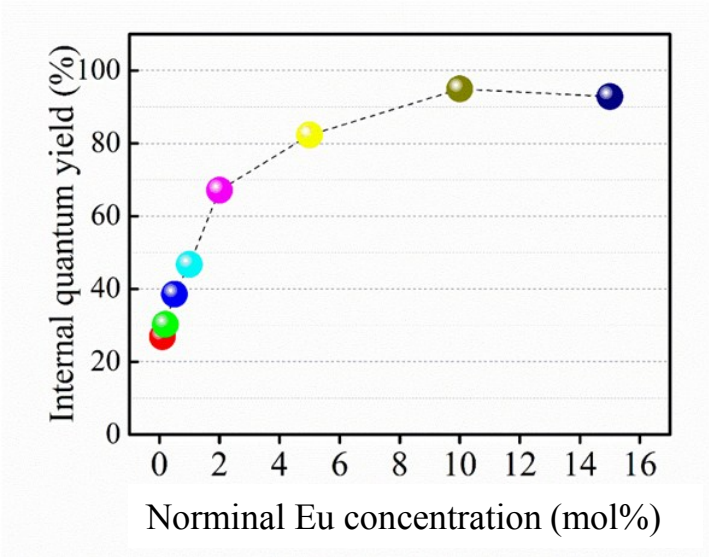

Fig.S2 Quantum yields (QY) of $Sr_{1-x}Al_2O_4$:xEu^{2+} cage-like microspheres with different nominal Eu^{2+} concentration.

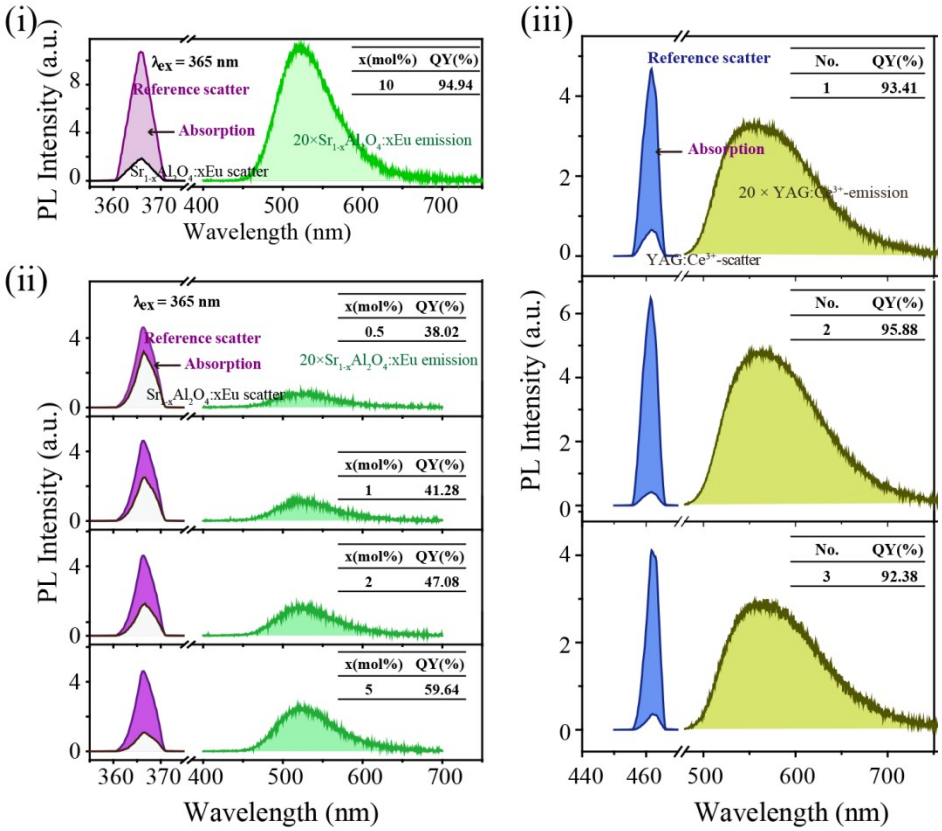

Fig.S3 Quantum yields of $Sr_{1-x}Al_2O_4$:xEu^{2+} cage-like microspheres with different Eu^{2+} doped concentration and commercial YAG:Ce^{3+} phosphors.