

Abstract Submitted
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White wide-band emission from $\text{Yb}^{3+}:\text{Y}_2\text{Si}_2\text{O}_7$ nanoparticles under IR excitation¹ BRYAN SITT, Boston College, MURAT ERDEM, Marmara University, GAOZAN DING, Wheaton College, GONUL ERYUREK, Istanbul Technical University, BALDASSARE DI BARTOLO, Boston College — The spectral properties of Yb^{3+} ions have attracted considerable attention and offered the possibility of obtaining an infrared emission and an up-converted emission. The emission properties of various host media activated with Yb^{3+} , have been recently studied even in nanoscale form, due to their potential photonic application. Ytterbium (Yb^{3+}) doped $\text{Y}_2\text{Si}_2\text{O}_7$ powders with average particle size 40 were successfully synthesized using the sol-gel technique. At the pressure of 0.01 mbar a wide white light band appeared. The International Commission on Illumination (CIE) coordinates (c) using an illuminance meter for nano-particles at a distance of 5cm. The CIE coordinates were found to be (0.465, 0.377) for white emission under 950 nm excitation.

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