

Atikur Rahman

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EXPERIENCE

05/2022 – Present

Wilton, CT

Intern, Defectivity engineer
ASML, inc.

Currently, I am working as an intern at ASML, inc. ASML manufactures complex photolithography machines critical to the microchips and is the global leader in semiconductor industry. My role in Development and Engineering department is to identify contaminations in the reticle and find a solution to remove them.

01/2019 – 04/2022 GRADUATE ASSISTANT

Little Rock, AR

- Ph.D. researcher in the laser lab.
- Experienced in SEM, UV-Vis, XRD, AFM, Raman spectroscopy.
- Have a basic understanding of scripting language: Matlab, Python, C++. Proficient in Origin.
- Skilled in Pulsed Laser Ablation in Liquids (PLAL) technique to produce colloidal solution of nanoparticles.
- Measured size, shape, and concentration of the nanoparticles by using Dynamic Light Scattering (DLS), and the Atomic Emission Spectroscopy (AES).
- Have a basic understanding of semiconductor device physics.
- Good understanding of general electrical lab hardware: voltage/multi-meters, oscilloscope. Also, experience with imaging related lab hardware: image source, lenses.
- Laboratory instructor for the first and second-semester physics students.
- Courses: Artificial Intelligence and Machine Learning, Quantum Mechanics, Electromagnetism, Nanostructured Material, Potential Field Theory, Electromagnetism, Intro Mat Char Tech.
- Instructor: College physics 1
- Lab instructor: College physics 1 and 2.

07/2016 – 12/2018 GRADUATE ASSISTANT

New Orleans, LA

- 2 years of experience in thin film lab at Advanced Materials Research Institute (AMRI).
- Deposited and developed multilayered magnetic materials in the silicon wafer using magnetron sputtering and electron beam deposition system.
- Worked in class 100 clean room.
- Good knowledge of photolithography steps such as photoresist coating, spinning, baking, and developing.
- Measured and characterized micro and Nano-scale surface features of metals using 3D optical surface profiler.
- Courses: Applications Fourier Transform, Classical mechanics, Intro Micro Mat Char.
- Lab instructor: College physics 1 and 2.

10/2014 – 07/2016 **EXECUTIVE ENGINEER**

Dhaka, Bangladesh

- Successfully completed projects as a team leader and confirm products.
- Rigorously tested software of android smartphones and feature phones.
- Performed testing of smart phone's hardware e.g. Screen, camera, microphone, speaker, body etc.
- Developed different methods to improve user experiences of different handsets.
- Checked user manuals and packaging of the products.

EDUCATION

01/2019 – present University of Arkansas at Little Rock
08/2016 – 12/2018 The University of New Orleans
01/2012 – 12/2012 University of Dhaka
01/2006 – 12/2011 University of Dhaka

Ph.D. in Applied Science
M.S. in Applied Physics
M.S. in Physics
B.S. in Physics

SKILLS

- PLAL, DLS, AES, UV-Vis, SEM, XRD, Raman, Thin film, sputtering deposition, Electron beam deposition, Cleanroom, Photolithography, Coating, Baking, Etching.
- Self-disciplined, Motivated: ability to work with little direct supervision.
- Working in mobile science museum project helps me to develop my communication skill.
- Serving as secretary of student organization helps me to learn the leadership skill.
- Experience preparing reports, papers, or other scientific publications.

AWARD AND PRESENTATION

- **Signature grant experience:** Signature grant experience is a competitive grant awarded to undergraduate and graduate students by the University of Arkansas at Little.
- **Outstanding Graduate Teaching Assistant:** Awarded by the department of physics and astronomy, University of Arkansas at Little Rock.
- **Chateaubriand Fellowship:** The Chateaubriand Fellowship is a merit-based competition offered by the Embassy of France in the United States. It supports outstanding Ph.D. students from American universities who wish to conduct research in France for a period of 4 to 9 months.
- **Presented poster** titled "Magnetic Ni@NiO core-shell nanoparticles synthesized by pulsed laser ablation in liquids"
- **Presented poster** titled "Nickel nanoparticles synthesized by the Electric Field Assisted-Pulsed Laser Ablation in Liquids"

Media coverage:

<https://ualr.edu/news/2020/07/15/rahman-chateaubriand-fellowship/>

<https://ualr.meritpages.com/stories/Atikur-Rahman-receives-2019-20-Signature-Experience-Award-/22056029>

University of Arkansas merit page:

<https://meritpages.com/Atikur-Rahman/5435118>

Publications:**Published paper:**

Nanostructured antibacterial aluminum foil produced by hot water treatment against *E. coli* in meat.

Journal name: MRS advances.

Under review:

Tailoring the optical properties of free-standing selenium nano-needles by pulsed laser ablation in various organic solvents.

Journal name: ACS applied nano materials.

Google scholar link: <https://scholar.google.com/citations?user=ZRbhUhkAAAAJ&hl=en>

LinkedIn link: <https://www.linkedin.com/in/atikur-rahman-96343b43/>