Contribution ID: **90** Type: **Poster Presentation**

XPS analysis and luminescence properties of commercially Gd2O2S:Tb powder phosphor

Wednesday, 13 July 2011 17:00 (2 hours)

<p>We report on the characterization of commercially terbium doped gadolinium oxysulfide (Gd2O2S:Tb) phosphor and the degradation of the Gd2O2S:Tb green phosphor for its application in CRT screens. As a result, degradation of the cathodoluminescence (CL) intensity during irradiation of the powder with 2 keV electrons in an oxygen pressure of 1 x 10-6 Torr was studied. The ESSCR mechanisms was used to explain the effects of sulphur desorption and the formation of a non-luminescent oxide layer. A dead layer of Gd2O3 and Gd2S3 are responsible for the degradation of the CL intensity with an increase in electron dose. The XPS results have proved the presence of Gd2O3 and Gd2S3 on the degraded powder spots.

Level (Hons, MSc,
   PhD, other)?

Other

Consider for a student
   award (Yes / No)?

No

Would you like to <br> submit a short paper <br> for the Conference
 Proceedings (Yes / No)?

Yes

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