# Ram Munde

Email Likedin Website

## Employment History

August 2024 – present — **Graduate Research Assistant** Raisul Islam Semiconductor Engineering Lab Materials Engineering, Purdue University, West Lafayette, USA

May 2023 – July 2023 — **Data Scientist Internship** United Phosphorus Ltd, Bengaluru, India

May 2022 – July 2022 — **Invention Internship** Indian Institute of Technology, Gandhinagar, India

## Education

August 2024 – present — **Ph.D, Materials Science and Engineering (GPA: 4.0/4.0)**
Purdue University, West Lafayette, USA
Advisor: Prof. Raisul Islam
Thesis: *The Study of Nanoscale Heat Transport for Next-Gen Heterogeneous Integration Systems*

November 2020 – June 2024 — **B.Tech, Materials Science and Engineering (GPA: 8.01/10)**
Indian Institute of Technology Delhi, New Delhi, India
Advisor: Prof. Dibyajyoti Ghosh
Thesis: *Computational Insights into Modulating the Performance of MXene-Based Electrocatalysts for Hydrogen Evolution Reaction (HER)*

## Research Publications

### Journal Articles

1. **R. Munde**, H.-R. Chuang, B. C. Wyatt, B. Anasori, and R. Islam, "High-throughput parasitic-independent probe thermal resistance calibration for robust thermal mapping with scanning thermal micrsocopy," *(in preparation for submission to Journal of Applied Physics)*, (In preparation).
2. A. Kumari, S. Singh, **R. Munde**, A. Bashir, P. Ingole, and D. Ghosh, "Boosting hydrogen evolution on halogenated mxenes via surface termination engineering: A data-informed computational and experimental strategy," *Advanced Functional Materials (Under review), ACS catalysis (Under review)*, 2025.
3. **R. Munde**, N. Vaillancourt, H.-R. Chuang, C. Gu, Y. Wang, and R. Islam, "3d integrated system for advanced intelligent computing," *Advances in Physics: X (Under Review)*, 2025.

### Conference & Symposium Proceedings

1. **R. Munde**, B. C. Wyatt, K. K. Kamarth, B. Anasori, and R. Islam, "High-throughput thermal conductivity mapping for 2d mxene via probe thermal resistance calibration in scanning thermal microscopy (sthm)," in *MRS Fall Meeting 2025*, Boston, MA, USA, (Accepted for oral presentaion).
2. **R. Munde** and R. Islam, "The study of nanoscale heat transfer using scanning thermal microscopy (sthm)," in *Purdue Graduate Symposium*, Indianapolis, IN, USA, 2025, (Poster presentation).

## Relevant Coursework

2025
- ECE606: Solid State Devices
- ECE604: Electromagnetic Field Theory
- ECE60645: High Speed Semiconductor Devices

## Relevant Coursework (continued)

2024 MSE670: Atomistic View of Materials: *Theory, Modeling and Simulations*

Misc. Academic research, training, consultation, writing and publishing.

## Awards, Scholarships & Honors

### Leadership Experience

2023 **Technical Overall Coordinator:** *Offices of Career Services, IIT Delhi*

**Convener:** *Department of Materials Science & Engineering, IIT Delhi*

2022 **Academic Mentor:** *Board for Student Welfare, IIT Delhi*

### Awards and Achievements

2021 **Joining Hands Scholarship:** *3 Year NXP Semiconductors Support for Bachelor Program*

2024 **Significant Contribution Award:** *Office of Career Services, IIT Delhi*

**Micron Hackathon Winner:** *Memory optimization for AI* .

2023 **Best Contribution Award:** *Office of Career Services, IIT Delhi*.

### Certification

2024 **Phi Kappa Phi:**. Honor Society Award