

Supplementary information

One-step structure-directing approach to Ce³⁺-doped CaS luminescent micro-nanocrystals

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S1 Comparison of XRD patterns of CaS and CaS: 0.01Ce³⁺.

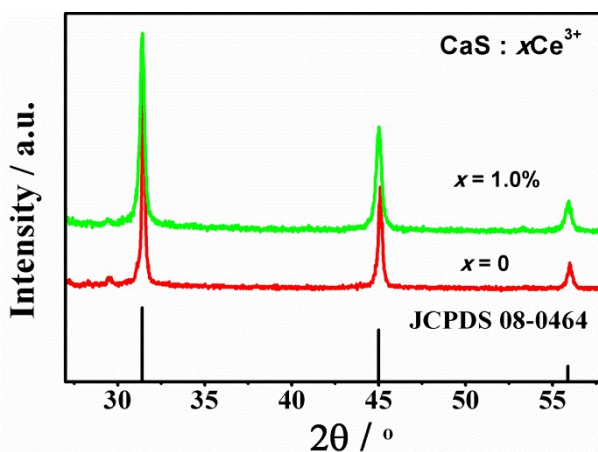


Fig. S1 Comparison of XRD patterns of CaS and CaS: 0.01Ce³⁺ synthesized by solvothermal process in en-1-DT co-solvents systems.

S2 ICP characterization of Ce³⁺ doping concentrations in en system

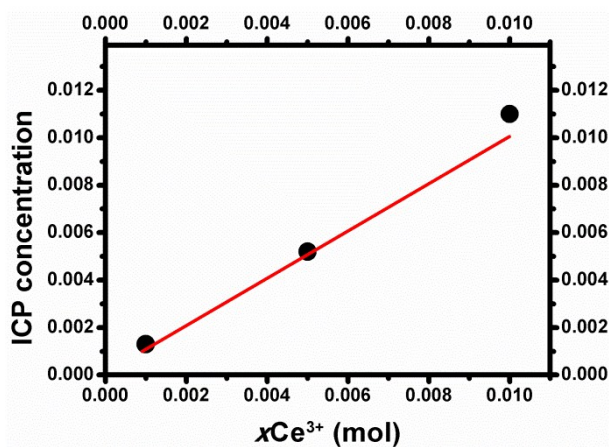


Fig. S3 The correlation of Ce^{3+} concentrations determined by ICP with experimental contents in **en** system

S3 Comparison of emission spectra of phosphors synthesized in different solvothermal systems

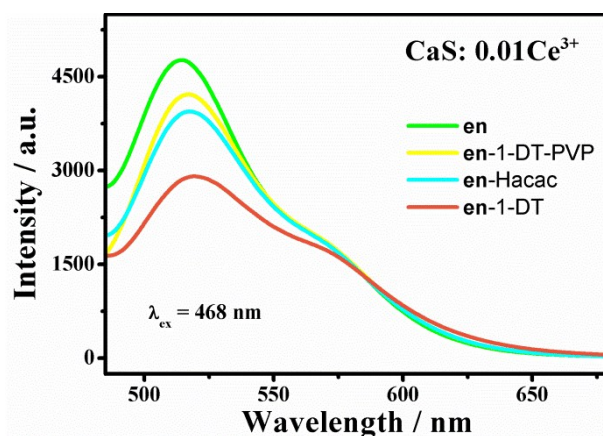


Fig. S3 Emission spectra of $\text{CaS}: 0.01\text{Ce}^{3+}$ synthesized without or with different co-solvent(s)