

Preparation, growth mechanism, size manipulation and near-infrared luminescence enhancement of β -NaYF₄:Nd³⁺ microcrystals via Ca²⁺ doping

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Table S1. Nominal and ICP-AES measured results of cation mole ratios in the β -NaYF₄:3% Nd³⁺ samples doped with 0-30 mol% Ca²⁺ ions.

NaYF ₄ : 3Nd/ xCa	Na : Y : Nd : Ca	
	Nominal ratio	ICP-AES results
x = 0	1.000 : 0.970 : 0.030	1.019 : 0.968 : 0.032
x = 5	1.000 : 0.920 : 0.030 : 0.050	0.990 : 0.912 : 0.034 : 0.054
x = 10	1.000 : 0.870 : 0.030 : 0.100	0.991 : 0.861 : 0.033 : 0.106
x = 20	1.000 : 0.770 : 0.030 : 0.200	1.001 : 0.768 : 0.029 : 0.203
x = 25	1.000 : 0.720 : 0.030 : 0.250	1.012 : 0.722 : 0.031 : 0.247
x = 30	1.000 : 0.670 : 0.030 : 0.300	0.998 : 0.671 : 0.027 : 0.302

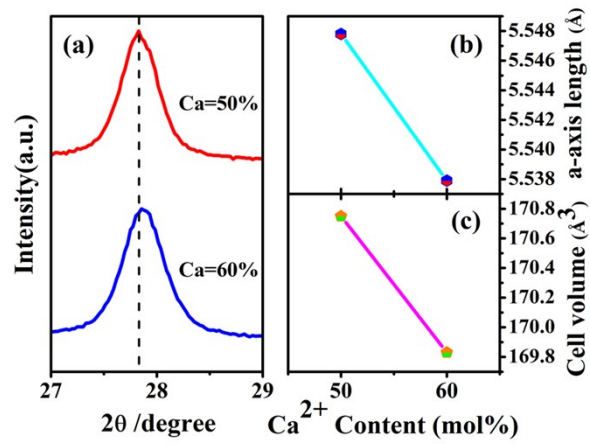


Fig. S1 (a) Amplified XRD patterns of (111) peak for CaF₂ doped with 50 mol % and 60 mol% Ca²⁺; the variation trend of a-axis length (b) and cell volume (c) of CaF₂ doped with 50 mol % and 60 mol% Ca²⁺.