

FACULTY PROFILE

Name: Dr.S.RUBY

Designation: Asst.Professor

Department: Physics

Date of Joining:16.6.2005

Phone with Extn. No: -

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Educational Qualification:

Degree	Subject	College/ University&Place	YearCompleted
B.Sc.,	Physics	Lady Doak College, Madurai.	2000
M.Sc.,	Physics	The American College, Madurai.	2003
M.Phil.,	Physics	Bharathidasan University, Trichy.	2005
Ph.D.,	Physics	Mother Teresa Women's University, Kodaikanal	2020

Specialisation in Teaching:

Optics and Astrophysics

Specialisation in Research:

Nanomaterials

Research Interests:

Nanoscience and Nanomaterials

Administrative/Academic Positions (held/currently holding):

Positions held/currently holding	Year – From (month/year) To (month/year)
Project Associate in SLP–Solid Waste Management	September2015 to till date
Project Associate in SLP–School Extn. Program	2007-2008
One of the Conveners in the College Science Exhibition.	August, 2015.
Convener for SF in PHOBOS	March, 2015

External Examiner in Other Colleges and University

- Mother Teresa Women’s University, Kodaikanal.
- Madurai Kamaraj University, Madurai.
- Fatima College, Madurai affiliated to Madurai Kamaraj University.

Guideship

- Guiding M.Phil students of Mother Teresa University from January 2022.

Publications:

Articles published in International Journals:

- “Structural Properties and Electrical Conduction Mechanisms In $\text{Bi}_{0.9}\text{Sm}_{0.05}\text{Tb}_{0.05}\text{FeO}_3$ Thin Films Prepared by Hydrothermal Method” in *Applied Surface Science*, 449 (2018) 10 – 14.
Impact Factor: **4.439**
- “Sun-Light Driven Photocatalytic Degradation of Methyl Orange Based on Bismuth Ferrite (BiFeO_3) Heterostructures Composed of Interconnected Nanosheets” in *Journal of Nanoscience and Nanotechnology*, Vol. 20, 1–8, 2020.
Impact Factor: **1.8**
- “Photodegradation of methyl orange based on manganese-substituted bismuth ferrite nanoparticles” *Emerging Materials Research*, Volume 11 Issue 4, December 2022, pp. 415-422. Impact Factor: **1.79**.

Book Chapter Published

- Synthesis methods for bismuth series nanostructures. In *Bismuth-Based Materials for Environmental Remediation*, IOP Publishing, June 2022.

Conference/Seminar Presentations:

Name of the Seminar/Conference/Symposia/Workshop etc.,	Name of the sponsoring Agency	Title of the paper	Institution, Place and Date
International Conference SMTBEA -2022	Elavenil Science Association & Indian Science and Technology Association.	“Nanostructured Mg doped Bismuth Ferrite for Methyl Orange dye Degradation”	SSN College of Engineering, Chennai, 13-15 July, 2022.

International Conference ICONN 2019	Shizuoka University, Japan, National Chiao University, Taiwan, CSIR and DST – SERB, India.	“Synthesis and characterisation of Manganese substituted Bismuth Ferrite by Microwave Assisted Method ”	SRM University, Chennai, 28 – 30 January, 2019
International Conference on Recent Advances in Material Science	NSERB, India, BRNS, Mumbai, TNSCST, Chennai, TANSICHE.	"Study of Optical and Magnetic properties of Cobalt doped BFO nano particles by Microwave assisted method”	National College, Trichy, 4 – 6 February, 2019
National Conference on Recent advanced Materials“(NCRAM 2018)	BRNS, Mumbai and TNSCST, Chennai.	“Photocatalytic activity of Bismuth Ferrite synthesised by Microwave assisted method”	Thiruvalluvar University College of Arts and Science, Vandavasi, 23-24 February, 2018.
International Conference on Functional Materials ICFM 2017	DST-SERB.	“Synthesis and Characterization of Cobalt doped BFO nano particles by Microwave assisted method”	Thiagarajar College of Arts and Science, Madurai, 7-8 September, 2017.
International Conference ICONN 2017	Shizuoka University, Japan, National Chiao University, Taiwan, GNS, Newzeland.	“Structural Properties and Electrical Conduction Mechanisms In $\text{Bi}_{0.9}\text{Sm}_{0.05}\text{Tb}_{0.05}\text{FeO}_3$ Thin Films Prepared by Hydrothermal Method”	SRM University, Chennai, 9-11 August, 2017.
National Seminar on Crystal Growth and Applications"	UGC, Delhi	"Synthesis and Characterization of Pure BFO Nano particles by Microwave assisted Method"	National College, Trichy, 7 th March 2017
National Conference on Emerging Trends in Materials-2017	Mary Matha College of Arts and Science, Periyakulam.	"Synthesis and Characterization of Barium doped BFO nano particles by Microwave assisted method"	Mary Matha College of Arts and Science, Periyakulam, 6 th March 2017

Orientation Program, FDP program and Refresher course Attended

- One week online FDP on “Creation of E-Content for Professional Sustainability” from 4th to 9th Oct 2021, organized by the PSG College of Arts & Science in association with PSG Centre for Academic Research and Excellence, Coimbatore.

- Virtual Refresher Course on “Material Characterisation” from 3rd Oct to 1st Nov 2020, organized Indian Ceramic Society Karnataka Chapter, Bangalore & Visvesvaraya Technological University, Bangalore.
- Online FDP on “Spectroscopic Techniques” from 3rd to 5th August 2020, DBT Star Scheme & DST-FIST funded, organized by PG and Research Department of Physics, Jamal Mohammed College, Trichy.
- Faculty Development Programme on “Advance Materials for Energy Storage Applications” on 18.7.20 to 22.7.20 (5Days), conducted by the Department of Physics, Velammal Institute of Technology, Vellore.

Seminars Conducted

- Conducted a Seminar on “Nanomaterials and Photoconducting Devices” as part of Ph.D requirement at the Physics Department, Mother Teresa University, Kodaikanal on 29-30 August, 2016.
Resource Persons: 1.Dr.Jegadesh Kesevan, Rome III University, Rome
2.Dr.K. Balamurugan,NITT,Trichy
- Conducted a Seminar on “Astrophysics” as part of Ph.D requirement at the Physics Department Mother Teresa University, Kodaikanal on July 13, 2018.
Resource Persons: 1.Dr.Ebenezer, Reader, IIA, Kodaikanal
2.Dr.Prabhu Ramkumar, Research Associate, IIA, Kodaikanal

Workshop, Seminars and Conferences Attended

- One-day Interactive workshop on “Arts & Science of Methodical Scientific Writing and Publishing in a High-impact Journal” on 6th March 2023, conducted by the IQAC & Dean of Curriculum and Research, The American College, Madurai.
- Short Term online training program on “Materials Synthesis, Characterisation Techniques and Data Analysis Tools for Research Beginners” during 30th Nov to 5th Dec 2020, organized by Centers of Excellence – Materials Science, Sensors & Nanoelectronics, CMRIT, Bangalore.
- National webinar on “Introduction to Nanotechnology & Nanomaterials” on 29.7.20 organized by the Department of Science and Humanities, Nehru Institute of Engineering and Technology, Coimbatore.
- National webinar on “Teacher Vs Learner: Impact of COVID-19 in Colleges” on 22nd July 2020 by the IQAC, The American College, Madurai.
- Online webinar on “Big Bang–The story of Expanding Universe” on July 29, 2020, conducted by the Department of Physics, PSNA College of Engineering and Technology.
- One day TEQIP-II Sponsored workshop on “Research Paper Writing” on 26th August 2016, conducted by the Academic Research Section of Thiagarajar College of Engineering
- National seminar on “Recent Trends in Energy Technologies” on 1 August 2015 conducted by The American college, Department of Physics(SF) and Department of Applied Sciences.
- One day workshop on “Materials Characterization Techniques: AFM&XRD” on 19 November 2014, conducted by the School of Physics, Madurai Kamaraj University, Madurai.

- One day workshop on “Research Methodology” for Ph.D Scholars on 27 August 2013 conducted by the Mother Teresa University, Kodaikanal.
- National workshop on “Preparation and Characterisation of Nanomaterials” on 14th to 16th March 2011, conducted by the National Centre for Nanoscience and Nanotechnology, University of Madras, Chennai.
- Workshop on “Quantum Computers and Quantum Information”, The American College, Madurai, 2001.
- Workshop on “Renewable Energy Resources and their Applications”, Lady Doak College, Madurai, 2000.
- Seminar on “Astrophysics –Solar Physics”, Lady Doak College, Madurai, 1999.

Awards/Fellowships

College	Name of the award/fellowship	Year
The American College, Madurai.	Richard P.Reiz award	2001-2002

Research activity of the student under guideship

16PSP09 16PSP14	Growth and characterization of Silver Nanoparticles	M.Sc.,	2015-16
13PHS24 13PHS26 13PHS54	Synthesis and Characterisation of BFO Nanoparticles using Microwave Synthesis Method	B.Sc.,	2015-16
14PHS37 14PHS40	Designing Photoreactor using UV-LED	B.Sc.,	2016-17
16PSP22 16PSP25	Small distance measurement using Arduino	M.Sc.,	2016-17
14PHS07 14PHS27	Swing Bridge	B.Sc.,	2016-17
17PSP09 17PSP17 17PSP22	Synthesis of Bismuth Ferrite by Substitution of Lanthanum	M.Sc.,	2017-18
15PHS08 15PHS20 15PHS25 15PHS32 15PHS34	RFID proximity based checking, detecting expiry date of any products.	B.Sc.,	2018-19
15PHS37 15PHS35 15PHS77 15PHS68	Automatic Alive human rescuer robot	B.Sc.,	2018-19
18PSP04 18PSP24	Synthesis and Characterization of Mg doped BiFeO ₃ by Microwave assisted Method	M.Sc.,	2018-19
16 PHS08 16PHS11 16PHS59 16PHS61	Green synthesis of Aluminium Nitrate	B.Sc.,	2019-20

19PSP09 19PSP21	Construction of Solar panel tracker using LDR sensor and servo motor	M.Sc.,	2019-20
19PSP01 19PSP03	Synthesis & Characterization of MgO nanoparticles	M.Sc.,	2019-20
18PHS39 18PHS64 18PHS59 18PHS13 18PHS68	Arduino Based Home Automation	B.Sc.,	2020-21
20PSP02 20PSP10	Wavelength Dependency On Solar Limb Darkening	M.Sc.,	2020-21
18PHS14 18PHS21 18PHS35 18PHS38 18PHS62	Solar Panel Monitor Using Arduino	B.Sc.,	2020-21
20PSP15 20PSP30	Study On Review Of BifeO ₃ Photocatalytic Application	M.Sc.,	2020-21
21PSP05 21PSP21	Synthesis of Calcium doped BFO nanoparticles	M.Sc.,	2021- 22

Other Activities/Academic Credentials

- Contributed list of experiments for the “Lab Manual for Physics Lab” for major and Allied courses of our department during 2022-23.
- Served as a staff in charge for departmental throw ball match 2018, 2022, 2024.
- Served and serving as an academic advisor for M.Sc., and B.Sc., students of Physics department.
- Serving as a member in taking inventory in the department library and the instruments in Physics department laboratory.
- Worked for the department criterion-VII for NAAC.
- In college chapel messages were given during each semester.
- Served as a leader for chapel service in Vespers.
- Served as an organizing member for our department functions like PHOBOS, Reverberate and Science exhibitions.
- Served as compeerer in National Seminars and Workshops conducted in the Physics Department, The American College.
- Served as a member in various committees of the college during National seminars, International Conferences, Inauguration of Satellite Campus, Christmas Celebrations, Christmas Carols and the College Day Celebrations.
- As one of the torch bearers as a Staff for the first time in the College Sports Day, 2007.
- Served as a member in the selection committee for light music in AMFEST 2007.

Computer Knowledge

- Working knowledge in Ms-Word, Ms-Excel and Ms-Power Point.

I hereby declare that all the information given above is true to the best of my knowledge.

Signature & date