**Dr.EBITHA EQBAL**

Alamana House, Puthuvassery, Nedumbassery P.O,Ernakulam (Dist)

**9747653006, ebithashiyas@gmail.com**

**PROFILE**

Highly self-motivated Ph.D candidate with demonstrated research expertise in the growing field of Material Science.

**EXPERIENCE**

**Cochin University of Science and Technology (CUSAT), Kalamassery-** *Post-Doctoral Fellow*

September 2022- September 2023

Department of Physics

**KMEA Engineering College,** Edathala — *Associate Professor*

December 2020 – September 2022

Department of Basic Sciences and Humanities

**St.Pauls College,** Kalamassery — *Assistant Professor*

June 2019 - March 2020

Department of Physics.

# **Union Christian College ,** Aluva – *Research Fellow*

January 2014- June 2020

Department of Physics

**EDUCATION**

**Cochin University of Science and Technology (CUSAT), Kalamassery-** *Post-Doctoral Fellow(PDF)*

September 2022- September 2023

Department of Physics

# **Union Christian College,** Aluva (Research Centre)

# *Ph.D Physics (Mahatma Gandhi University)*

# *June 2020*

# **Cochin University of Science and Technology (CUSAT),** Kalamassery—

# *M.Phil Physics*

December 2012- 75%- First Class with Distinction (University Third Rank)



**SKILLS**

C, C++, MATLAB.

**ACHIEVEMENTS**

* Third Rank Holder in M.phil Physics from CUSAT.
* Best Poster presentation award- National Seminar on Nanomaterials-Synthesis and Characterization, at Al-Ameen College Edathala on 6-7 December 2018.
* KTU Ph.D Guide from 2021.

**AREAS OF INTEREST**

* Nano Technology
* Thin film Deposition
* Fabrication of Optoelectronic Devices using thin films.
* Laser and Fibre optics
* Solid State Physics and Electronics

**Title of the Ph.D Thesis**

Tin Oxide Based Transparent Conductors and PN Junctions: Spray Pyrolysis Deposition and Characterization.

Title of the PDF Work

Photoluminescent Studies of Tin Oxide Nano powder by Combustion Method

**JOURNAL PUBLICATIONS**

1. *Properties of transparent conducting tin monoxide (SnO) thin films prepared by chemical spray pyrolysis method***, Ebitha Eqbal** and E.I Anila, Physica B: Physics of Condensed Matter 528(2018) 60-65.
2. *Preparation and Characterization of Transparent Conducting FTO Thin Films by Chemical Spray Pyrolysis Method*, **Ebitha Eqbal,** E.Hilal Rahman,E.I.Anila, J.Nanaosci.Tech.4(5) (2018) 572-574.
3. *Fabrication of p- SnO/n-SnO2 Transparent p-n Junction Diode by Spray Pyrolysis and Extraction of Device’s Intrinsic Parameters*, **Ebitha Eqbal**, Rakhy Raphael, K.J. Saji and E.I Anila, Materials Letters,247 (2019) 211-214.
4. *Effect of Substrate temperature on Flourine doped Tin oxide (FTO) thin film by chemical spray pyrolysis method*, **Ebitha Eqbal,** E.I.Anila, AIP Conference Proceedings, 2082 (2019)030013.
5. *P type copper doped tin oxide thin films and p-n homojunction diodes based on them*, **Ebitha Eqbal,** E.I.Anila, Optical Materials 118(2021)111281.
6. *Tailoring the properties of tin dioxide thin films by spray pyrolysis technique,* ***Ebitha Eqbal,*** *E.I.Anila, Optical Materials 122(2021)111653.*

**PUBLICATIONS IN CONFERENCE PROCEEDINGS**

1. *Effect of Substrate temperature on Flourine doped Tin oxide (FTO) thin film by chemical spray pyrolysis method*, **Ebitha Eqbal,** E.I.Anila, AIP Conference Proceedings, 2082 (2019)030013, doi.org.10.1063/1.5093831[ISBN: 978-0-7354-1812-7].
2. *Properties of transparent conducting SnO2thin films by chemical spray pyrolysis method,* **Ebitha Eqbal ,**E.I.Anila. Proceedings of International Conference on Advances in Materials Science (ICAMS 2018) at Sree SankaraCollege,Kalady.
3. *Synthesis and Characterization of Fluorine doped Tin oxide (FTO) thin films prepared by chemical spray pyrolysis method,* **Ebitha Eqbal**, Hilal Rahman E, E.I Anila, Proceedings of National Workshop on Trends in Physical Sciences (TriPS 2017) at Sree Sankara College,Kalady.
4. *Properties of transparent conducting SnO2thin films by chemical spray pyrolysis method*, **Ebitha Eqbal**, E.I Anila, Proceedings of Frontiers of Nanotechnology-UGC sponsored national seminar at Marthoma College for Women Perumbavoor, 9th Aug 2017.
5. *Synthesis and Characterization of Tin dioxide thin films by chemical spray pyrolysis method,* **Ebitha Eqbal,** E.I.Anila, Proceedings of National Seminar on Nanomaterials-Synthesis and Characterization, at Al-Ameen College Edathala on 6-7 December 2018 [ISBN: 978-93-5346-065-5].

**WORKSHOPS/SEMINARS/STTP**

1. Quality Assurance in Higher Education at Al- Ameen College Edathala on 09-04-2013.
2. National Conference on Innovative Engineering (NCIE) at Holy Grace Academy of Engineering on19th March 2015.
3. National Workshop on Nanotechnology (NWNT2016), KKTM. Govt. College, Pullut, on 21 to 23rd November 2016.
4. Workshop on LATEX, Department of Computer Science, Union Christian College Aluva on November 2016.
5. TriPS 2017- National Workshop on Trends in Physical Sciences, at Sree Sankara College, Kalady,29 th July 2017.
6. Frontiers of Nanotechnology-UGC sponsored national seminar at Marthoma College for Women Perumbavoor, 9th Aug 2017.
7. INNVENT 2017 CUSAT on 13-15 December 2017
8. International conference on Materials for Energy and Technology (ICMET) at MES Ponnani College on 18th December 2017.
9. Emerging Trends and Applications in Nanoscience 20-21 December 2017 at SNM College Maliankara.
10. International Conference on Advances in Materials Science (ICAMS 2018) at Sree Sankara College,Kalady on 24th and 25th October 2018
11. National Seminar on Nanomaterials-Synthesis and Characterization, at Al-Ameen College Edathala on 6-7 December 2018.
12. 30th Kerala Science Congress at Govt. Brennan College, Thalassery on 28-30 January 2018.
13. IcONMAT 2019 at CUSAT on 2 to 5th January 2019.
14. National Seminar on the Foundations of Statistical Mechanics and Celebration of the 125th Birth Anniversary of S.N.Bose, Department of Physics,aharajas College, Ernakulam on 14 and 15th November 2019.
15. Webinar on Super Heavy Elements – Hopes and Challenges, Department of Physics,St.Thomas College Thrissur on 1st July 2020.
16. International Webinar on Careers in Physics, Innovations and IPR at KE College Mannanam on 4th July 2020.
17. International Webinar on Particle Physics organized by Sree Vidyadhi Raja NSS College, Vazhoor. on 15th July2020
18. Webinar on Astronomy and Astrophysics by Department of Physics,Mar Ivanios College , Thiruvanthapuram on 25th July 2020.
19. Webinar on Emerging Solar cell Technologies as Part of the DBT STAR Lecture Series on Characterization Techniques in Material Science , organized by the Department of Physics, Bishop Moore College ,Mavelikkara on 28th July 2020.
20. Webinar on X-ray Diffraction : Good Analysis Practices organized by the Department of Physics Vimala College, Thrissur, Kerala on 4th August 2020.
21. International Webinar on Need of Basic Sciences in Engineering organized by Department of Basic Sciences and Humanities, KMEA Engineering College, Aluva on 16 th December 2020.
22. Webinar on Basics of Writing and Getting Published A Quality Technical Paper conducted by IEEE Malabar Hub in collaboration with IEEE SB NIELIT Calicut on 15 th May 2021.
23. Webinar on IEEE- Enhancing Your Project Work and Research Organized by KMEA Engineering College, Edathala

ACADEMIC PROJECTS UNDERTAKEN

* Synthesis & Characterization of Tin Oxide (SnO2 and SnO) Thin films by Chemical Spray Pyrolysis method.
* Fabrication of p-n junction diodes (Both Heterojunction and Homojunction diodes) using Tin oxide based thin films by chemical spray pyrolysis method.
* Synthesis and Characterization of p-type TCOs by doping with Al and Cu on SnO2 thin films by chemical spray pyrolysis method.
* Synthesis & Characterization of FTO Thin films by Chemical Spray Pyrolysis method.
* Synthesis of SnO2 nanopowder by Combustion method.
* Synthesis of Ni doped SnO2 nanotubes by Combustion method.
* Synthesis of Mn and Fe doped SnO2 nanopowder by Combustion method.
* Synthesis of Ni, Mn and Fe nanocomposites by Combustion method.
* Raman & IR Structural Investigations of SbV0.5InIII0.5P2O7 & SbV0.5 FeIII0.5P2O7 .
* Synthesis and Characterization of Znx(O,S)y by SILAR method.
* Television testing and Servicing.

REFERENCES

1. Dr. E.I Anila

Professor

Department of Physics and Electronics CHRIST (Deemed to be University)

Bengaluru-560029, India

Email: [anilaei@gmail.com](mailto:anilaei@gmail.com)

Phone no: 9645730534

1. Dr. Junaid Bushiri

Professor

Department of Physics, Cochin University of Science and Technology (CUSAT)

Kochi-682022, Kerala, India

Email: [junaidbushiri@gmail.com](mailto:junaidbushiri@gmail.com)

Phone no:9495348631,9048183372

1. Dr. Reshmi Raman

Assistant professor

Department of Physics

Union Christian College, Aluva

Email: rreshmi@gmail.com

Phone no: 9446127331

**DECLARATION**

I hereby declare that the above-furnished details are true and correct to the best of my knowledge and belief.

Place: Aluva

Date: Dr.Ebitha Eqbal