

## Accepted Manuscript

Title: Ultrasound assisted sonochemically engineered effective red luminescent labeling agent for high resolution visualization of latent fingerprints

Authors: M. Dhanalakshmi, H. Nagabhushana, G.P. Darshan, B. Daruka Prasad



PII: S0025-5408(17)33084-2  
DOI: <https://doi.org/10.1016/j.materresbull.2017.09.059>  
Reference: MRB 9600

To appear in: *MRB*

Received date: 8-8-2017  
Revised date: 15-9-2017  
Accepted date: 27-9-2017

Please cite this article as: M.Dhanalakshmi, H.Nagabhushana, G.P.Darshan, B.Daruka Prasad, Ultrasound assisted sonochemically engineered effective red luminescent labeling agent for high resolution visualization of latent fingerprints, Materials Research Bulletin <https://doi.org/10.1016/j.materresbull.2017.09.059>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Ultrasound assisted sonochemically engineered effective red luminescent labeling agent for high resolution visualization of latent fingerprints

M. Dhanalakshmi<sup>1,2</sup>, H. Nagabhushana<sup>3,\*</sup>, G.P. Darshan<sup>4</sup>, B. Daruka Prasad<sup>5</sup>

<sup>1</sup>Department of Physics, Govt. Science College, Bangalore 560 001, India

<sup>2</sup>Research and Development Center, Bharathiar University, Coimbatore 641046, India

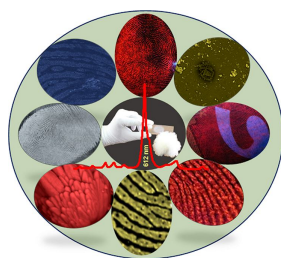
<sup>3</sup>Prof. C.N.R. Rao Centre for Advanced Materials, Tumakuru University, Tumakuru 572103, India

<sup>4</sup>Department of Physics, Acharya Institute of Graduate Studies, Bangalore 560 107, India

<sup>5</sup>Department of Physics, BMS Institute of Technology, VTU-affiliated, Bangalore 560 064, India

\* Corresponding authors. +91-9945954010, E-mail addresses: bhushanvlc@gmail.com (H. Nagabhushana).

### Graphical Abstract



### Research Highlights

1. BaTiO<sub>3</sub>:Eu<sup>3+</sup> NPs were prepared by facile bio-template assisted sonochemical route.
2. The obtained samples displayed SS of various regular morphological shapes.
3. The optimized product was used for forensic and anti-counterfeiting applications CIE, CCT studies indicate the present phosphor was highly useful in LED's.

### Abstract

Nanoscience and technology finds wide range of benefits in the area of surface based science due to its nano size and high surface area. This offers new potentials in surface-based science comprising latent fingerprint (LFP) and to develop luminescent ink for anti-counterfeiting applications. Due to high backward hindrance, low sensitivity, complicated setup, and poor universality of traditional developed techniques were main drawbacks for the visualization of

Download English Version:

<https://daneshyari.com/en/article/7905167>

Download Persian Version:

<https://daneshyari.com/article/7905167>

[Daneshyari.com](https://daneshyari.com)