


## CERTIFICATE

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It is certified that the work contained in the thesis titled "*Study of 2-(3, 4-epoxycyclohexyl)ethyltrimethoxysilane mediated synthesis and catalytic applications of Palladium nanoparticles and its multimetallic analogues*" by "*Shubhangi Shukla*" has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of Comprehensive, Candidacy and SOTA for the award of Ph.D. Degree.

  
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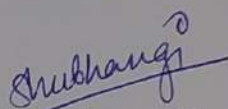
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## DECLARATION BY THE CANDIDATE

I, "**Shubhangi Shukla**", certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of "**Prof. P. C. Pandey**" from "**July 2014**" to "**January 2019**", at the "**Department of Chemistry**", Indian Institute of Technology (BHU), 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 willfully 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.

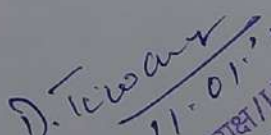
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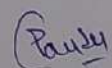
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It is certified that the above statement made by the student is correct to the best of my/our knowledge.

  
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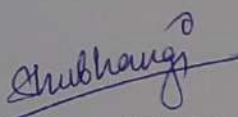
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## ACKNOWLEDGEMENT

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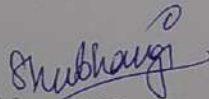
I am extremely grateful to my labmates, both the seniors (**Dr. Arvind Prakash, Dr. Richa Singh, Dr. Digvijay Pandey and Dr. Gunjan Pandey**) and the juniors (**Shwarnima Singh and Murli Dhar Mitra**) for being the source of energy, stimulation in many ways and also for keeping the aura of lab humorous and viable for rigorous research work. Though challenging, but experience of working with these guys was just amazing and an overwhelming one.

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In a nutshell, I would genuinely praise that every single person who has remained directly or indirectly associated with my research venture and knowingly or unknowingly assisted me to carry out my work in full-fledged manner.

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Shubhangi Shukla