

Faculty Profile

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

Designation: Associate Professor

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

Date of Joining: 16.06.2005

Phone with Extn. No: 0452-2530070

Email ID:

bursar@americancollege.edu.in,beaularubykamalam@americancollege.edu.in



Academic Qualifications

Examination	Name of the University	Year of Passing	Subject
Ph.D	Madurai Kamaraj University, Madurai	2019	Physics
M.Phil	Madurai Kamaraj University, Madurai	2001	Physics
M.Sc	Madurai Kamaraj University, Madurai	1997	Physics

Teaching Experience in various Institutions:

Designation	Name of the Employer	Period of working
Lecturer	J.A College for Women, Periyakulam	1997 to 1999
Lecturer	Lady Doak College, Madurai	2000-2002
Guest Lecturer	SEEN, Madurai Kamaraj University, Madurai	2003- 2005

Teaching experience at this Institution:

Designation	Department	Period
Junior Lecturer	Physics	1999-2000
Assistant Professor	Physics	2005 – 2021
Associate Professor	Physics	2021- till date

Total Teaching Experience

Post Graduation (P.G level) -21 years

Under Graduation (U.G level)– 23 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 V_2O_5 rods decorated on Graphene Oxide, *Chemistry Select*, 2018, 3, 12725-127233.

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

4. **M. Beaula 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. Beaula 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>.
6. **Daniel Smith**, **Shivasubramanian Gopinath**, **Francis Gracy Arockiaraj**, **Andra Naresh Kumar Reddy**, **Vinoth Balasubramani**, **Ravi Kumar**, **Nitin Dubey**, **Soon Hock Ng**, **Tomas Katkus**, **Shakina Jothi Selva**, **Dhanalakshmi Renganathan**, **Manueldoss Beaula Ruby Kamalam**, **Aravind Simon John Francis Rajeswary**, **Srinivasan Navaneethakrishnan**, **Stephen Rajkumar Inbanathan**, **Sandhra-Mirella Valdma**, **Periyasamy Angamuthu Praveen**, **Jayavel Amudhavel**, **Manoj Kumar**, **Rashid A. Ganeev**, **Pierre J. Magistretti**, **Christian Depeursinge**, **Saulius Juodkazis**, **Joseph Rosen** and **Vijayakumar Anand**, Nonlinear Reconstruction of Images from Patterns Generated by Deterministic or Random Optical Masks—Concepts and Review of Research, *J. Imaging* 2022, 8(6), 174; <https://doi:10.3390/jimaging8060174>
7. **Francis Gracy Arockiaraj**, **Shakina Jothi Selva**, **Stephen Rajkumar Inbanathan**, **Manueldoss Beaula Ruby Kamalam**, **Aravind Simon John Francis Rajeswary**, **Vijayakumar Anand**, and **Joseph Rosen**,Computational Imaging Using Deterministic Optical Fields and Non-linear Reconstruction,Imaging and Applied Optics Congress, Year 2022.
[DOI:https://doi.org/10.1364/3D.2022.3Th4A.5](https://doi.org/10.1364/3D.2022.3Th4A.5)
8. **Mariadhas Jarvin**, **Daniel Rani Rosaline**, **Thamizharasan Gopalakrishnan** , **Maniveldoss Beaula Ruby Kamalam**, **Edson Luiz Foletto**,**Guilherme Luiz Dotto**, **Savariroyan Stephen Rajkumar Inbanathan**, Remarkable photocatalytic performances towards pollutant degradation under sunlight and enhanced electrochemical properties of TiO₂/polymer nanohybrids, *Environmental Science and Pollution Research*, Volume 4, Year 2023, Pages 26486
[DOI: https://doi.org/10.1007/s11356-023-26486-4](https://doi.org/10.1007/s11356-023-26486-4)

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 Completed:

- **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.

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.
6. **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.
7. **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.Beaula 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, February, 1-3, 2021.

17. **M.Beula Ruby Kamalam**, S.S.R. Inbanathan and L.Ganesh, “Electrochemical performance of Co₃O₄/rGO nanocomposites prepared by microwave assisted method using phenol as reducing agent,, 2nd International Conference on” Sustainable Materials and Technologies for Bio and Energy Applications SMTBEA-2022, during 13-15th, July 2022 Organized by SSN Institutions, Kalavakkam.
18. **M.Beula Ruby Kamalam**, S.S.R. Inbanathan and L.Ganesh,,” Synthesis and Characterisation of Titanium Di-oxide using Solgel method,” Bhodhi international Conference on “ Engagging Development: Problems,and Prospects in Science, Socila Sciences and Humanities” , Saradha Gangadharan College, Puducherry, 22& 23 April 2022.
19. **M.Beula Ruby Kamalam,R.Sam Jebakumar,A.Janarthanan Athavan** ,”Monte Carlo Studies on Extensive Cosmic Air Shower Development,Two days international conference on Smart materials and Biomolecules –ICSMB’23 during 9 & 10 th January ,2023 organized by The American Collge, Madurai.
20. **M.Beula Ruby Kamalam,K.Emmimal Josephine Mary, M.Anitha**,” Synthesis and Characterisation of Cobalt oxide using Hydrothermal method,”Two days international conference on Smart materials and Biomolecules –ICSMB’23 during 9 & 10 th January ,2023 organized by The American Collge, Madurai.

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 on 18.03.2022 held at The American College, Madurai.

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 2010,2023
- ❖ 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
- ❖ YSSP-2022
- ❖ NAAC Criterion IV Head

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 Annackiam 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	Organized by
1	Orientation Programme	UGC, Academic Staff college, Madurai Kamaraj University , Madurai.
2.	Refresher in Physics	UGC, Academic Staff college, Madurai Kamaraj University , Madurai.
3.	Refresher in physics	UGC, Academic Staff college, Madurai Kamaraj University , Madurai.
4.	Refresher in Basic sciences	UGC, Academic Staff college, Madurai Kamaraj University , Madurai.
5.	Faculty Development programme- UGC Sponsored	School of Physics, Madurai Kamaraj University , Madurai.
6.	Refresher Course on	Ramanajum College, New Delhi

	“Managing Online Classes & Co- creating MOOCS 6.0”	
7.	Refresher Course in Physics	UGC, HRDC, Pondicherry University

Students Projects guided

- U.G level – 35
- P.G level -27
- 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.