Name	:	Dr. A. Juliet Christina Mary
Designation	:	Assistant professor
Department	:	Physics
Date of Birth	:	03.02.1992
Date of Appointment	:	05.07.2021

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Area of Specialization : Energy storage devices, Biosensors

Google scholar citation link :https://scholar.google.co.in/citations?user=YJnpLdQAAAAJ&hl=en
Citations: 575
h-index :10
i10-index:11

Academic Qualification

S. No.	Degree	University / Instituion	Year of Completion
1.	B. Sc.	The Gandhigram Rural Institute- Deemed to be University	2012
2.	M. Sc.	The Gandhigram Rural Institute- Deemed to be University	2014
3.	M. Phil.	The Gandhigram Rural Institute- Deemed to be University	2015
4.	Ph.D.	National Institute of Technology - Tiruchirappalli	2021

Projects Completed

S.No	Degree	Project title	Research Supervisor
1	B. Sc	Implementation of UJT Characteristics Display System.	Professor. G. Muralidharan, GRI- DU
2	M. Sc	A study on the effect of pH variation in the synthesis of CuO Nanoparticles.	Professor. S. Arumugam, GRI- DU
3	M.Phil	Synthesis and characterization of CuO/Co_3O_4 nanoparticles for supercapacitor application.	Professor. G. Muralidharan, GRI- DU
4	Ph. D	Investigation on electrochemical performance of MCo_2O_4 (M= Ni, Zn) based anode and carbon-based cathode materials for the supercapacitor application	Professor. A. Chandra Bose NIT- Trichy
5	Metal Phosphates based Electrode Materials for Supercapacitor Application – JACFRP Project		

Experience in teaching and Research

- Teaching Experience: 4 Years
- Research Experience: 10 Years

Research Supervision

- Guiding - 2 Ph.D scholars

Professional Affiliation:

- Member of SPIE Chapter, NITT (2016-17)
- Member of IQAC
- Organizing Secretary of "International Virtual Conference on Recent Trends in Physics" (ICRTP) held at 16th and 17th March, 2023 organized by Jayaraj Annapackiam College for Women (Autonomous), Periyakulam.
- Editor of the Proceedings of the "International Virtual Conference on Recent Trends in Physics (ICRTP-2023)"

- Served as a Reviewer for Ionics, Journal of Inorganic and Organometallic Polymers and Materials, and Journal of Applied Electrochemistry
- Organizing Committee Member of "International Virtual Conference on Emerging Technologies in Materials Science" (ICETM - 2024) held at 22nd February, 2024 organized by Jayaraj Annapackiam College for Women (Autonomous), Periyakulam.
- Convener of National Space Day Celebration 2024

Fellowship and Awards

- INSPIRE Fellowship, DST INSPIRE Program, New Delhi, INDIA.
- Best Poster Presentation Award ((ICONN-2017), SRM university, Chennai
- Received JACFRP project in the year of 2021-2022

Faculty development Program, workshop, and Short term courses attended

- Completed the "Short Term Programme on Building Competencies of Teachers in Blending Learning" organized by the Malaviya Mission Teacher Training Centre, University of Hyderabad from 19th February to 24th February, 2024.
- Attended the One Week National Level Online Faculty Development Programme on "Technology Integration in Learning and Teaching" organized by Seethalakshmi Ramaswami College, Tiruchirappalli from 19.08.2024 to 24.08.2024
- Attended the Workshop on "Exploring Leadership Potential" organized by Leadership Institute at Christ University- Deemed to be University, Bengaluru from 21.11.2024 to 23.11.2024
- Attended the Faculty Development Programme on "Empowering Faculty through Whole Person Education: Fostering Teaching Skills, Wellness and Women's Leadership" organized by St. Christopher's College of Education, Chennai from 10.04.2025 to12.04.2025
- Attended the "Five Days Hybrid FDP Workshop on Sustainable Hydrogen Production and Integration of Hydrogen Technologies" organized by Indian Institute of Information Technology, Design and Manufacturing, Jabalpur from 12.05.2025 to 16.05.2025

E- contents developed

Name of the module developed	Date of launching the e-content	Link to the relevant document and facility available in the institution	List of the e-content development facilities available
Free, Forced and Damped Oscillations	04.10.2023	https://youtu.be/9W5HbTNemOs?list=PLK9IwGmfbJV5HPlsNY0WtP9rTKmNIoIDO	Laptop, e-content developing studio (JACTILE)
Thermal and Electrical Properties	12.10.2023	https://youtu.be/ghJcZ2g5pmI	Laptop, e-content developing studio (JACTILE)

Papers presented in conference/workshops/seminars

1. Hydrothermal synthesis of cobalt oxide micro bundles and their high electrochemical performance as supercapacitor. **A Juliet Christina Mary**, N Maheswari, and G Muralidharan (AMEEA-2015 Advanced Materials for Energy and Environmental Application, Bharathiar University, Coimbatore)
2. Electrochemical performance of $ZnCo_2O_4$ anode material in the Na_2SO_4 electrolyte medium. **A Juliet Christina Mary** and A Chandra bose (ICRAMCS- 2015 International Conference on Recent Advances in materials and chemical sciences, Gandhigram Rural Institute–Deemed University, Dindigul) **ISBN**:978-93-85477-46-1
3. Electrochemical performance of $ZnCo_2O_4$ nanoparticle**. A Juliet Christina Mary** and A Chandra Bose (ICNBL-2016, International conference on Nanotechnology for better living, NIT-Srinagar, Kashmir) **DOI:** 10.3850/978-981-09-7519-7nbl16-rps-235, **ISBN:** 978-981-09-7519-7
4. Effect of alkaline and neutral electrolytes in the Co_3O_4 material for supercapacitor application. **A Juliet Christina Mary** and A Chandra Bose, RSC (Royal society of Chemistry) -NIT symposium 2016, Tiruchirappalli, Tamil Nadu.
5. Facile synthesis of $ZnCo_2O_4$/rGO nanocomposite for effective supercapacitor application. **A Juliet Christina Mary** and A Chandra Bose (61^{st} DAE SSPS 2016), KIIT university, Bhubaneswar, Odisha. AIP Conference Proceedings **1832**, 050093 (2017); doi: 10.1063/1.4980326

6. Achieving high capacitance in $ZnCo_2O_4$ nanomaterial through different synthesis approach. S Thilagavathi, **A Juliet Christina Mary** and A Chandra Bose (ICREST 2017), International conference on Renewable energy science and technology, Alagappa university, Karaikudi -630 003 **ISBN:** 978-93-85682-46-9
7. Effect of reaction temperature for synthesizing $ZnCo_2O_4$ and study its supercapacitance performance, S Thilagavathi, **A Juliet Christina Mary** and A Chandra Bose (ICEEAMSF 2017), International conference on Energy, Environment and advanced materials for a sustainable future, Kongu Engineering college, Erode - 638 060. **ISBN:** 978-81-933005-2-7
8. Surfactant assisted $ZnCo_2O_4$ nanomaterial for supercapacitor application, **A Juliet Christina Mary** and A Chandra Bose (ICONN-2017), International conference on Nanoscience and Nanotechnology, SRM university, Chennai. **BEST POSTER PRESENTATION AWARD.**
9. Facile microwave-hydrothermal synthesis of NiS nanostructures for supercapacitor applications, S. Nandhini, **A. Juliet Christina Mary** and G. Muralidharan, (ICONN-2017), International conference on Nanoscience and Nanotechnology, SRM university, Chennai.
10. Influence of different synthesis approach on $ZnCo_2O_4$ nanomaterial and its supercapacitor behavior. **A. Juliet Christina Mary**, S. Thilagavathi and A. Chandra Bose (62^{nd} DAE SSPS 2017) DAE convention centre, Anusakthinagar, Mumbai. AIP Conference Proceedings **1942**, 140042 (2018); doi:10.1063/1.5029173
11. To study the pseudocapacitor behaviour of urchin like $NiCo_2O_4$ nanomaterial, **A Juliet Christina Mary** and A Chandra Bose, International Conference on Sustainable Energy Technologies (i-SET 2018), 27-28 June 2018, School of Physics and School of Chemistry, Bharathidasan University, Tiruchirappalli-620024, Tamilnadu. (ORAL presentation)
12. Pseudocapacitive Performance of $NiCo_2O_4$ nanostructures, **A Juliet Christina Mary** and A Chandra Bose, (63^{rd} DAE SSPS-2018) Guru Jambheswar University, Hisar, Haryana. AIP Conference Proceedings **2115**, 030552 (2019); doi:10.1063/1.5113391
13. Controllable synthesis of V_2O_5/Mn_3O_4 nanoflakes and to investigate the performance of all solid-state asymmetric supercapacitor device, **A Juliet Christina Mary** and A Chandra Bose, 28^{th} Jan-30^{th} Jan 2019, (ICONN-2019) - 5^{th} International Conference on Nanoscience and Nanotechnology, SRM IST, Chennai.

14. Investigating the antibacterial activities of dinickel- diphosphate [α- $Ni_2(P_2O_7)$] nanosheets, M. Santhanalakshmi, L.Lavanya and **A. Juliet Christina Mary,** International Virtual Conference on Recent Trends in Physics (ICRTP), 16th and 17th March, 2023, Jayaraj Annapackiam College for Women (Autonomous), Periyakulam.
15. Investigating the Structural and Morphological Variations of NiCo2S4 Nanoparticle by Varying the Concentration of Thiourea, A.B. Shanmugapriya, M. Raghanila, **A. Juliet Christina Mary** and R. Mary Mathelane, International Virtual Conference on Recent Trends in Physics (ICRTP), 16th and 17th March, 2023, Jayaraj Annapackiam College for Women (Autonomous), Periyakulam.
16. Investigating the antibacterial activity of Dicobalt – Diphosphate [α -$Co_2(P_2O_7)$] nanostructures, A.B. Shanmugapriya, and **A. Juliet Christina Mary,** National Seminar on Interdisciplinary Trends in Life Sciences, PG & Research Centre of Zoology, JAC on 25.09.2024.
17. Empowering Rural areas with Decentralized Renewable Energy System, National Conference on Innovative approaches to Quality Assurance in Higher Education for Sustainable Futures on 09.01.2025 organized by IQAC, JAC

Papers published in SCIE indexed Journals

1. Hydrothermal synthesis of Mn-doped $ZnCo_2O_4$ electrode material for high-performance Supercapacitor, **A Juliet Christina Mary** and A Chandra Bose, Applied Surface Science 425 (2017) 201–211.
2. Surfactant assisted $ZnCo_2O_4$ nanomaterial for supercapacitor application, **A Juliet Christina Mary** and A Chandra Bose, Applied Surface Science 449 (2018) 105-112
3. Facile Microwave-hydrothermal synthesis of Ni-S nanostructures for supercapacitor application, S. Nandhini, **A Juliet Christina Mary** and G.Muralidharan, Applied Surface Science 449 (2018) 485-491.
4. Incorporating $Mn^{2+}/Ni^{2+}/Cu^{2+}/Zn^{2+}$ in the Co_3O_4 Nanorod: To Investigate the Effect of Structural Modification in the Co_3O_4 Nanorod and Its Electrochemical Performance, **A Juliet Christina Mary** and A Chandra Bose, ChemistrySelect 4 (2019) 160-170.
5. Controllable Synthesis of V_2O_5/Mn_3O_4 Nanoflakes and rGO Nanosheets: To investigate the Performance of All Solid-State Asymmetric Supercapacitor Device, **A Juliet Christina Mary** and A Chandra Bose, ChemistrySelect 4 (2019) 7874-7882.

6. Hierarchical porous structured N-doped activated carbon derived from Helianthus Annuus seed as a cathode material for hybrid supercapacitor device, **A Juliet Christina Mary**, C Nandhini, and A Chandra Bose, Materials Letters 256 (2019) 126617
7. Fabrication of hybrid supercapacitor device based on $NiCo_2O_4$@$ZnCo_2O_4$ and the biomass-derived N-doped activated carbon with a honeycomb structure, **A. Juliet Christina Mary**, CI. Sathish, P. S. Murphin Kumar, Ajayan Vinu, and A Chandra Bose, Electrochimica Acta 342 (2020) 136062
8. Investigating the structural, morphological and electrochemical performance of rGO/$NiCo_2O_4$@$ZnCo_2O_4$ ternary composite material: To evaluate the performance of all-solid-state symmetric/asymmetric supercapacitor device, **A. Juliet Christina Mary**, CI. Sathish, Ajayan Vinu, and A Chandra Bose, Energy and Fuels 34 (2020) 10131-10141
9. Supercapacitor and non-enzymatic biosensor application of the Mn_2O_3/$NiCo_2O_4$ composite material, **A. Juliet Christina Mary**, S. Siva Shalini, R. Balamurugan, M.P. Harikrishnan, and A. Chandra Bose, New journal of chemistry 44 (2020) 11316-11323
10. Electrochemical performance of $ANiO_3$ (A= La, Ce) Perovskite Oxide material and its device performance for supercapattery application, M.P. Harikrishnan, **A. Juliet Christina Mary**, and A. Chandra Bose, Electrochimica Acta, 362 (2020) 137095.
11. Investigating the electrochemical performance of Ammonium Oxonium Dodeca Molybdophosphate microcubes for supercapacitor application, **A. Juliet Christina Mary**, and L. Lavanya, Materials Letters 340 (2023) 134150.
12. Development of different nanostructured nickel oxide (NiO): Investigations on highly efficient asymmetric solid state supercapacitor device, Dhanabal, R, **A. Juliet Christina Mary**, Suhash Ranjan Dey, and A. Chandra Bose, Journal of Solid State Electrochemistry 27 (2023) 3269-3280.

Papers published in International Journals

1. Hierarchical porous carbon nanoparticles derived from Helianthus Annuus for glucose sensing application, S. Siva Shalini, R. Balamurugan, **A. Juliet Christina Mary**, and A. Chandra Bose. Emergent Materials, 4 (2021) 755-760.
2. Investigating the electrochemical and antibacterial activities of nickel pyrophosphate [a-Ni2P2O7] nanostructures, **A. Juliet Christina Mary**, M. Santhanalakshmi, and L.

Lavanya, Advances in Natural Sciences: Nanoscience and Nanotechnology 14 (2023) 045014.

3. Synthesis of ammonium oxonium dodeca-molybdophosphate nanostructures for supercapacitor application, L. Lavanya, **A. Juliet Christina Mary**, J. Pragathi, Malaysian NANO-An International Journal, 2(2) (2022) 19-26.
4. Enhanced photocatalytic and antibacterial performance of $NiCo_2S_4$ nanostructures, Shanmugapriya A. B, R. Mary Mathelane, **A. Juliet Christina Mary**, A. Jegatha Christy, and Suresh Sagadevan, MRS Advances (2024) 1-7.

Papers published in National Journals

1. Synthesis of $ZnCo_2O_4$ nanoflakes and its electrochemical performance, **A. Juliet Christina Mary**, and A. Chandra Bose, JAC Journal of Science, Humanities and Management, 9, 2021, 95-107.

Papers published in conference proceedings

1. Facile synthesis of $ZnCo_2O_4$/rGO nanocomposite for effective supercapacitor application. **A Juliet Christina Mary** and A Chandra Bose (61st DAE SSPS 2016), KIIT university, Bhubaneswar, Odisha. AIP Conference Proceedings **1832**, 050093 (2017); doi: 10.1063/1.4980326.
2. Influence of different synthesis approach on $ZnCo_2O_4$ nanomaterial and its supercapacitor behavior. **A. Juliet Christina Mary**, S. Thilagavathi and A. Chandra Bose (62nd DAE SSPS 2017) DAE convention centre, Anusakthinagar, Mumbai. AIP Conference Proceedings **1942**, 140042 (2018); doi:10.1063/1.5029173.
3. Pseudocapacitive Performance of $NiCo_2O_4$ nanostructures, **A Juliet Christina Mary** and A Chandra Bose, (63rd DAE SSPS-2018) Guru Jambheswar University, Hisar, Haryana. AIP Conference Proceedings **2115**, 030552 (2019); doi:10.1063/1.5113391
4. Investigating the antibacterial activities of Dinickel-Diphosphate [α- $Ni_2(P_2O_7)$] Nanosheets, M. Santhanalakshmi, **A. Juliet Christina Mary**, International Virtual Conference on Recent Trends in Physics (ICRTP-2023), PG & Research Centre of Physics, JAC. Proceedings of the International Virtual Conference on Recent Trends in Physics, Pg. No:174, 2023, ISBN: **978-93-94725-06-6**

5. Investigating the antibacterial activity of Dicobalt – Diphosphate [α -$Co_2(P_2O_7)$] nanostructures, A.B. Shanmugapriya, L. Lavanya, M. Santhanalakshmi & **A. Juliet Christina Mary**, "National Seminar on Interdisciplinary Trends in Life Sciences", PG & Research Centre of Zoology, JAC. Proceedings of the National Seminar on Interdisciplinary Trends in Life Sciences, Pg. No:170, 2025,
ISBN: **978-93-341-5969-1**

Seminars /Webinar/ Conference Attended (Last five Years): 12

- Two days National Webinar on "Recent Advances in Nanoscience and Nanotechnology" organized by Department of Biotechnology and Physics, Rathinam College of Arts and Science, Coimbatore on 12th and 13th August 2021.
- National Webinar on "The Dynamic Sun" organized by the Research Department of Physics, St. Xavier's College, Palayamkottai on 16th August 2021.
- National Webinar on "Magic of Lasers & Holography" organized by the Department of Physics, St. Antony's College of Arts and Sciences for Women, Thamaraipadi, Dindigul on 17th August 2021.
- National Webinar on "The Impact of Nanotachnology: Energy and Environmental applications" organized by the Department of Physics, Sacred Heart College (Autonomous), Tirupattur on 31st August 2021.
- International webinar on "Exoplanets" organized by the P.G and Research Department of Physics, Jayaraj Annapackiam College for women, Periyakulam on 2nd September 2021.
- Webinar on "Fit India – 2021", organized by NSS, NCC & Physical Education, Jayaraj Annapackiam College for Women, Periyakulam on 15th September 2021.
- International virtual seminar entitled on "Energy Harvesting & sensors- IEHS 2023" organized by J. K. K. Nataraja College of Arts & Science, kumarapalayam on 17.2.2023
- International ACS science talks entitled on "Synthetic tunability in open framework materials for energy and environmental applications" on 9.8.2023
- National Webinar on Best Preparation & Practices for Improving National Institution Ranking Framework (NIRF) in Higher Education Institutions organized by "Ashok Goel Library, Rishihood University, Sonipat" on 29.01.2024

- International Webinar on “Multidisciplinary approaches in Research for sustainable development” organized by PG & Research Centre of Zoology, Jayaraj Annapackiam College for Women (A), Periyakulam on 29.08.2024
- International Webinar on Emerging Trends in Computer Science (IWETCS’24) on 16.12.2024 organized by Department of Computer Science, JAC
- International Conference on Interdisciplinary perspectives of Nanomaterials’24 on 18.12.2024 organized by PG and Research Centre of Physics, JAC