

## **New Up-conversion Phosphor Materials**

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In recent years, renewed interest has been directed toward up-conversion devices and materials. The interest is principally due to prospects for the realization of infrared up-conversion lasers pumped with laser diodes. The revival of interest for the up-conversion phenomenon is due to the advent of efficient and less costly that can be used as excitation sources and the appearance of new materials such as Calcium Silicates and  $\text{BaSrCeO}_4$ . We will discuss the applications of such materials in printing inks and plastics that would frustrate the activities of forgers and counterfeiters. Apart from applications in currency printing, there are many other fields in which up-conversion phosphors can play a part, including original works of art, passports and credit cards.



Prof. Murthy is a well known researcher in the field of luminescent materials. He has published more than 150 papers in several journals and conference proceedings and is a Fellow of Luminescence Society of India.