

NIKITA SINGH

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EDUCATION

Master in Science (Physics)

Pandit Nagina Smarak Mahavidyalaya

Department **Rank: 1**

CGPA: 7.96 /10

Bachelor in Science

J.B.M. Degree College 52%

Azamgarh - UP, India

July 2022- July 2024

Chaurichaura - UP, India

July 2014- June 2018

RESEARCH EXPERIENCE

- **Research Internship:** To increase the efficiency of Dye Sensitized Solar Cell , working on counter electrode.

Supervisor: Prof. Bhaskar Bhattacharya

- **Master's Thesis:** “Synthesis of Graphene using the electrochemical method”.

Supervisor: Prof. Bhaskar Bhattacharya

I focused on synthesizing graphene using electrochemical methods and characterizing its structural properties through Raman spectroscopy and X-ray diffraction (XRD).

PROJECT EXPERIENCE

- **Cool The Globe mission**

Co-developed the 'Cool the Globe' web app, a project aimed at raising awareness about carbon footprints. Leveraging my background in physics, I contributed to the development of surveys and analytical tools within the app to help users understand their environmental impact. Future plans for the app include implementing features to track individual carbon footprints and provide personalized recommendations for reducing environmental impact. This project reflects my commitment to applying scientific principles to real-world problems.

Mentor: Mrs. Sapna Jhaver , Vigyanshaala International accelerator programme

- **Earthen Stove Development**

Led a team to develop an earthen stove to reduce indoor pollution and air pollution and alleviate health impacts on women in villages.

Mentor: Mr. Anil Kumar Tripathi (Science Communicator); National Children Science Congress (NCSC)

PUBLICATION

In preparation: “Impact of Climate Change on Agriculture A Perspective Based on Economy and Food Scarcity”. (under review)

CONFERENCES

- **International Conference on Hydrogen Energy and Advanced Material [ICHEAM-2024]**
Department of Physics, BHU, Varanasi - UP, India. [22-24 April]

- **2nd International Conference on Energy Materials and Devices** , MMV, BHU, Varanasi, India [March 2024]
- *Oral Presentation* in **International Conference on Climate Change, Disaster Management and Environmental Sustainability**, Jamia Millia Islamia, New Delhi, INDIA. [21-22 February] Presented paper entitled “Impact of Climate Change on Agriculture”
- *Poster Presentation* in **International Conference on Advancement in Functional Materials (ICAFM-2024)**, VBS Paranuchal University, Jaunpur, UP, India. [8-10 February] Presented my poster entitled “Impact of Climate Change on Agriculture” ,
- **National Symposium On Advancements In Various Fields Of Physics**
Attended this National Symposium organized by the *Association Of Indian Physicists (AIP)* [3rd September 2023]
- Webinar on “**Graphene Oxide – Prospects and Challenges**”, Department of Physics, St, John’s College, Agra. [11 May 2020]
Participated in the webinar delivered by Dr. Ajay Thakur, IIT, Patna.

SKILLS

- **Instrumental:** Electrochemical workstation, UV chamber, Centrifuge, Synthesis of Graphite, Washing and Filtering Graphite Powder, Ultrasonic Heater, Magnetic stirrer
- **Digital:** Matlab, Microsoft Word, Powerpoint and Excel
- **Soft:** Science Communication, Documenting scientists’ stories, Leadership Skills, Teamwork.

TRAINING

Internship in “**Research Training**”, MSME –Technology Development Center (PPDC), Online
I learned basics about paper writing through this internship on 16 January -16 February 2024

- Summer course on “**The Fascinating World of Flows**”- ICTS, Banglor
- Summer school on “*Quantum Information and Quantum Technology* “, IISER, KOLKATA [1 June- 5 July 2022]
- SHE FOR STEM KALPANA *Incubator fellow*, Vigyanshaala International, [July-Oct. 2022]

I got opportunity to develop the soft skills like communication skills ,growth mindset, critical thinking, scientific temperament, problem solving skill. I successfully submitted the project which was based on observation of browning of apple slice.

PUBLIC ENGAGEMENTS EVENTS

- Delivered a talk on **Communicating with children and youth: What and How? Our Experience and suggestion** on 19 May 2024 for Science for society, Jharkhand
- Delivered a talk on the **Challenges and possibilities of students and youth in the present time** on 16 June 2024. for science for society, Jharkhand.

TEACHING EXPERIENCE

Taught science, mathematics to High School Students for board exam preparation.

I taught the basic concept of electricity, and magnetism to my students.

EXTRA-CURRICULAR ACTIVITIES

- Company- ScienceOverse worked as a Coordinator of the media and communication department:

Organized masterclasses and invited guest speakers. Managed social media content.

- *Documenting scientists' stories*: Published in AIP bulletin.
- *Narrating scientific facts*: - Published in Hindi article in the book "Kan Kan Me Vigyan".
- Training in *Classical Singing*.

VOLUNTARY EXPERIENCE

Taught unprivileged children who could not afford to enroll in good quality schools at the NGO named "***Light De Literacy***".

REFERENCES

- Dr. Chandra Kumar, Assistant Professor at Universidad of Mayor, Santiago, CHILE,
Email: chandra@alumnos.ucn.cl; Phone no. (+56)- 928728904
- Dr. Pukhrambam Dipak, Assistant Professor at Chandigarh University, Punjab, INDIA
Email: pukchaokhuman@gmail.com; Phone no. (+91)- 8839192644

DECLARATION

- I hereby declare that all the facts given above are true and correct to the best of my knowledge.

PLACE: Deoria, UP DATE:
30-07-2024

Nikita Singh