

Nishant Mishra

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PUBLICATIONS

- **Vancomycin functionalized WO_3 thin film-based impedance sensor for efficient capture and highly selective detection of Gram-positive bacteria**

[Biosensors and Bioelectronics 136 \(2019\): 23-30](#)

- **MoS_2/TiO_2 Hybrid Nanostructure-Based Field-Effect Transistor for Highly Sensitive, Selective, and Rapid Detection of Gram-Positive Bacteria**

[Advanced Materials Technologies \(2019\): 1900615](#)

- **Reconstituted Fe-Azurin based device for resistive memory switching**

Submitted to the International Workshop on the Physics of Semiconductor Devices, 2017

SKILLS

- **Physical Vapour Deposition** using Varian 3117 Thermal evaporator
- **Semiconductor characterization** using Keithley 4200 and 4200A parameter analyzers. Experience with Keithley 2636B, Keithley 2400 SMUs
- **Electrochemical Impedance Spectroscopy** using BioLogic SP-150 Potentiostat
- **Impact Electrochemistry Measurements** using Variable Gain Sub Femto Ampere Amplifier DDPCA-300
- **Basic Mask designing** using ProjeCAD, IntelliCAD, and CleWin5
- **Data analysis and plotting** using Origin 2019
- **Infrared Spectrum analysis** using Thermo Scientific Nicolet iN10MX infrared imaging microscope
- **UV-Vis Spectrum analysis** using Eppendorf Biospectrometer
- **Silver Nanoparticle Synthesis** using chemical & biological methods

EXPERIENCE

ECSens, Enschede (The Netherlands) - Research Intern

Jul 2020–Dec 2020

- Mask Design using CleWin5
- Amperometric measurements
- Data analysis of the electrical measurements

Student Union, University of Twente, Enschede (The Netherlands) - Secretary Buddy *September 2020 edition*

Jul 2020–Present

- Responsible for correspondence with the Buddy program

Indian Institute of Technology Delhi, New Delhi (India) - Research Intern

Dec 2017–Sep 2019

- Characterized a Bioimpedance sensor for bacteria detection

- Fabricated and characterized a Polysaccharide-based Resistive memory device on a flexible substrate
- Characterized a BioFET sensor for bacteria detection

Indian Institute of Technology Delhi, New Delhi (India) - *Research Intern*

Jun 2017– Aug 2017

- Fabricated and characterized a Protein-based Resistive memory device on a flexible substrate

Electronics Club IEEE GTBIT, New Delhi (India) - *Member*

Aug 2015–Dec 2017

- Conducted an academic-industry workshop on Renewable Energy Resources
- Conducted a two-day Hardware Hackathon
- Taught a Special Interest Group on the Basics of C

EDUCATION

University of Twente, Enschede (The Netherlands) - *Master of Science in Electrical Engineering (EQF level 7)*

Sep 2019 – Present

Specialization: Lab on a chip Systems for Biomedical and Environmental Applications

Part of the Master Research Honours program

Guru Tegh Bahadur Institute of Technology, New Delhi (India) - *Bachelor of Technology in Electrical and Electronics Engineering (EQF level 6)*

Aug 2014–May 2018

Affiliated with **Guru Gobind Singh Indraprastha University** *First Division*

Delhi Public School, R. K. Puram, New Delhi (India) - *All India Senior School Certificate Examination (EQF level 4)*

2013-2014

Mathematics, Physics, Chemistry, Computer Science, English

PROFESSIONAL DEVELOPMENT

Dutch B1 ([Certificate](#))

University of Twente, Enschede (Netherlands)

Nanotechnology for Health ([Certificate](#))

University of Twente (FutureLearn), Enschede (Netherlands)

Device Characterization with the Keithley 4200-SCS (Audit)

Keithley Instruments, Inc (Nanohub), Cleveland (United States)

Micro & Nano fabrication (MEMS) ([Certificate](#))

École Polytechnique Fédérale de Lausanne (EdX), Lausanne (Switzerland)

Primer on Semiconductor Fundamentals (Audit)

Purdue University (EdX), West Lafayette (United States)

Circuits and Electronics 1: Basic Circuit Analysis ([Certificate](#))

Massachusetts Institute of Technology (EdX), Cambridge (United States)

The Arduino Platform & C Programming ([Certificate](#))

University of California, Irvine (Coursera), Irvine (United States)

AWARDS AND HONOURS

- 2016- Second Place in Tesla Turbulence -IEEE GTBIT: Quiz on hardware, networking, electronics, boolean logic, and Computer assembly