

**STUDY OF INTERACTION OF ARSENIC WITH
PLASMONIC GOLD NANOPARTICLES**

A

Project Submitted to

PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR (C.G.)

For

INSPIRE

MENTORSHIP PROJECT

SUBMITTED

BY

SANGITA

(B.Sc. II Year)

Late Shri Devi Prasad Ji Choubey Govt. College, Gandai

Khairagarh-Chhuikhadan-Gandai [C.G.]

Under the supervisor of

Dr. MANMOHAN L. SATNAMI

School of Studies in Chemistry

Pt. Ravishankar Shukla University

Raipur (C.G.)

May-June, 2024



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Dr. Manmohan L. Satnami

School Of Studies in Chemistry

Pt. Ravishankar Shukla University, Raipur (C.G.)

2023-2024

School Of Studies in Chemistry

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CERTIFICATE

This is to certify that Ms. Sangita has completed the project work entitled "Study of interaction of arsenic with plasmonic gold nanoparticles" under my supervision for the inspire mentorship project embodies the observation, interpretation and conclusion of her study.

She is allowed to submit the present work for the project of Pt. Ravishankar Shukla University, Raipur (C.G.).

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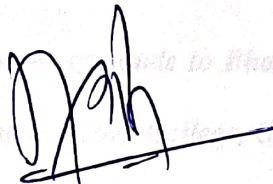
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DECLARATION

I hereby declare that the project entitled "**Study of interaction of arsenic with plasmonic gold nanoparticles**" is my own work, conducted under the supervision of **Dr. Manmohan L. Satnami**, School of Pt. Ravishankar Shukla University, Raipur, (C.G.).

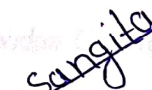
I further declare that to the best of my knowledge, the project does not contain any part of the work, which has been submitted for the award of any degree either in the university or any other University/ deemed University, without proper citation.



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ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my supervisor **Dr. Manmohan L. Satnami**, Associate Professor, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (C.G.), who has given his benevolent cooperation at every stage in building up to this project and without his fostering care this work would hardly have been completed.

My deep regards and thanks to **Prof. Kallol K. Ghosh**, Head of Department, Pt. Ravishankar Shukla University Raipur (C.G.), who has always helped and facilitating me during my project work.

I express my heartfelt thanks to **Dr. N. S. Verma**, Principal, Late Shri Devi Prasad ji Choubey, Govt. College, Gandai (Khairagarh-Chhuikhadan-Gandai), for allowing me to perform the INSPIRE Mentorship project at School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (C.G.).

I show my sincere gratitude to **Bhagwat Ram Verma**, Assistant Professor, Late Shri Devi Prasad ji Choubey, Govt. College, Gandai (Khairagarh-Chhuikhadan-Gandai), for guidance and encouragement.

I would further like to express my sincere thanks to research scholars **Yogyata Chawre, Pinki Miri, Ankita Beena Kujur, Akash Sinha** who supported me with their timely advice and laboratory work.

Place: Raipur

Ms. Sangita

Date: 5/07/2024



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**Innovative Smart Nano Bag for Enhanced Methylene Blue
Dye Adsorption Using MnO₂ Nanosheet Coated BN Co-
doped Carbon Fibers Derived from Jute**

A

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For

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SUBMITTED

BY

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May-June, 2024



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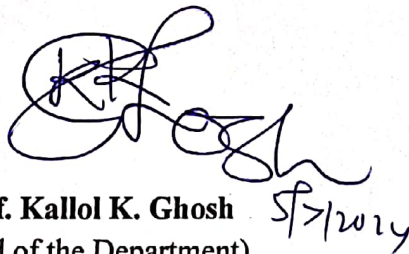
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CERTIFICATE

This is to certify that Bhajan Lal Patel has completed that the project work "Innovative Smart Nano Bag for Enhanced Methylene Blue Dye Adsorption Using MnO₂ Nanosheet Coated BN Co-doped Carbon Fibers Derived from Jute". This project is submitted for the fulfilment inspire mentorship project.

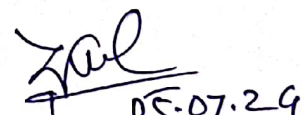
I wish him good luck for all his future endeavours.


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DECLARATION

I hereby declare that the project work presented in this dissertation entitled "**Innovative Smart Nano Bag for Enhanced Methylene Blue Dye Adsorption Using MnO₂ Nanosheet Coated BN Co-doped Carbon Fibers Derived from Jute**" has been done by me under the guidance of **Dr. Indrapal Karbhal**, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (Chhattisgarh).


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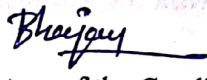
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ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my supervisor **Dr. Indrapal Karbhal**, Assistant Professor, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (C.G.), who has given his benevolent cooperation at every stage in building up to this project and without his fostering care this work would hardly have been completed.

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I would further like to express my sincere thanks to research scholar **Mr. Rajiv Nayan** who supported me with his timely advice and laboratory work.

Place: Raipur

Date: 05/07/2024


Bhajan Lal Patel

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