



Mrs. Aswathy B R
Assistant Professor, Department of Physics

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Phone no: **9400147645**

QUALIFICATION:

M Sc, M Ed, NET

DATE OF JOINING:

17/10/2012

EXPERIENCE IN YEARS

11 Years

AREA OF SPECIALIZATION:

Thin Films,

Nanomaterials

ADMINISTRATIVE DISTINCTION:

- Member of *College Calendar and Handbook committee*
- Member of *College Union Election committee*
- Member of *Admission Committee- UG and PG admissions*
- Member of *Code of Conduct Committee*
- Mentor of *Scholar Support Programme (SSP)*

PAPER PRESENTATIONS

- **Paper entitled** “*Solar Energy- Technology Feasibility*”, Presented in One day National Seminar on “**Energy Efficient Systems for Environmental protection (EEEEP-14)**” on 27th October 2014.
- **Paper entitled** , “*Structural studies of Zinc oxide thin film by sol-gel dip coating method*”, **presented in 31st Kerala Science Congress**, held at Fatima Mata National College, Kollam on 02-03 February 2019.
- **Paper entitled** “*Deposition of tin oxide thin film by sol-gel dip coating technique and its characterization*”, Presented in **INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS (ICAM2019)**, during 12-15 June 2019, at Nirmalagiri College, Kannur, Kerala, India.
- **Paper entitled**, *Influence of deposition parameter on the optical properties of ZnO thin films by dip coating method*, Presented in **International Conference on Physics of Materials and Nanotechnology (ICPN 2019)** Organized by Department of Physics, Mangalore University, Karnataka, during September 19-21, 2019
- **Paper entitled**, “*Effect of annealing temperature on structural and optical properties of nickel oxide thin films by sol-gel dip coating method*” Presented in **International Conference on Energy and Environment (ICEE-2019)** held at TKMCAS, Kollam, during 12-14 December 2019.
- **Paper entitled**, “*Optical properties of sol-gel derived Zinc oxide thin films: Effect of thickness*” Presented in International Conference on Energy and Environment (ICEE-2019) held at TKMCAS, Kollam, during 12-14 December 2019.
- **Paper entitled**, *Effect of deposition parameter on structural and optical properties of Sol-gel derived tin oxide thin films*, Presented in International Conference on Energy and Environment (ICEE-2019) held at TKMCAS, Kollam, during 12-14 December 2019.
- **Paper entitled** “*Bio-synthesis and Characterization of ZnO Nanoparticles: Structural, Optical and antimicrobial studies*” Presented in International Conference on Energy and Environment (ICEE-2019) held at TKMCAS, Kollam, during 12-14 December 2019.

PARTICIPATION IN SEMINARS/ CONFERENCES/ WORKSHOPS

- Participated in UGC sponsored National Seminar on **Research Instrumentation for Interdisciplinary Science: RIISc-2014** organized by Iqbal College, Peringamala on 22-23 January 2014.
- Participated in UGC sponsored National Seminar on **Applications of Advanced Nanomaterials (NSNANO-2014)** organized by S N College, Kollam on 25-26 February 2014
- Attended the 'Walkathon 2014' organized by **Students for Palliative care Initiative of Alpha Palliative care** on 15th October 2014 at Kollam.
- Participated in One day National Seminar on "**Energy Efficient Systems for Environmental protection (EEEP-14)**" supported by **Kerala State Council for Science, Technology and Environment**, on 27th October 2014.
- Participated in One day Seminar held in connection with the 100th birthday celebration of Bohr Atom Model organized by S N College for Women, Kollam on 21st January 2015.
- Participated in UGC sponsored National Seminar on **Fitness and Life style disease management** organized by S N College for Women, Kollam on 26-27 March 2015
- Participated in UGC sponsored National Seminar on **Spectroscopic Techniques-Present Scenario (NSST-2015)** organized by T K M M College, Nangiarkulangara on 17-19 September 2015.
- Participated in **Spectrum Seminar Series 2015-2016** organized by Department of Physics, S N College, Chempazhanthu on 3rd March 2016.
- Participated in a Workshop on "**Crystal Growth of Functional and Exotic materials**" organized by **Centre for High Pressure Research**, Department of Physics, Bharathidasan University, Thiruchirappalli, during 6-10 August 2018.
- Participated in Science Academies' Lecture Workshop on "**Quantum theory of Angular momentum**", hosted by T K M College of Arts and Science, Kollam during 14-16 March 2018.
- Participated in UGC sponsored National Seminar on **Interdisciplinary Approaches in Materials and Biological Research**, organized by Mahatma Gandhi College, Thiruvananthapuram on 16-17 February 2018.
- Participated in **31st Kerala Science Congress**, held at Fatima Mata National College, Kollam on 02-03 February 2019.

- Participated in **INTERNATIONAL CONFERENCE ON ADVANCED MATERIALS (ICAM2019)**, during 12-15 June 2019, at Nirmalagiri College, Kannur, Kerala, India
- Participated in **International Conference on Physics of Materials and Nanotechnology (ICPN 2019)** Organized by Department of Physics, Mangalore University, Karnataka, during September 19-21, 2019
- Participated in **International Conference on Energy and Environment (ICEE-2019)** held at TKMCAS, Kollam, during 12-14 December 2019.
- Participated in **One-day workshop on Computer Interfaced Science Experiments with ExpEyes-17** at TKM College of Arts and Science, Kollam on 18th October 2019.
- Participated and successfully completed in **Two Day National Faculty Development Programme on "Need for Examination Reforms in Changing Scenario"** on 12-13 August, 2020 organized by Bishop Moore College, Mavelikara.
- Participated and successfully completed in Two Weeks Faculty Development Programme on **"MANAGING ONLINE CLASSES and CO-CREATING MOOCS:2.0"** from May 18 - June 03, 2020 organized by Teaching Learning Centre, Ramanujan College, University of Delhi.
- Participated and successfully completed in One Week Faculty Development Programme on **"Open-Source Tools for Research"** from June 08 - June 14, 2020, organized by Teaching Learning Centre, Ramanujan College, University of Delhi.
- Participated in Two Weeks Faculty Development Programme on **"ADVANCED CONCEPTS FOR DEVELOPING MOOCS"** from July 02 - July 17, 2020, organized by Teaching Learning Centre, Ramanujan College, University of Delhi.
- Participated and successfully completed in One Week online **Short term Faculty Development Programme (Interdisciplinary) on "Towards a Digital Era of Teaching and Learning"**, organized by UGC-HRDC, University of Kerala, Thiruvananthapuram in collaboration with KSMDDB College, Sasthamcotta from August 12-18, 2020.
- Participated and successfully completed the One Week online **Short term Faculty Development Programme on "Implementation of Information and Communication Technology in Teaching"**, organized by School of Legal Studies , CUSAT in collaboration with KSHEC from July 18-24 , 2020.
- Participated and successfully completed the One Week online **Short term Faculty Development Programme on "ICT Tools for Teaching Learning Process- Post Pandemic Educational Strategies"** organized by Department of Physics and IQAC Sree Narayana College Kollam in collaboration with KSHEC from August 17-23, 2020.

- Participated in a Two Day Online National level Faculty Development Program on “**Virtual Physics Labs**” on 4th & 5th June 2020 organized by MALLA REDDY INSTITUTE OF ENGINEERING AND TECHNOLOGY, Hyderabad.
- Participated in **Moodle Learning Management System** training organized at **Sree Narayana College, Chengannur** in **January 2020** semester, with course material provided by the Spoken Tutorial Project, IIT Bombay.
- Participated and successfully completed the One Week Online Short-Term Faculty Development Programme on “**PEDAGOGICAL AND E-LEARNING TOOLS FOR TEACHING**” **organized** by Sanatana Dharma College, Alappuzha in collaboration with The Kerala State Higher Education Council from 04th -10th August 2020.
- Participated and successfully completed in Two Weeks Faculty Development Programme on “**ICT Based New Paradigms of E- Teaching and E -Learning** ” during September 16- 30, 2020 organized by Mats Sundari College for Women in association with Teaching Learning Centre, Ramanujan College, University of Delhi.
- Participated in One Week Online FDP on “**Research Ethics & Characterization Techniques in Materials Science**” during 9-15 September 2020 organized by Bishop Moore College Mavelikara in association with St. John's College Agra and Guru Angad Dev Teaching Learning Centre of MHRD , PMMMMNMTT (SGTB Khalsa College, Delhi University).
- Participated in One Week E-summer school on **Advanced Functional materials for Energy Harvesting, Storage and Biomedical Applications** during 13-19 May 2020 organized by Bishop Moore College, Mavelikara in association with The Kerala State Higher Education Council.
- Participated in National webinar on “**Applications of Vibrational Spectroscopy**”, on 28th July organized by Department of Physics & Research Centre, Women's Christian College, Nagercoil
- Participated in **First National Students Conference on Spectroscopy (NSCoS 2020)**, jointly organized by SciRox (Science Club), Guru Nanak Dev University, Amritsar and Chemical Research Society of India and sponsored by ACS Publications on 16th and 17th October 2020.
- Participated in **NPTEL Awareness Workshop** on 21st May 2021
- Participated in International Webinar on ‘**Earthquake studies and their prediction possibilities**’ organized by the Department of Physics, Sree Narayana College for Women, Kollam on 25 May, 2021.

- Participated in One day workshop on ‘**Optimizing Research Steps towards Centre for Excellence**’ organized by T K M College of Arts and Science, Kollam on 22 March, 2023.

PUBLICATIONS IN JOURNALS

- **Aswathy B R**, K. Vinay, M. Arjun, and P. K. Manoj, *Structural studies of Zinc oxide thin film by sol-gel dip coating method*, **published in 31st Kerala Science Congress Proceedings**, 214-215.
- **B. R. Aswathy**, K. Vinay, M. Arjun, and P. K. Manoj, “*Deposition of tin oxide thin film by sol-gel dip coating technique and its characterization*”, Published in AIP Conference Proceedings 2162, 020134 (2019); <https://doi.org/10.1063/1.5130344> Published Online: 29 October 2019
- **Aswathy B R** and P K Manoj, “*Influence of deposition parameter on the optical properties of ZnO thin films by dip coating method*”, Published in AIP Conference Proceedings **2244**, 110003 (2020); <https://doi.org/10.1063/5.0009213> , Published Online: 26 June 2020.
- Meenakshi L J , **Aswathy B R** , P K Manoj , “*Effect of annealing temperature on structural and optical properties of nickel oxide thin films by sol-gel dip coating method*” -Presented a paper in International Conference on Energy and Environment (ICEE-2019) held at TKMCAS, Kollam
- B. Sreelakshmi, S. Induja, P.P. Adarsh, H.L. Rahul, S.M. Arya, S. Aswana, R. Haripriya ,**B.R. Aswathy**, P.K. Manoj, Dalia Vishnudasan, “*Drought stress amelioration in plants using green synthesized iron oxide Nanoparticles*” , Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.05.801>
- **B. R. Aswathy**, Dalia Vishnudasan, P K Manoj, “**Bio-synthesis, characterization and antibacterial studies of ZnO nanoparticles**” International Journal of Materials Research(accepted)

MEMBERSHIP IN PROFESSIONAL BODIES

- Life Member in **Academy of Physics Teachers (APT)**, Kerala
- Life Member in **Indian Academy of Physics Teachers (IAPT)**
- Life Member in **Kerala Academy of Sciences (KAS)**

OTHER ACHIEVEMENTS

- **Organizing member of One day Seminar - “Aesthetics of Smallness”** on 8th February 2013, organized by *Department of physics, T K M M College Nangiarkulangara.*
- **Organizing member of One day Workshop “Experiments in Physics” for higher secondary students of Alappuzha (Dist.)** organized by *Department of Physics, T K M M College,* on 26th July 2013.
- **Convener** of One day National Seminar on **“Energy Efficient Systems for Environmental protection(EEEP-14)”** supported by *Kerala State Council for Science, Technology and Environment,* on 27th October 2014.
- **Organizing member of Science Exhibition “Callidus-2014” for high school students of Alappuzha (Dist.)** organized by *Department of Physics, T K M M College,* on 10th January 2014 .
- **Organizing member of One day Training Programme on “Human Rights”** on 18th March 2015, organized by *Department of Physics, T K M M College, Nangiarkulangara*
- **Organizing Member** of International Seminar on “Laser: A non-conventional tool for medical diagnosis and treatment” on 2 5th August 2017 at *S N College for Women, Kollam*
- **Organizing Member of One day Workshop on “Space Science Programme” on 4th October 2018** at *S N College for Women, Kollam*
- **Organizing Member of National Science Day celebrations -2018, “ Technology Transfer from Lab to Land for Sustainable Development”** on 26th and 27th February 2018 organized by *Science Club, S N College for Women.*
- **Stage Manager** of *Kerala University Youth Festival,* held at *Kollam* during the academic year 2017-18
- **Mentor of Scholar Support Programme (SSP)** in *S N College for Women, Kollam* during the academic year 2017-18, 2018-2019 and 2019-2020.
- Resource Person of **KSITM course” Capacity Building in IT for Girls”** at *S N College for Women, Kollam* during the academic year 2017-18, 2018-2019 and 2019-2020.
- Single Point of Contact, **SPOC of SWAYAM- NPTEL online courses**
- **Organizing Member of International Webinar on 'Crossroads 2020', on 22nd July 2020** organised by *Department of Physics, Sree Narayana College for Women, Kollam*
- **Organizing Member of International Seminar series on 'Crossroads 2020', on 22nd July 2020** organised by *Department of Physics, Sree Narayana College for Women, Kollam*

- **Organizing Member** of World Space Week 2021 celebrations organized by Dept. of Physics, S N College for Women, Kollam in association with National Service Scheme, SNCW, Kollam
- **Stage Manager** of Kerala University Youth Festival, held at Kollam during the academic year 2021-22
- Acted as Evaluator of one week FDP on '**Digital Content Management on E-Learning**', organized by Sree Narayana College for Women, Kollam in collaboration with The Kerala State Higher Education Council from June 13-19,2021
- **Organizing Member** of Sky watch- "**Explore the Sky**" on **20th March 2022** organized by Dept. of Physics, S N College for Women, Kollam in association with Break through Society, Kollam chapter
- **Organizing Member** of Science day Celebrations-2023 on organized by Dept. of Physics , S N College for Women, Kollam
- **Organizing Member** of an awareness talk on "**Well Women Nutrition**" on **26th July 2023** organized by Community Health Activities Club in association with Health Education Club, S N College for Women, Kollam
- **Organizing Member** of an awareness talk on "**Well Women Nutrition**" on **26th July 2023** organized by Community Health Activities Club in association with Health Education Club, S N College for Women, Kollam

ABSTRACT BOOK of International Conference on Materials - Properties, Measurements and Applications (ICMPMA 2022) 9 to 13 May 2022 Organized by Research & Postgraduate Department of Physics Fatima Mata National College (Autonomous) Kollam, Kerala, India

Influence of Al doping level on the structural, morphological and optical properties and photocatalytic degradation of Tin oxide nanostructured film , P K Manoj2 , Nayana D A2 , Fathima Riyaz