

## **CANDIDATE'S DECLARATION**

I, **Pattam Hemanth Kumar**, certify that the work embodied in this thesis is my own bonafide work and carried out by me under the supervision of **Prof. Vinay Kumar Singh** (Department of Ceramic Engineering, IIT (BHU), Varanasi) and co-supervision of **Dr. Pradeep Kumar** (Department of Chemical Engineering and Tech., IIT (BHU), Varanasi) from **July, 2013 to April, 2016** at the **Department of Ceramic Engineering**, Indian Institute of Technology, (Banaras Hindu University) Varanasi. The matter embodied in this thesis has not been submitted for the award of any other degree/diploma. I declare that I have faithfully acknowledged and given credits to the research workers wherever their works have been cited in my work in this thesis. I further declare that I have not will fully copied any other's work, paragraphs, text, data, results, *etc.*, reported in journals, books, magazines, reports dissertations, theses, *etc.*, or available at websites and have not included them in this thesis and have not cited as my own work.

Date:

Place: Varanasi

**(Pattam Hemanth Kumar)**

## **CERTIFICATE BY THE SUPERVISOR**

It is certified that the above statement made by the student is correct to the best of my/our knowledge.

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