

Faculty Profile



Name: **Dr. Mrs.M.Beula Ruby Kamalam**

Designation: Assistant Professor

Department: Postgraduate and Research department of Physics
The American College, Madurai

Date of Joining: 17.09.2007(2005)

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Academic Qualifications

Examination	Name of the University	Year of Passing	Division / Class / Grade	Subject
Ph.D	Madurai Kamaraj University, Madurai	2019	Awarded	Physics
M.Phil	Madurai Kamaraj University, Madurai	2001	I class	Physics
M.Sc	Madurai Kamaraj University, Madurai	1997	I class	Physics

Teaching Experience in various Institutions:

Designation	Name of the Employer	Period of working
Lecturer	J.A College for Women, Periyakulam	08.07.1997 to 27.07.1999

Junior Lecturer	The American College, Madurai	28.07.1999-30.04.2000
Lecturer	Lady Doak College, Madurai	13.06.2000-30.04.2002
Guest Lecturer	SEEN, Madurai Kamaraj University, Madurai	24.01.2003- 30-04-2005

Teaching experience at this Institution:

Designation	Department	Period	
		From	To
Assistant Professor	Physics	16.06.2005 – till date (15 years)	

Period of teaching Experience

Post Graduation (P.G level) -21 years

Under Graduation (U.G level)– 24 years

M.Phil -2 years

Courses Handled:

Classical Mechanics and Nonlinear dynamics, Quantum mechanics, Analog and digital Electronics. Thermodynamics and Statistical mechanics, Astrophysics and Cosmology , Astronomy and Astrophysics, Numerical methods, C++ and MathCAD, Nuclear Physics, Modern Optics, Solar Energy Physics. Condensed Matter Physics, Nanophysics.

Specialization in Research: Experimental Condensed Matter Physics

Research Interests:

Nano materials synthesis and characterization, Energy storage and Super capacitor applications, Photo catalytic and gas sensing analysis of transition metal oxides- Graphene and Graphene Oxide Nanocomposites, Environment and energy storage applications and Optics.

Publications:

Articles Published in International Journals:

1. **Beula Ruby Kamalam, M., Balachandar, B.K. and S. Sethuraman. 2016. Solvothermal Synthesis and Characterization of Reduced Graphene oxide/ Vanadium Pentoxide Hybrid nanostructures. Materials Today Pro. 3 (2016) 2132–2140.**

<https://doi.org/10.1016/j.matpr.2016.04.118>

2. **M. Beula Ruby Kamalam, S.S.R Inbanathan, K. Sethuraman, Enhanced photo catalytic activity of graphene oxide /MoO₃ nanocomposites in the degradation of Victoria Blue Dye under visible light irradiation, Applied surface science,449 (2018) 685-696.**

<https://doi.org/10.1016/j.apsusc.2017.12.099>

3. **Nagaraj Anbu, Maniveldoss Beula Ruby Kamalam, Kunjithapatham Sethuraman and Amarajothi Dhakshinamoorthy, Aerobic oxidation of alcohols Catalyzed by V₂O₅ rods decorated on Graphene Oxide, Chemistry Select, 2018, 3, 12725-127233.**

<https://doi.org/10.1002/slct.201802811>

4. **M. Beula Ruby Kamalam, S.S.R Inbanathan, B.Renganathan, K. Sethuraman, Enhanced sensing of ethanol gas using fiber optics sensor by Hydrothermally synthesized GO-WO₃ nanocomposites, Materials Science & Engineering B, Volume 263, January 2021, 114843.**

<https://doi.org/10.1016/j.mseb.2020.114843>

5. **M. Beula Ruby Kamalam, S.S.R. Inbanathan , K. Sethuraman , Ahmad Umar,Hassan Algadi, Ahmed A. Ibrahim , Qazi Inamur Rahman , Christos**

S. Garoufalidis, Sotirios Baskoutas, Direct sunlight-driven enhanced photocatalytic performance of V₂O₅nanorods/ graphene oxide nanocomposites for the degradation of Victoria blue dye, Environmental Research 199August (2021) 111369.

<https://doi.org/10.1016/j.envres.2021.111369>.

Book Chapter Published

- **M. Beaula Ruby Kamalam**, S.S.R Inbanathan, K. Sethuraman ,Graphene Oxide/V₂O₅ Nanocomposite for Photo Catalytic Applications 253-258 (2015), Advanced Nanomaterials:Synthesis and applications, Dr.V.Rajendran,Dr.K.Saminathan,Dr.K.E.Geckler, Bloomsburry, 978-93-85436-74-1

Project:

- **TAMILNADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY** project sponsored by Department of Science and Technology entitled “ **Enhancing the Super capacitor Performance in Graphene and Graphene oxide/Transition metal oxide nanocomposites** “
– Sanctioned amount Rs.3,55,000/ for the year 2019-2021. Date of sanction -4.11.2019.

Papers Presented in International/ National Conferences

1. **M. Beaula Ruby Kamalam** and S.S.R. Inbanathan, Growth of diglycine hydrogen selenite acid single crystals and its characterization by XRD, FTIR, UV-Vis NIR, TG-DTA and DSC XVII National Seminar on Crystal Growth, Chennai (Jan 2013).
2. **M.Beaula Ruby Kamalam**, S.S.R. Inbanathan, Growth of nonlinear optical glycine single crystals and is characterization by XRD, FIIR, UV-Vis NIR, TG-DTA. 17 th National seminar on Crystal Growth at Anna University, Chennai. during 9-11 th January 2013 .
3. **M.Beaula Ruby Kamalam**, S.S.R. Inbanathan , K.Sethuraman Enhanced antibacterial activity of chemically synthesized graphene oxide sheets decorated by silver nano particles, Frontier Vistas in Modern Immunology at The American College, Madurai-2 on Dec 2013
4. **M.Beaula Ruby Kamalam**, B.K.Balachandar, K.Sethuraman, Reduced graphene oxide/Vanadium Pentoxide Hybrid nanostructures using solvothermal synthesis. 19 th National Seminar on Crystal Growth held at VIT University, Vellore during 12-14 th March,2015.
5. **M.Beaula Ruby Kamalam**, B.K.Balachandar, K.Sethuraman, Solvothermal synthesis of reduced graphene oxide/Vanadium pentoxide Hybrid nanostructures. RAINSAT-2015 held at Sathya Bama University, Chennai during 8-10 th July,2015.
7. **M.Beaula Ruby Kamalam**, B.K.Balachandar, K.Sethuraman, Graphene oxide Vanadium pentoxide nanocomposite for Photocatalytic Application. NANO-2015 held at KSR college of engineering, Thiruchengode.

8. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan and K.Sethuraman, Enhanced photocatalytic activity of graphene oxide /MoO₃ nanocomposites in the degradation of Victoria blue dye under visible light irradiation, International conference on Nanoscience and Nanotechnology, SRM University, Chennai,9-11 August 2017.
8. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan and K.Sethuraman, Investigations on the photocatalytic degradation of Victoria Blue dye by sonochemically synthesized graphene oxide-V₂O₅ nanocomposite under direct sunlight, International Conference on sustainable energy technologies, Bharathidasan University, Trichy. 27 and 28 June , 2018.
9. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan and K.Sethuraman, Investigations on Augmented Photocatalytic Degradation Of Methylene Blue Dye By GO - CdO Nanocomposites under the irradiation of visible light, International Conference on Advanced nanomaterials for Energy, Environment and Health Care Applications, KSR college of engineering, Thiruchengode. July 31 and August 1 , 2018
10. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan . B.Renganathan and K.Sethuraman, Improved ethanol gas sensing using fiber optic gas sensor, International conference on Nanoscience and Nanotechnology, SRM Institute of Science and Technology, Chennai. 28-30 January 2019
11. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan. P.Jothilal, R.Kaviya and K.Sethuraman, Visible Light Driven CdO/GO Nanocomposite for the Degradation of Methyl Orange Dye, SRM Institute of Science and Technology, Chennai. 28-30 January 2019.
12. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan and K.Sethuraman, Synthesis of GO-CdO nanocomposites for the photocatalytic degradation of methylene blue dye under visible light irradiation, International Conference on recent advances in Materials Science (ICRAMS-2019) , National College, Trichy.4-6 February 2019.
13. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan and K.Ashok Kumar ,Structural and Optical Studies of Graphene oxide- Manganese dioxide nanocomposites for Supercapacitor applications,International conference on Advanced nanomaterials for Energy, Engineering, biological and Medical applications (ICAN-2019), 12-14 December 2019, Department of Physics, Chettinad College of Engineering and Technology, Karur- 639114, Tamil Nadu, India.
14. **M.Beaula Ruby Kamalam**, S.S.R.Inbanathan ,Synthesis of Reduced Graphene Oxide And Bismuth Oxide Nanocomposite, One day International Conference on Recent Advanced Materials (ICRAM-2020),Thiruvalluvar University College, Vandavasi, 6, January 2020.
15. **M.Beaula Ruby Kamalam**, S.S.R. Inbanathan, Synthesis of Graphene oxide- Manganese dioxide nanocomposites from used batteries for supercapacitor applications, One day International Conference on Recent Advanced Materials (ICRAM-2020),Thiruvalluvar University College, Vandavasi, 6, January 2020.

16. **M.Beula Ruby Kamalam, S.S.R. Inbanathan**, Investigations on Structural, Optical studies and morphological of Graphene oxide- Manganese dioxide nanocomposites for the degradation of Methylene blue dye, 6 th International Conference on Nanoscience and Nanotechnology, SRM Institute of Science and Technology, Chennai, ferbruary,1-3,2021.

Conferences/Workshops Participated

- ✓ Participated in UGC sponsored Workshop on Research methodology, Writing Practices and Language Skills at SasthraBhavan,Pattom,Thiruvananthapuram,3-4 August 2012.
- ✓ Participated in DAE-BRNS sponsored National Seminar on Applications of spectroscopy in materials characterization at Fatima College, Madurai during 22-23 August 2012.
- ✓ Participated in Technology transfer in Nanoscience& Technology ,Research to product awareness workshop at Madurai Kamaraj University, Madurai on 17 June 2013
- ✓ Participated in Workshop on Materials characterization techniques-AFM & XRD organized by School of Physics, Madurai Kamaraj University, on 19 November 2014.
- ✓ Participated in National Seminar on Recent trends in Energy technologies organized by Department of Physics, The American College, Madurai on 14 th august 2015.
- ✓ Participated in the one day National seminar on Astronomy and Astrophysics organized by Department of Physics, The American College, Madurai.
- ✓ Participated in the two days workshop on Advanced materials characterization techniques organized by School of Physics, Madurai Kamaraj University during 26-27 March 2018.
- ✓ Participated in the one day Pedagogical workshop on Relativistic and Magnetic Astrophysics sponsored by DST.

Extension, Co-curricular Activities

Member of Committees

- ❖ Science Around You programme
- ❖ Member of Athletics Committee
- ❖ Science Exhibition
- ❖ Association President-UG
- ❖ Academic Advisor
- ❖ Intercollegiate Competition- PHOBOS- 2015,2016,2020

- ❖ NAAC Committee Criterion –II Member
- ❖ INSPIRE -2020
- ❖ College Day Celebrations
- ❖ Autonomy Review Committee 2010
- ❖ Member of Counseling and performance committee
- ❖ Member of Candle lighting committee
- ❖ Hostel Superintendent 2000, 2005
- ❖ Member of Senatus 2016-2017 ,2019-2020
- ❖ Ladies club of The American College 2020
- ❖ NIRF-2020, NIRF-2021
- ❖ Organizing Team Vigyan Sarvatra Pujyate-2022

Professional Development Activities

- **Life Member** in All India Crystal Growth Association (2013)
- FDP appointment **selection committee member(Mother Teresa University Nominee)** at Arul Migu Palaniaandavar College of Arts and Science, Palani.(2009)
- **Judge** for K.V Regional Science Exhibition (2013)
- **Board Of Studies Member** of Jayaraj Annapackiam college for Women, Periyakulam. 2008-2011, 2019-21
- **Secretary** for the Ladies Club of The American College from March 2020.
- **Additional dean for Women Students**, The American College from June 2020.
- **Co-Convener for NAAC Criterion II.**
- **Reviewer** for the Research articles in Physics for the Journal **JACJOSHAM (ISSN:2347-9868 Biannual)** published by Jayaraj Annapackiam College for Women, Periyakulam.

Resource Person

- Invited speaker in the Astro Club of Lady Doak College, Madurai.
- Invited speaker in the **One Day National Seminar On Emerging Trends in Physics** held at Jayaraj Annapackiam College For Women, Periyakulam on 13 December 2019 on the topic **NOVEL MATERIAL- GRAPHENE AND ITS APPLICATIONS.**
- Invited speaker at C.S.I College of Arts and Science for Women, Madurai on the topic **“GRAPHENE – THE WONDER MATERIAL AND ITS APPLICATIONS** “on 19 February 2020.
- Invited Speaker at Jayaraj Annapackiam College for Women, Periyakulam on 28 th February 2021 on the topic **Exploration of the Universe.**
- Invited speaker in the two day webinar **Thin film Nanomaterials** held on 10.1.2022 to 11.01.2022 jointly organized by Government Arts College for Women , Nilakottai and Jayaraj Annapackiam College for Women, Periyakulam.

Awards received

Received **National level Inspiring Senior faculty award- 2020** from Madras journal series Pvt ltd.

Training Programmes, faculty development programmes attended

S. No.	Programme	Duration	Organized by
1	Orientation Programme	28 days (27.07.2011-23.08.2011)	UGC, Academic Staff college, Madurai Kamaraj University, Madurai.
2.	Refresher in Physics	21 days (12.11.2013-2.12.2013)	UGC, Academic Staff college, Madurai Kamaraj University, Madurai.
3.	Refresher in physics	21 days (3.2.2015-23.02.2015)	UGC, Academic Staff college, Madurai Kamaraj University, Madurai.
4.	Refresher in Basic sciences	21 days (02.11.2016-22.11.2016)	UGC, Academic Staff college, Madurai Kamaraj University, Madurai.
5.	Faculty Development programme- UGC Sponsored	28.11.2016-23.11.2018	School of Physics, Madurai Kamaraj University, Madurai.
6.	Refresher Course on "Managing Online Classes & Co-creating MOOCS 6.0"	5.07.21-19.07.21	Ramanajum College, New Delhi
7.	Refresher Course in Physics	4.08.21-17.08.21	UGC, HRDC, Pondicherry University

Students Projects guided

- U.G level – 30
- P.G level -20
- M.Phil - 2

Seminars Organized

- ❖ Organized One day National seminar on Recent trends in Energy Technologies – 2015

Webinars Organized

- International webinar on “ **Recent trends in Advanced material Science-RTAMS-2020**” on 19 the June 2020 through ZOOM platform.
- Webinar on “**Social responsibility and self-awareness of Covid-19** “on behalf of Ladies Club of The American College on 13 th June 2020 through ZOOM platform
- National webinar on “**Women at Risk- Blossom!** “ on behalf of Ladies Club of The American College on 9 rd June 2020 through ZOOM platform.
- Webinar for Ladies club of The American college Series-1 on 27 th May 2020 through ZOOM platform.
- State level webinar on **Lead life in a Style** on 1 st February 2021, on behalf of women’s forum.
- International Webinar on "**The Power To Change the World**" 8th March 2021.
- National level webinar on **The pandemic year for women: What are we learning?**.on 30 th June 2021.
- International webinar on **Promoting IKIGAI to Arise and Shine** on 29 th July 2021.
- Organized one day National webinar on **Mobile Astronomy** on 28.07.2021.

Webinars Attended

- ❖ Participated in the **International webinar on energy and environmental applications** organized by PG and research department of physics, Sacred Heart College, Tirupathur on 24.06.2020.
- ❖ Participated in the **Micro, Nano and Atomic scale approaches in Electronic applications**, Erode arts and science college, 21, May 2020
- ❖ Participated in the **Webinar on solid state physics series-1: Electrons in solids** organized by Department of Theoretical Physics, University of Madras during 1-4 , June 2020.
- ❖ Participated in the **Webinar on introduction to metal oxide nanostructures for sensing applications** organized by Centre for Nanoscience and Nanotechnology , Sathyabhama Institute of Science and technology on 15.06.2020.
- ❖ Participated in the **Webinar on Molecules and materials of Ge and Sn** School of Advanced Sciences, Kalasalingam Academy of Research and Education, on 8th JULY 2020.

- ❖ Participated in the Two days **National webinar on glimpse of nanomaterials** organized by department of science and humanities, P.A engineering College, Pollachi during 9 and 10 July 2020.
- ❖ Participated in the **International Webinar on Material Synthesis and Characterization. (IWMSC-2020)** Jointly organized by the Department of Physics and Electronics, Dr. Rammanohar Lohia Avadh University, Ayodhya, India, and Department of Natural Science, Florida Polytechnic University, Lakeland, Florida, USA. during 11-13 July 2020.
- ❖ Participated in the **FDP program on virtual learning platform for experimental sciences** organized by department of Physics, A.P.C Mahalaxmi College for women, Thoothukudi on 2 July 2020.
- ❖ Participated in the **FDP program on Nanoscience and Nanotechnology 2020** organized by Sathyabhama Institute of Science and Technology during 29.06.2020 - 07.07.2020.
- ❖ Participated in the **Lecture series on Spectroscopy and its perspectives conducted** by Sacred Heart college, Thiruppathur on 17.07.2020.
- ❖ Participated in the **National webinar on Dating Geo - Archaeological Materials using Luminescence** conducted by department of Physics, A.P.C. Mahalaxmi College for Women, Thoothukudi, on 17.07.2020.
- ❖ Participated in the **FDP ON “ADVANCED MATERIALS FOR ENERGY STORAGE APPLICATIONS”** From 18.07.2020 To 22.07.2020 organized by Velammal Institute of Technology , Chennai.
- ❖ Participated in the **National webinar on “Teacher Vs Learner: Impact of COVID’19 in colleges”** organized by Internal Quality Assurance Cell, The American College on 22 July 2020.
- ❖ Participated in the **e-Conference on Recent trends in Nanotechnology and Materials Science** organized by St.Joseph College for Women, Kerala on 18-20, January, 2021.
- ❖ Participated in the **Indo –US webinar and lecture series organized by Jamia Millia Ismalia , New Delhi, 1-9 June 2021.**
- ❖ Participated in the **FDP Recent trends in Materials Science** organized by Karpagam Academy of Higher Education on 22-28, June 2021.