

# Dr. Sushmitha V

## Skills

Nanomaterial synthesis through various Chemical and Physical methods like Hydrothermal, E-spinning, Thermal evaporation, and magnetron sputtering.

Fabricating nanomaterials-based biosensors and wearable devices

Material characterization techniques: XRD, UV-VIS spectroscopy, FESEM, XPS, TEM.

Hands-on experience in characterization – UV-VIS spectroscopy, FESEM, FIB-SEM, PL spectroscopy, and Hall effect measurement.

## Awards

- Winner of Tata Steel, Material Next 3.0 competition
- International Cooperative Graduate Program (ICGP) Fellowship at NIMS, Tsukuba, Japan
- Received DST Nidhi Prayas grant
- Runner-up in Samsung Innovation Awards, 2019, India
- Academic excellence award in UG, PG and Ph.D.

## CONTACT

- Google Scholar - <https://scholar.google.com/citations?user=jahEo9IAAAAJ&hl=en&authuser=1>
- LinkedIn - [linkedin.com/in/dr-sushmitha-veeralingam-148b5786](https://www.linkedin.com/in/dr-sushmitha-veeralingam-148b5786)

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sushmithapriithvi@gmail.com

## EDUCATION

### B. Tech (ECE) | Anna University, Chennai

2011 - 2015

[CGPA – 8.5/10, Dept of Electronics and Communication Engineering.]

### M.Tech (Nanoelectronics) | SASTRA University, Tanjore

2015 - 2017

[CGPA - 8.9 / 10]

### Ph.D. | Indian Institute of Technology, Hyderabad

2018 – 2023

[CGPA - 9.1 / 10, Flexible Electronics and Nanodevices laboratory]

### ICGP Fellow | National Institute of Material Science, Japan

2022 – 2023

### Post-doctoral Fellow | Sungkyunkwan University

2023- present

## PUBLICATIONS (SELECTED FEW)

**S. Veeralingam**, S. Parikshit, S. Badhulika. Low cost, flexible and disposable SnSe<sub>2</sub> Based Photoresponsive Ammonia Sensor for Detection of Ammonia In Urine Samples. *Sensors & Actuators B: Chemical*; 2019, 297, 126725 Impact factor – 9.22

**S. Veeralingam** & S. Badhulika. Strain engineered Biocompatible h-WO<sub>3</sub> ultrafine nanofibers based highly selective and sensitive chemiresistive flexible platform for detection of bioanalyte - catechol in blood samples. *Materials Science & Engineering C*, 2020, Impact factor – 8.45

**S. Veeralingam**, S. Priya, S. Badhulika. NiO nanofibers interspersed sponge based low cost, multifunctional platform for broadband UV protection, Ultrasensitive strain and robust finger-tip skin inspired pressure sensor. *Chemical Engineering Journal*, 2020, 389, 124415 Impact factor – 16.74

**S. Veeralingam**, A. Ravindranath, S. Badhulika. Low cost, flexible, perovskite BaTiO<sub>3</sub> nanofibers-based p-n homojunction for multifunctional sensing of physical and chemical stimuli. *Advanced Materials Interfaces*, 2020 Impact factor – 6.38

**S. Veeralingam** & S. Badhulika. X (Metal: Al, Cu, Sn, Ti) - functionalized tunable 2D-MoS<sub>2</sub> nanostructures assembled biosensor array for qualitative and quantitative analysis of vital neurological drugs. *Nanoscale*, 2020, 12, 15336-15347 Impact factor – 8.307

**S. Veeralingam** & S. Badhulika. Surface functionalized □-Bi<sub>2</sub>O<sub>3</sub> nanofibers based flexible, field-effect transistor-biosensor (BioFET) for rapid, label-free detection of serotonin in biological fluids. *Sensors & Actuators B: Chemical*; 2020, 321, 128540 Impact factor – 9.22

**S. Veeralingam**, and Sushmee Badhulika. "BiVO<sub>4</sub> Nanofiber-Based Field-Effect Transistors for Detection of Epinephrine/Adrenaline Hormones." *Materials Chemistry Frontiers* (2021). Impact factor – 8.68

**S. Veeralingam**, and Badhulika, S., 2022. Enhanced Carrier Separation Assisted High-Performance Piezo-Phototronic Self-Powered Photodetector Based On Core-Shell ZnSnO<sub>3</sub>@ In<sub>2</sub>O<sub>3</sub> Heterojunction. *Nano Energy*, p.107354. Impact factor – 19.06