## I, "AnkurKhare", certify that the work embodied in this thesis is my own bona fide work and

**DECLARATION BY THE CANDIDATE** 

carried out by me under the supervision of "Prof. K. D. Mandal" from "2013" to "2017", at the "Department of Chemistry", 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:

(Ankur Khare)

## **<u>CERTIFICATE BY THE SUPERVISOR/CO-SUPERVISOR(S)</u></u>**

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

Prof. N.K. Mukhopadhyay

(Co-Supervisor)

Prof. K, D. Mandal

(Supervisor)

(Prof. R.B. Rastogi)

Head

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