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*Supporting Information*

# Luminescence Quenching Behavior of Hydrothermally Grown $YVO_4:Eu^{3+}$ Nanophosphor Excited Under Low Temperature and Vacuum Ultra Violet Discharge

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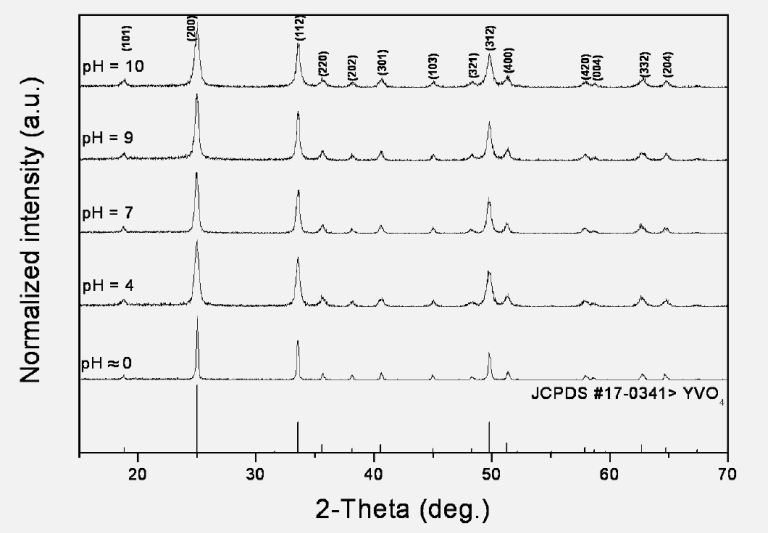


**Figure S1.** XRD patterns for the hydrothermally grown $YVO_4:Eu^{3+}$ compound with different precursor solution pH levels.

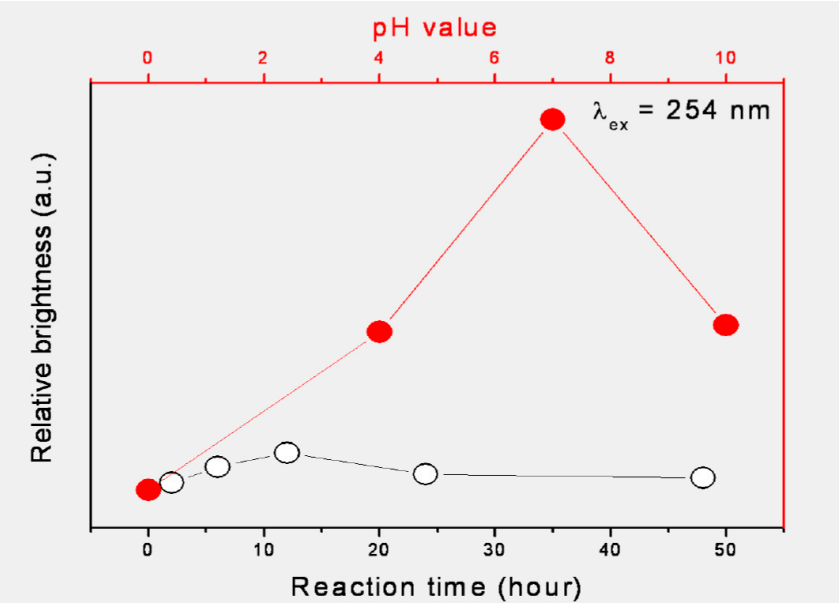


**Figure S2.** $YVO_4:Eu^{3+}$ photoluminescence emission intensity change with hydrothermal reaction parameters; precursor pH and reaction time.

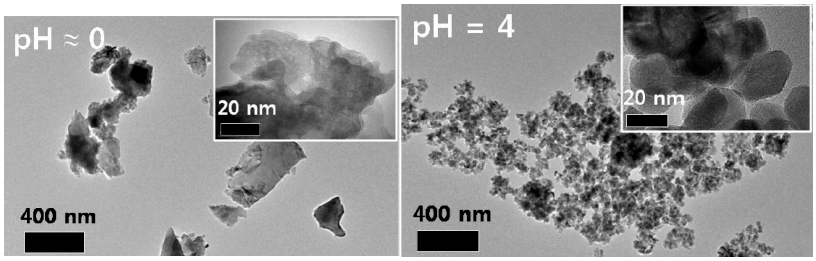


**Figure S3.** TEM images of the hydrothermally grown $YVO_4:Eu^{3+}$ compound using the precursor solution with acidic conditions (pH = 7).