

## Parveen Kumar

M.Tech final year

Indian Institute of Technology (IIT) Kharagpur, India

Email Id: [praveenahuja003@gmail.com](mailto:praveenahuja003@gmail.com)

Inst. Email Id: [praveenahujaphy@kgpian.iitkgp.ac.in](mailto:praveenahujaphy@kgpian.iitkgp.ac.in)

Contact Number: (+91) 8447020549



## Education

Qualification	Institute/Board	Year	Percentage/CGPA
M.Tech (Materials Science and Engineering)	Indian Institute of Technology (IIT) Kharagpur	Pursuing from Sep. 2020	(9.01/10) CGPA (up to 3 <sup>rd</sup> Sem. )
B.Ed	Chaudhary Bansi Lal University (CBLU)	2020	72.41%
M.Sc (Physics)	Kurukshetra University Kurukshetra (KUK)	2018	72.23%
B.Sc Hons. (Physics)	University of Delhi (DU)	2016	81.85%
INTERMEDIATE	Central Board of Secondary Education (CBSE)	2013	80.00%
HIGH SCHOOL	Central Board of Secondary Education (CBSE)	2011	(9.2/10) CGPA

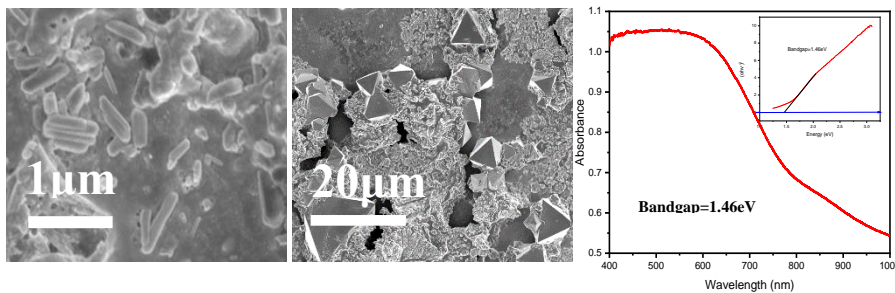
## Research Area of Interest

• Semiconductor Materials	• Nanotechnology	• Solar cell
• Experimental Nuclear Physics	• 2D material like Graphene, TMDs (M=Mo, W & X= S, Se and Te)	

## Research Project

Working on “**Sn-based hybrid organic-inorganic Perovskite solar cell**” for increasing efficiency and improving their stability with various optimized parameters in my M.Tech thesis.  
**Guides: Prof. Debabrata Pradhan and Prof. Prasana Kumar Sahoo (07/2021 to 05/2022)**

Constructed first time a 2D  $\text{MA}_2\text{SnI}_2\text{Br}_2$  novel crystalline material with a bandgap of 1.46eV and achieved rod and octahedra shaped morphology of their thin film on glass substrate using room temperature synthesis method in open air environment.



## Skills and Expertise

### Soft Skills

• Problem Solving	• Analytical Thinking	• Event Management
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### Technical Skill

• CVD (Chemical Vapor Deposition)	• UV-Vis Spectroscopy (Bandgap Measurement)	• Optical Microscope (OM)
• SEM (Scanning Electron Microscopy)	• XRD (X-ray Diffraction)	• Solar Simulator

### Software Skill

• MS Word	• MS Excel	• MS Powerpoint
• X'Pert Highscore	• ImageJ	• Python

## Work Experience

### Guest Assist. Prof. of Physics in Vaish College Bhiwani

(08/2019 to 04/2020)

- Worked as Physics faculty in the Department of Physics and lab guide for undergraduate students.
- I used to teach **Solid State Physics, Nuclear Physics, Thermodynamics, Statistical Physics** to more than 200 undergraduates of the second year & final year.

### Founder and faculty of Ahuja Classes, Haryana

(07/2019 to 09/2020)

- Guided and mentored more than 100 students.
- Initiated open test series for preparation of board exams.
- Run weekly mentorship and carrier counseling programs to keep motivating & better future vision for the students.

## Conferences Attended

- Webinar on Atomistic Modelling and Simulation of Materials organized by Dept. of Metallurgical and Materials Engineering, IIT Kharagpur on 30th and 31st May 2021.
- Webinar - International Conference on Light-Matter Interaction (ICLMIN-2021), organized by Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, India during May 19-21, 2021.
- Scientific Writing Workshop organized by American Chemical Society (ACS) publication in collaboration with IIT Bhilai delivered by Dr. Ajay Kumar Jha on 20<sup>th</sup> September 2021.
- Webinar on “The publishing process: The complete journey of an article”, “Presenting numbers and quantities with precision and style”, “Conquering the intricacies of citations and references” organized by WILEY.

## Scholastic and Non-Scholastic Achievements

- Gate Physics 2021 exam qualified with AIR 1240.
- Secured 3<sup>rd</sup> position in 1<sup>st</sup> year of B.Sc (Hons.) in University of Delhi (DU).
- Awarded **National Credit Corps (NCC)** “C” and “B” Certificate with ‘A’ grade and participated in various NCC camps like Army Attachment Camp (AAC) and Combined Annual Training Camp (CATC).
- Participated in anchoring in Departmental events and Group Drama competitions & got 1st rank in dramatics.
- Achieved 1<sup>st</sup> position in Science Exhibition held on National Science Day at an interdepartmental level of Kurukshetra University Kurukshetra (KUK).

## Academic References

### Prof. Debabrata Pradhan

Professor, Material Science Centre  
IIT Kharagpur, West Bengal, India-721302  
Email Id: [deb@matsc.iitkgp.ac.in](mailto:deb@matsc.iitkgp.ac.in)

### Prof. Prasana Kumar Sahoo

Assistant Professor, Material Science Centre  
IIT Kharagpur, West Bengal, India-721302  
Email Id: [prasana@matsc.iitkgp.ac.in](mailto:prasana@matsc.iitkgp.ac.in)