

**Dr. SABNA V.**



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School of Environmental Studies  
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**ACADEMIC PROFILE:**

- **Ph. D Environmental Engineering**, National Institute of Technology Calicut, 2019  
**Title of thesis:** Nanomaterials based treatment of wastewater containing industrial dyes.
- **M. Sc. Environmental Technology** (specialization in Environmental Engineering), Cochin University of Science and Technology, 2008
- **B. Sc Chemistry** (Mathematics and Physics subsidiary, University of Calicut, 2006

**AWARDS:**

- **University Grants Commission National Eligibility Test - Junior Research Fellowship** (UGC NET – JRF - SRF) – April 2010.
- **First Rank - M. Sc Environmental Technology 2006 - 08** (specialization in Environmental Engineering), School of Environmental Studies, Cochin University of Science and Technology, Cochin, Kerala.
- **Merit Scholarship, M.Sc Environmental Technology 2006 – 08**, School of Environmental Technology, Cochin University of Science and Technology, Cochin, Kerala.

**ORGANIZATIONAL EXPERIENCE:**

- **Assistant Professor (contract): 18<sup>th</sup> June 2024 – till date**, School of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur, Kerala.
- **Guest Faculty: (22<sup>nd</sup> Aug 2023 – 27<sup>th</sup> March 2024)**, School of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur, Kerala.
- **Guest Faculty: (2<sup>st</sup> June 2022 – 10<sup>th</sup> August 2023)**, School of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur, Kerala.
- **Guest Faculty: 1<sup>st</sup> July 2021 – 31<sup>st</sup> March 2022**, School of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur, Kerala.
- **Guest Faculty: 25<sup>th</sup> June 2020 – 31<sup>ST</sup> May 2021**, Department of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur, Kerala.
- **Guest Faculty: 09<sup>th</sup> July 2019 – 31<sup>ST</sup> March 2020**, Department of Environmental Studies, Thunchath Ezhuthachan Malayalam University, Tirur, Kerala.

- **Assistant Professor (contract):** 27<sup>th</sup> Nov 2015 – 6<sup>th</sup> March 2018, Department of Environmental Science, University of Calicut, Kerala (**2 YEARS AND 3 MONTHS**)
- **Junior Research Fellow:** 23<sup>rd</sup> July 2010 – till date (part time), National Institute of Technology Calicut, Kozhikode, Kerala.
- **Junior Project Fellow:** 23<sup>rd</sup> Jan 2009 - 22<sup>nd</sup> July 2010, Central Water Analysis Laboratory, Centre for Water Resources Development and Management, Kozhikode, Kerala.

**Project Title: Soil Quality Monitoring of Cheruvannur and Nallalam Panchayaths of Kozhikode District, Kerala.**

**Description:** A baseline data on soil pollution status of the solid waste disposal site of Kozhikode Corporation, Nhjeliyamparamba in Cheruvannur and Nallalam Panchayaths, Kozhikode, Kerala.

**Responsibilities:** Physical and chemical analysis of the soil and water samples including heavy metals and pesticides.

- **Scientific Assistant:** 04<sup>th</sup> July 2008 – 22<sup>nd</sup> Jan 2009, Entec Consultants, Cochin, Kerala

**Responsibilities:** Preparation of Environmental Impact Assessment reports for the upcoming flats, transportation facilities, resorts etc. in Kerala.

- **Project Trainee with M. Sc. Dissertation:** 01<sup>st</sup> Jan 2008 – 15<sup>th</sup> May 2008, Indian Institute of Technology Kanpur.

**Project Title: Concentration Polarization Analysis during the treatment of Inorganic Chemical Industry Effluent by using Reverse Osmosis,** Indian Institute of Technology, Kanpur

#### **PAPERS IN JOURNALS:**

- P. S. Harikumar, Moly A, **Sabna V**, Water and Sediment Quality Assessment of a Multipurpose Reservoir in India, Journal of Environmental Science and Engineering, 2010, 4(2). 1-8
- P. S. Harikumar, Amit Dhruvan, **Sabna V**, Babitha, Study on the leaching of mercury from compact fluorescent lamps using stripping voltammetry, Journal of Toxicology and Environmental Health Sciences, 2011, 3(1), 8 – 13.
- **Sabna V**, Santosh G. Thampi and S. Chandrakaran, Adsorption of crystal violet onto functionalised multi-walled carbon nanotubes: equilibrium and kinetic studies, Ecotoxicology and Environmental Safety, 2016, 134 (2), 390 – 397.
- **Sabna V.**, Santosh G. Thampi, and S. Chandrakaran, Degradation of rhodamine B with manganese dioxide nanorods, Journal of Water and Health, 2018, 16(5), 846 – 856.
- **Sabna V.**, Santosh G. Thampi, and S. Chandrakaran, Adsorptive removal of cationic and anionic dyes using graphene oxide, Water Science and Technology, 2018, 78(4), 732 -742.

- **Sabna V.**, Santosh G. Thampi, and S. Chandrakaran, Sasina E. P. and Resmi P. fMWNTs/GO/MnO<sub>2</sub>nanocomposites as additives in a membrane for the removal of crystal violet, *Membrane and Water Treatment*, 2021, 12(5), 205-216.

#### PAPERS IN CONFERENCE PROCEEDINGS:

- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Carbon nanotubes for desalination of water, Proceedings, Full paper, **International Conference & Exhibition on Water, Wastewater & Isotope Hydrology (ICE-WWISH-2013)**, Bangalore University, Bangalore, Karnataka, India.Vol III, Page 155-160.
- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Fabrication and characterization of functionalized multiwalled carbon nanotubes/ polysulfonenanocomposite membrane, **Swadeshi Science Congress 2014**, Malayalam University, Tirur,Kerala, India 2014, Page. 155.
- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Application of different isotherm models for equilibrium sorption of crystal violet onto functionalized multi-walled carbon nanotubes, **International Conference on Energy, Environment, Materials, and Safety (ICEEMS'14), School of Engineering**, Cochin University of Science and Technology, Cochin, Kerala, India 2014, Page. 225-234.
- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Investigation on the oxidative degradation of crystal violet using needle like MnO<sub>2</sub> Nanostructures, **28<sup>th</sup> Kerala Science Congress**, University of Calicut, Kerala, India 2016.
- **Sabna V**, Santosh G Thampi, S Chandrakaran, Manganesedioxide nanoparticles for the oxidative degradation of rhodamine B,**Fifth International Conference on Water, Energy and Environment, American University of Science and Technology, Sharjah, UAE**, 2017, Page 120 – 133.

#### ABSTRACTS IN CONFERENCE PROCEEDINGS:

- P. S. Harikumar, Amit Dhruvan, **Sabna V**,Babitha, Study on the leaching of Mercury from the Compact Fluorescent Lamps to the soil by Anodic Stripping Voltammetry, Abstract, Proceedings, **Young Environmental Researchers Conference**, Centre for Water Resources Development and Management, Kozhikode, Kerala, India.
- P. S. Harikumar, Amit Dhruvan, **Sabna V**, Study on the heavy metal pollution in the sediments of the rivers Periyar, Meenachil, Karamana and Kadalundi in Kerala, **Young Environmental Researchers Conference**, Centre for Water Resources Development and Management, Kozhikode, Kerala, India.
- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Oxidative Degradation of Rhodamine B using Needle like MnO<sub>2</sub> Nanoparticles, **International Conference On Innovations in Sustainable Water and Wastewater Treatment Systems (ISWATS)**, Pune, India 2016, Page 73.
- **Sabna. V**,Santosh. G. Thampi and S. Chandrakaran, Functionalization of Multiwalled carbon nanotubes, Abstract Proceedings, **International Conference on Advanced**

**Functional Materials (ICAFM 2014)**, National Institute of Interdisciplinary Science and Technology, Thiruvananthapuram, Kerala. India, Page 242,

- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Crystal Violet Adsorption on Functionalised Multi-walled Carbon Nanotubes: Kinetic And Equilibrium Studies, **International Conference on Green Technology for Environmental Pollution Prevention and Control (ICGTEPC-2014)**, Department of Chemical Engineering, National Institute of Technology Tiruchirappalli, Tamil Nadu, India. 2014, Page 122.
- **Sabna. V**, Santosh. G. Thampi and S. Chandrakaran, Manganese dioxide nanoparticles for the oxidative degradation of methyl orange **International Online Conference on Sustainable Technologies in Water Treatment and Desalination (STWTD-2020)**, Dept. of Chemical Engineering, National Institute of Technology Calicut.

### **TRAINING PROGRAMMES ATTENDED**

- Career Advancement Program for Scientists/Academicians Training of Scientists, Technologists and Academicians with Special Focus on Women, Centre for Water Resources Development and Management, Kozhikode, Kerala, India 15<sup>th</sup> July 2011.
- TEQUIP II Sponsored Short Term Training Program on Environmental Forensics, Department of Civil Engineering, National Institute of Technology Calicut, Kozhikode, Kerala, India
- Instruments for Environmental Quality Assessment (IEQA-2015), Department of Civil Engineering, National Institute of Technology Calicut, Kozhikode, Kerala, India

### **WORKSHOPS ATTENDED**

- Workshop on Research Methodology, Writing Practices and Language Skills, Central Water Analysis Laboratory (CWAL), Centre for Water Resources Development and Management, Kozhikode, Kerala, 04 – 05<sup>th</sup> March 2011.
- National Workshop on Multivariate Analysis using SPSS and Spreadsheets, School of Management Studies, National Institute of Science and Technology Calicut, Kerala, 30<sup>th</sup> January to 1<sup>st</sup> February 2014.
- Workshop on Spectroscopy: Instrumentation and Applications, Applied Optics and Instrumentation Group, School of Nano Science and Technology, National Institute of Technology Calicut, Kerala, 11<sup>th</sup> January, 2014.
- TEQUIP II Sponsored National Workshop on Water, Air and Soil: Sampling and Analysis (WASSA-2014), Department of Civil Engineering, National Institute of Technology Calicut.

### **AREAS OF EXPERTISE**

- Wastewater treatment using reverse osmosis and nanofiltration
- Nanotechnology applications in water, wastewater treatment and membrane technology
- Analysis of physical, chemical and biological parameters of the environment
- Environmental Management and Environmental Impact Assessment Studies
- Solid Waste Management

