Synthesis and luminescent modulation of ZnS crystallite by hydrothermal method

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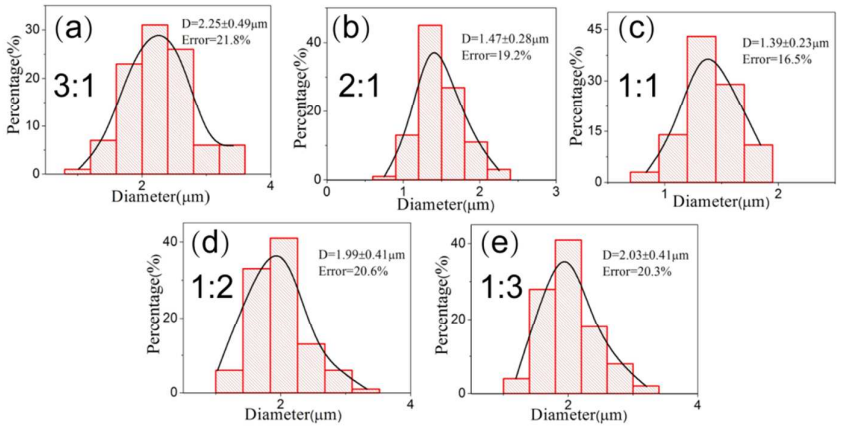

Figure S1 The histogram of diameter distribution of ZnS prepared with different ratio of water and ethanol (3:1, 2:1, 1:1, 1:2, 1:3)

From the histogram images of diameter distribution of ZnS, we could find that the distribution of size takes on normality and the diameters vary from 1.39-2.25 μm. The average particles size is about 1.39 μm when the W/E is 1, which is the minimum in the five samples.

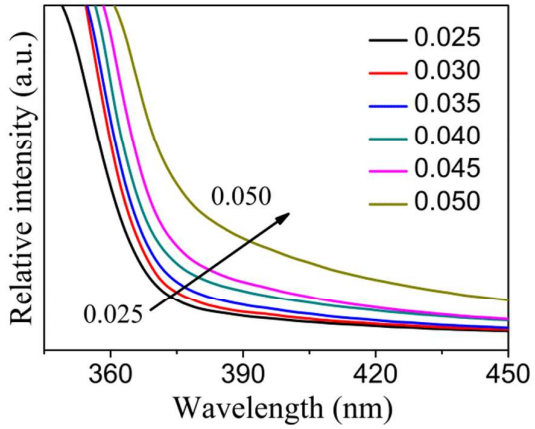

Figure S2 The absorption spectra of ZnS:xEu^{3+} (x=0.025, 0.030, 0.035, 0.040, 0.045, 0.050) crystallite

The absorption spectra of ZnS:xEu^{3+} (x=0.025, 0.030, 0.035, 0.040, 0.045, 0.050) crystallite are shown in figure S2. It could be find that the absorption region is before 390 nm and this is a red shift as a result of the increase of Eu^{3+} doped concentration.