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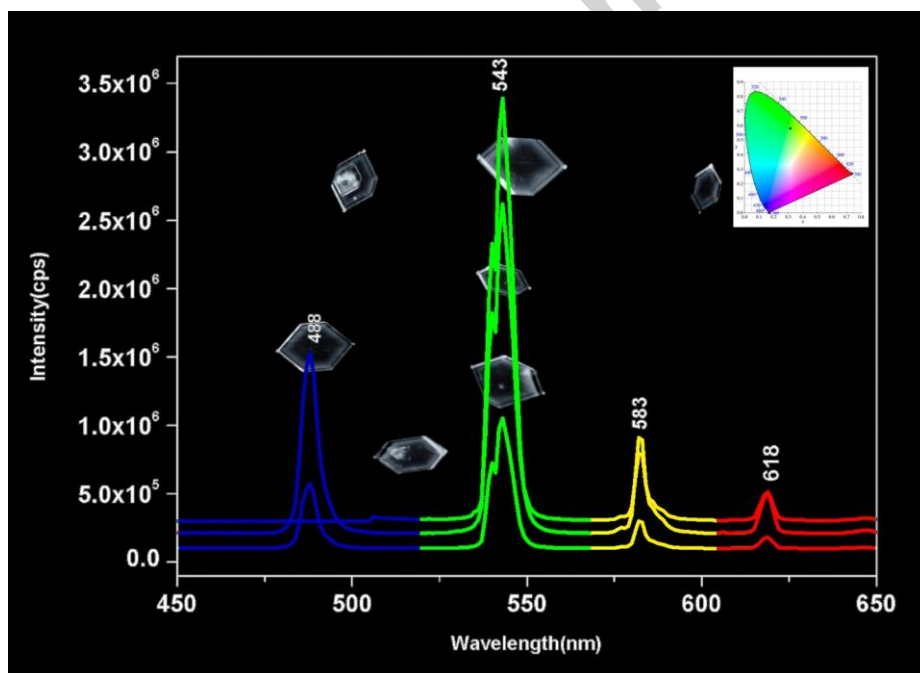
**Photoluminescence properties of fully concentrated Terbium oxalate: A novel efficient green emitting phosphor**

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**Abstract**

A novel green emitting phosphor, Terbium oxalate decahydrate, was synthesized in crystalline form employing the hydro silica gel method. The structure of the sample was confirmed by x-ray diffraction analysis. Photoluminescence excitation spectrum of the sample shows several peaks in the deep UV to Visible region, matching well with the commercially available LED sources. Emission spectrum, recorded with representative excitation wavelengths revealed efficient luminescence, particularly the green emission at 543nm. The decay time of the sample was measured to be 0.81ms. It exhibits a colour purity of 68% with chromaticity coordinates (0.31, 0.57) which is very close to that of the European Broadcasting Union illuminant green.

**Graphical Abstract****Keywords:**

Phosphors, Crystal growth, Optical materials and properties, Luminescence

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