

Future Scope

In all the three host materials, the increase in Erbium content shows almost linear rise in the intensity of spectral peak. Hence, there is a scope to study these further with higher Erbium content.

The change in the relative intensities of the spectral peaks can be further explored to correspond with other physical parameters and can give rise to potential applications for measurement of such parameters.

This is the first study of Cadmium oxide as an up-conversion material. This can be taken further with other activators and sensitizers.

The conditions for synthesis can be manipulated to explore the formation of rod structures in nano dimensions, as the morphology and size heavily influences the properties.

Synthesis of particles in nano dimensions and subsequent coating of these particles with appropriate agents can make them biocompatible and suitable for use in bio labeling and imaging.

The improvement in the efficiency of DSSC can be studied further using the same phosphors with different morphologies and size as well as better spectral characteristics.