

## Color cathodoluminescence study of oxides subjected to thermal environments

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### Abstract

The behavior of cathodoluminescence (CL) from oxides associated with plastic deformation as well as with annealing at different temperatures and atmospheres has been examined. Observations using the real color CL (CCL) mode in a scanning electron microscope show that the annealing temperature rather than the annealing atmosphere is the major factor influencing the observed changes in the spatial distribution of the total CL emission from the microdeformed surface. However, at the same annealing temperature, the spectral composition of the CL depends on the annealing atmosphere. An attempt has been made to explain the obtained results in terms of defect theory and radiation effects in electron microscopy.

**Keywords:** *cathodoluminescence, oxides, emissions, microdeformed surface, annealing*

### Citing Literature

Do Noh, References, New Generation of Europium- and Terbium-Activated Phosphors, 10.1201/b111172, (407-436), (2011).

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