

<p>Name:</p> <p>Dr. G. Ramanathan</p>				
<p>Designation:</p>	<p>Professor</p>			
<p>Qualification:</p>	<p>M.Sc., M.Phil., Ph.D.</p>			
<p>Area of specialization:</p>	<p>Material Science, Thin films semiconductor, Solar cells, Sensors ,Nanomaterials synthesis and characterization</p>			
<p>Experience:</p>	<p>Industrial Experience</p> <p>-</p>	<p>Postdoctoral Experience</p> <p>-</p>	<p>Teaching Experience</p> <p>27 years 10 months</p>	
<p>Number of workshops / FDP attended:</p>	<p>Number of Workshops</p> <p>23</p>		<p>Number of FDPs</p> <p>22</p>	
<p>Publications:</p>	<p>Conference</p> <p>National International</p> <p>20 15</p>		<p>Journal</p> <p>National International</p> <p>- 21</p>	
<p>Books / Book Chapters</p>	<p>3</p>			
<p>Patents:</p>	<p>National</p> <p>6</p>		<p>International</p> <p>1</p>	
<p>Professional Body Membership</p>	<p>IAPT, ISTE, TFRF, IEEE (Senior Member), SMC</p>			
<p>Research</p>	<p>Google Scholar ID: TdAHzkEAAAAJ Researcher ID: AAA-9343-2022 Orcid ID: 0000-0001-5388-9032 Scopus ID: 55793746700 Anna University Guideship: Nil</p>			

Staff Achievements	<ol style="list-style-type: none"> 1. Swamy Vivekananda Academic Excellence Award 2026 2. NPTEL-MOTIVATED Learner- July-Dec 2025. 3. Best Researcher award 4. Best Innovative Faculty Award 5. Inspiring Research Associate Award 6. Best oral paper awards in International and National Conference 7. Motivated P.Balaji (IT) with the score of 3124 for achieving extraordinary performance as a Topper in Skill Rack during the academic year 2021-2022.
---------------------------	---

Educational Qualifications:

Category	Name of the Degree	Specialization	Year of Passing	Name of the College	Name of the University	% of Marks / Grades obtained	Class obtained
UG	B.Sc.,	Physics	1995	Muqyyath Sha Sirguro Wakf Board College	Madurai Kamaraj University	69	I
PG	M.Sc.,	Physics	1995	Nadar Mahajana Sanjam S. Vellaichamy Nadar College	Madurai Kamaraj University	73	I
	M.Phil.,	Physics	1998	Alagappa University	Alagappa University	71	I
Doctorate	Ph.D.	Physics	2014	M.S.U	M.S.U	Highly Commented	

Academic Experience:

Name of the College	Designation	Joining Date	Relieving Date	Experience		
				Years	Months	Days
Sri Sairam Engineering College, Chennai	Professor	June-1-2019	Till date	6	6	10
Sri Sairam Engineering College, Chennai	Associate Professor	Aug-8-2016	31.5.2019	2	9	26
Sri Sairam Engineering College, Chennai	Assistant Professor	Sep-5-2009	31.7.2016	6	11	1
Rajalakshmi Engineering College	Lecturer	24-Jan2007	1-Sep 2009	2	7	11
Sourashtra College	Lecturer	14-Sep2004	8-sep-2006	1	11	29
Madurai Kamaraj University College	Lecturer	9- OCT1997	19-Sep 2004	6	11	14
Total				27	10	1

Workshops/Seminars attended:

1. "Workshop on Characterization Techniques Employed in Materials Science" organized by the Department of Physics, SRM Institute of Science and Technology, Ramapuram Campus, Chennai – 600089, Tamil Nadu on 2nd August, 2024.
2. "National Workshop on Hands on Training Programme on Useful Tools to Efficiently Create Research Summary" on 22th July 2024, organized by Department of Physics, SRM Institute of Science and Technology, Ramapuram, Chennai.
3. National Science day " Seminar On " National Educational policy (NEP)" on 11th March 2024 organized by SRM TRP Engineering college.
4. National Science day " Seminar On " Women in Science and Technology" on 9th March 2024 organized by SRM TRP Engineering college.
5. National Science day " Workshop On " Density Functional Theory" on 6th March 2024 organized by SRM TRP Engineering college.
6. National Science day " Seminar On " Societal Advancement Powered by Nuclear Energy" on 2nd March 2024 organised by SRM TRP Engineering college.
7. National Science day " Seminar On " Application of Amorphous and Nanostructured Magnetic Materials for Transformer core on 28th Feb 2024 organised by SRM TRP Engineering college.
8. National Science day " Seminar On " Application of Amorphous and Nanostructured Magnetic Materials for Transformer core on 28th Feb 2024 organised by SRM TRP Engineering college.
9. MATLAB for Engineering & Science Module code EXEWEE03-signal and image processing using MATLAB Organized by Elixir educational services, Chhattisgarh and The PRIME ACADEMY from 03-17 July 2021.
10. One week Workshop On Materials Technology Advancement in current scenario-MTACS2020 organized by the Department of physics, Sathyabama Institute of science and Technology, Chennai through Zoom video communication from 4th to 10th July 2020.
11. MY LIFE MY YOGA" organized by Yoga and Meditation club of Sri Ramakrishna Engineering college Coimbatore from 25-27 June 2020.
12. One day National level workshop on "Instrumentation Techniques for Advanced Research" Organized by Sri Venkateswara College of Engineering Sriperumbudur on 28th July 2017.
13. Two days National level workshop on Revealing the Advances in material science at Sri Sairam Institute of Technology on 19th and 20 th July 2016.
14. One day workshop on thin film characterization basic principles and practices organized by Department of physics IIT madras on Feb 21st 2016.
15. "National workshop on Analytical Instrumentation Techniques Organized by St Peter's University

Department of Science and Humanities Association and Indian Spectrophysics Association during 25th Sep 2015.

16. "Two days workshop on Advanced characterization Techniques of materials" conducted by Department of Mechanical Engineering, College of Engineering, Guindy on 23-24 Feb 2015.
17. International workshop on strongly correlated materials held at centre of high pressure Research, School of Physics, Bharathidasan University on 20 January 2015.
18. One day workshop on Materials in Research and Development organized by Jeppiaar Engineering College on 28 July 2014.
19. Two days workshop on Material characterization Techniques organized by Department of Physics, SSN college of Engineering on January 3-4 2014.
20. Hands-on Workshop on "Characterization of Nano materials" organized by CENCON, Hindustan University on 15 th November 2013.
21. One day workshop on Renewable energy organized by Department of Mechanical Engineering in Sri Sairam Engineering College on 24 -Feb 2012.
22. A two day workshop on "Advanced Analytical Techniques for Materials characterization" organized by SRM University on 19-20 July 2011.
23. National Workshop on Theory And Practice Of X-Ray Diffraction Techniques (Tpxrdt-2009) organized by School of Physics Alagappa University on 13-17 July 2009.

FDP/STTP Attended:

1. NPTEL-FDP- Materials Design for Electronic ,Electromechanical and optical functions-July-Oct-2025-12 week.
2. NPTEL-FDP- Solar Photovoltaics Principles -Jan- March-2025-8 week
3. FDP on Density Functional theory computation of Advanced Materials on 27.7.25 to 05..08.2025- centre for Advance computational Research- New Delhi
4. NPTEL-AICTE Faculty Development Programme- Physics of materials- 12 week- July-oct-2024 -70%
5. NPTEL-AICTE Faculty Development Programme- Fundamentals of Electronic Device Fabrication- 4 week-July-Aug 2024- 62%
6. NPTEL-AICTE Faculty Development Programme- Fundamentals of Electronic Materials and Device- 8 week- Jan-March 2024 -50%
7. NPTEL-AICTE Faculty Development Programme- Materials Characterization- 12 week -Jan-April -2024-56%
8. Two week online Faculty Development Program on Frontiers in Materials Research Innovations and Entrepreneurship -(FMRIE-24) organized by Department of Physics, Sri Sairam Engineering college

Chennai from 25.07.2024 to 08.08.2024.

9. One week 2nd International FDP on 'Advanced Functional Materials- Energy ,Environment and Sustainable Development' From 26.02.24 to 05.03.24 organized by Department of Physics SRM TRP Engineering college ,Tiruchirappalli Tamil Nadu India.
10. Five days ATAL FDP on "Magnetic levitation" Organized by Hindustan Institute of technology from September 20-24 2021.
11. One week online FDP program on Research methodology and Budgeting" organized by Geethanjali College of Engineering, Telangana, from 13-17 September 2021.
12. One week online ATAL FDP program Novel Nanostructured Mg based alloy for industrial and biomedical applications organized by Jawaharlal Nehru new college of engineering shimoga from 30-08-2021 to 03-09-2021.
13. One day FDP program Effective Teaching Learning and Evaluation online organized by Sri Kalliswari Institute of Management and Technology from 17 Feb 2021.
14. One week online FDP program for 5 days FDP on DEEKSHARAMBH (Student Induction Program) Organized by NIT Patna from 10-14 Aug 2020.
15. One week online FDP program on "The use of Virtual physics Labs-creating Next generation Teachers on May 20-24 2020. This event is organized by Geethanjali College of Engineering, Telangana, and India on a 3rd day program to create awareness about novel Corona Virus epidemics.
16. One week online lecturer in Solid State Physics-series 1: Electrons in Solids during 26-30 May 2020.
17. AICTE sponsored Faculty Development Program for Student Induction Program held at Easwari Engineering College between 3.12.18 to 9.12.18.
18. AICTE sponsored Faculty Development Program for Student Induction Program held at Panimalar Engineering College between 27th to 29th August 2018.
19. Faculty Development program on "Materials Science (PH8251) and Physics for Civil Engineering (PH8201) Organized by the department of Physics Easwari Engineering college on 11th and 12th July 2018.
20. Faculty Development program on "NEXTGEN Teaching methodology" organized by Sri sairam Engineering college on January 20 & 21 2018.
21. Staff Development program on 'RECENT DEVELOPMENTS IN COMPUTING" organized by Department of Computer Science and Engineering Sri Sairam Engineering College in April 2010.
22. Centre for Faculty Development Anna University Chennai Organized Faculty Development Training Program on 22nd to 30th December 2008.

Papers presented in International / National Conferences:

1. Investigating the photocatalytic performance of CeO₂, SnO₂ nanoparticles by the degradation of Methylene Blue dye in the 6th International conference of Advances in Physical Sciences and Materials 2025 (ICAPSM-2025) held at Kangeyam Institute of Technology, Kangeyam, India on 17 December 2025.
2. Performance of Tin Oxide thin films deposited using the doctor blade technique in dye Sensitized Solar Cells (DSSC) in the International conference of Recent Trends in Engineering and Technology (ICRTET 2025) held at Sengunthar Engineering College, Tiruchengode, Tamil Nadu on 29, September 2025.
3. "Dye Sensitized Solar Cell (DSSC) performance of Tin Oxide thin films deposited by dip coating and doctor blade technique" 4th International Conference on Advanced Functional Materials for Sustainable Energy Applications (ICAFMSA) 6th to 8th December, 2023
4. "Detection of H₂S gas sensing performance of sol gel prepared metal oxide (In₂O₃,SnO₂, Sn doped In₂O₃) thin films" 2nd International conference on Multifunctional Materials Organised by Geethanjali College of Engineering & Technology, Keesara Telangana India on December 22-24 2022
5. "Estimation of crystalline size pore size and surface area of CeO₂ Nanoparticles by Williamson Hall methods" 3rd International virtual conference on Recent trends on clean Technologies for sustainable environment-CTSE-2022 organized by Department of chemical Engineering, SSN college of Engineering 15 & 16 September 2022.
6. "Impact of Tin concentration in ITO films on its Optoelectronic sensor" In the second International conference on Materials science and Manufacturing Technology 2020 (ICMSMT2020) held at Hotel Aloft, Coimbatore, Tamil Nadu, India during 09-10 April 2020. Proceedings of the ICMSMT2020 will be published by the Institute of Physics, United Kingdom in the IOP conference series: Materials science and Engineering, a conference proceeding journal.
7. "surface area, Average pore size CeO₂ Nano particles" in the International conference on Recent Advancements in Material science (NewPhy2020) organized by The New College (Autonomous) PG & Research Department of Physics Chennai on 21st January 2020.
8. Paper presented in the International conference on Advancements and Challenges in chemical Sciences (ICACCS-2018) Organized by PG & Research Department of Chemistry Pachaiyappa's college on 2nd & 3rd February 2018
9. Optical properties of Sol gel dip coated SnO₂ films"- Fourth International conference on Nano Science and Nano technology (ICONN-2017) organized by Department of Physics and Nanotechnology, SRM University during 09-11th August 2017.
10. Optical properties of Sol gel dip coated SnO₂ films"- Fourth International conference on Nano Science

- and Nano technology (ICONN-2017) organized by Department of Physics and Nanotechnology, SRM University during 09-11th August 2017.
11. "Indium Oxide thin films grown by Acrylamide sol gel dip coating and their H₂S gas detection characteristics" - International Conference on Recent Advances in Nano Science and Technology (RAINSAT-15) organized by Sathyabama University on 8 to 10h July 2015.
 12. "Properties of sol gel dip coated tin Oxide thin films" Second International conference on Advances In Materials Processing and Characterization (AMPC-2013) organized by Anna university Department of Mechanical Engineering on February 06.08-2013
 13. "Properties of ITO films prepared by the Acrylamide sol gel route" International conference on Research in condensed Matter physics (ICCMP-2012) organized by University of Madras on 1-3 October 2012.
 14. Sol gel dip coated Indium Oxide films" International conference on Nanoscience; Engineering & Technology (ICONSET-2011) organized by Sathyabama University on 28-30th November 2011.
 15. "Characteristics of sol gel dip coated Tin oxide thin films" Chennai chemistry conference organised by IIT Madras Chennai on February 11-13, 2011.
 16. "Characteristics of sol gel deposited Alumina Films" -International Conference on Nano Science & Nano Technology (ICONN-2010) held at SRM University on 24th and 26th February 2010.
 17. THIN FILMS AND ITS APPLICATIONS" Organized by School of science and Humanities, Department of Physics Sathyabama Institute of Science and Technology , Chennai Tamil Nadu, and India on 17th May 2020.
 18. "Synthesis of copper doped Zinc Oxide nano particles by acrylamide sol gel method" paper presented in the National conference on Biomaterials in Medicinal chemistry (BMC-2017) Organised by Department of Natural Products Chemistry, Madurai Kamaraj University on 12-13 April 2017.
 19. "Optical properties sol gel dip coated Tin Oxide films" Second National conference on Recent Developments In Nano Materials And Thin Films Research Organised By Pg And Research Department Of Physics Avvm Sri Pushpam College Poondi Thanjavur on 4 & 5 March 2017.
 20. "Sol gel dip coated ZnO films for DSSC application" National Conference on Recent Advances in Smart Materials (NCRASM- 16) Organized by Department of chemistry & CENCON on January 7-8 January 2016.
 21. "H₂S Gas Sensor Based On a SnO₂ Thin Films"-Second National Conference on Recent Advances in Materials(NCRAM-14) organized by Department of Physics B.S.Abdur Rahman University on 3&4th September 2014.
 22. "Dye Sensitized Solar Cells with Indium Oxide films prepared by the Acrylamide sol gel route" -National seminar on technologically important crystalline and Amorphous Solids (TICAS-2013) organized by

Kalasalingam University on March 1 & 2 2013.

23. "Sol gel dip coated tin Oxide thin films"-National conference on Recent Advancement in Nano scale Research(NCRNR 2012) organized by Department of Physics Anna university Madurai region on August 24th and 25th 2012.
24. "Properties of sol gel dip coated Indium Oxide thin films" National conference on Recent trends in materials science (NCRMS-2012) organized by department of physics A.V.C. College on March 8-9th 2012."Sol gel Dip coated Indium Oxide films as electrode for Dye Sensitized solar cells-National Conference on Thrust Areas in Engineering" (NCTAE=2012) Organised by Global Academy of Technology Bangalore on January 20th and 21th 2012.
25. "Slurry coated PbSe films-National conference on Prospective in Laser and Spectroscopy" (NCPLAS-2009) held at Women's Christian College, Chennai on 24 & 25 September 2009.
26. "Characteristics Of slurry coated CdS Films"-Two days National conference on Recent Advancement And Development In Material Science (RAADIMS-09) held at Mepco Schlenk Engineering Sivakasi during February 20-21 2009.

Conference/ Symposium Attended:

1. Webinar On SPACE-2.0 held on 25th July 2020 organized by department of science, St. Joseph's college of Engineering Chennai, Tamil Nadu, India
2. Webinar On solar PV installation & Maintenance for your home organized by department of Electrical & electronics engineering on 17.07.2020.
3. Webinar On "Taking Research Forward During The Pandemic" Organized by Loyola Institute of Frontier Energy (LIFE), Loyola College (Autonomous) Chennai Tamil Nadu, and India on 20th May 2020.
4. Webinar On "Micro And Nanotechnology And Its Application" Organized by Department of Physics, G.T.N Arts College (Autonomous) Dindigul, Tamil Nadu, and India on 14th May 2020.
5. National seminar on New Engineering Materials and their Application organized by Valliammai Engineering college on 27 April 2015
6. CSIR sponsored the National Seminar on Recent trends in Laser spectroscopy and its application organized by the Department of Physics, Sri Sairam Engineering College on 17 October 2013.
7. CSIR Sponsored National seminar on Recent Trends and Development in the Emerging Field of New Transparent Conductors and Device Application using Multidisciplinary Approach held on 19th June 2012 at Kongu Engineering college, Erode.
8. National conference on Advanced Functional Materials (NCAFMS-2008) organized by Department of Physics SRM University held on 15th and 16th February 2008.
9. National Seminar on "Application Oriented Materials 07" Organized by Department of Physical science

Rajalakshmi Engineering College held on 14th August 2007.

Resource Person:

1. Delivered an invited talk titled “Dye-Sensitized Solar Cells: Behavior of TCO Materials” at the Research Internship Training Program (RITP), FMRL Research Laboratory, Department of Physics, Sri Sai Ram Engineering College, on 10 May 2025.
2. Delivered an invited talk titled “Quantum Computing in Quantum Gates” as a Special Guest at the Faculty Development Program on Quantum Computing, organized by the Department of Artificial Intelligence and Data Science, Sri Sairam Engineering College, Chennai, held from 27 May 2024 to 01 June 2024.
3. Delivered an invited talk titled “Characterization Techniques for Synthesized Nanomaterials” at the One-Day National Level Internship Program “To Explore New Research Insights”, organized by the Department of Humanities & Sciences (Physics), on 24 August 2023.
4. Delivered an invited talk titled “Thin Film Preparation and Its Applications” at the Research Internship Program, FMRL Research Laboratory, Department of Physics, Sri Sai Ram Engineering College, on 22 December 2022.

Patents:

1. Application number-454409-001 ‘Nanotechnology-Enhanced Solar Energy Conversion Device’ Publication date-06.04.2025
2. Application number-202441057216 ‘Titanium Oxide Nanoparticles: A new Frontier in Antibacterial solutions’ Publication date-02.08.2024
3. Application number-202341085025A ‘A-IOT Based Window Actuators System For Enhanced Energy Efficiency: Intelligent Control And Optimiza’ Publication date-05.01.2024
4. Design number-6338966 ‘SOLAR TREE FOR POWER GENERATION”” Publication date-12.01.24 -UK Design patent
5. Application number-202341080310 Advanced Silicon-Based Composite Electrodes with Enhanced Stability For Next Generation Lithium -Ion Batteries -Publication date-26.11.2023 -The patent Office Journal No.37/2021.\ Published Date- 22/12/2023
6. Application number- 202231053181 -Novel battery management system for Green Energy storage Publication date-23-09-2022 -The patent Office Journal No.37/202.
7. Application number-202141038802 A-Novel Architecture for Design and Evaluation of Asynchronous System on Chip for VLSI Technology-Publication date-10-09-2021-The patent Office Journal No.37/2021.

Journal Publications:

1. Published a paper entitled "Green synthesis of Mn doped ZnO NPs and their photocatalytic activities for Rhodamine B dye degradation" in Journal of Electronic Materials published 17 June 2025 vol-54 pages 6506-6520 <https://doi.org/10.1007/s11664-025-12077-1> (SCI)
2. Published a paper entitled "Detection of H₂S gas sensing performance of sol gel prepared metal oxide (In₂O₃, SnO₂, Sn doped Indium Oxide) thin films" in Journal of Materials today proceeding is available online 26 May 2023. <https://doi.org/10.1016/j.matpr.2023.05.320> (Scopus)
3. Published a paper entitled "Optical performance of Tin doped Indium Oxide (ITO) thin films prepared by sol gel dip coating techniques using acrylamide route." In the Journal of Optical and Quantum Electronics published on 29 Aug 2022. <https://doi.org/10.1007/s11082-022-03973-5> (SCI)-vol-54 issue-10.
4. Published a paper entitled "Photocatalytic activity of SnO₂ nanoparticles" in Journal of Applied Electrochemistry accepted in January 2022-<https://doi.org/10.1007/s10800-022-01676-z> -published online 18 February 2022. (SCI)
5. Published a paper entitled "Optical properties of alumina films by sol gel acrylamide route" in Journal of University of Shanghai for science and Technology-volume 23 issue-10-2021- SCOPUS JOURNAL <https://jusst.org/optical-properties-of-alumina-films-by-sol-gel-acrylamide-route/>
6. Published a paper entitled "Characteristics of slurry coated Cd_xPb_(1-x) Se thin films" in Journal of Huazhong University of Science and Technology- volume 50 issue 03 March-2021- SCOPUS JOURNAL- ISSN-1671-4512.
7. Published a paper entitled "Impact of Tin concentration in ITO films on its optoelectronic sensor Material science and Engineering- June 2020 -SCOPUS JOURNAL -page number-1037-1047. <https://iopscience.iop.org/article/10.1088/1757-899X/872/1/012168/pdf>
8. Published a paper entitled "Dip coated Indium oxide films and their optical constants- Transactions on electrical and Electronic Materials- April 2020- SCOPUS JOURNAL-ISSN 1229- 7607. <https://link.springer.com/article/10.1007/s42341-020-00202-2>
9. Published paper entitled "Photocatalytic activity of Biosynthesized CeO₂ nano particles-SN Applied Sciences A Springer Nature Journal 18th December 2018. -SCOPUS JOURNAL- <https://link.springer.com/article/10.1007/s42452-018-0103-y>.
10. Published a paper entitled "Micro structural Properties of Tin Doped Indium Oxide Thin Films-International Journal of ChemTech Research 2018, VOL-11 (09)298-307 DOI=<http://de.doi.org/10.20902/IJCTR.2018.110936>-SCOPUS JOURNAL- ISSN (ONLINE) 2455- 9555.
11. Published a paper entitled "OPTICAL PROPERTIES OF SOL GEL DIP COATED SnO₂ FILMS" – International Journal of Current Advanced Research (IJCAR) on Volume 6; Issue 9; September 2017

ISSN: O: 2319-6475, ISSN: P: 2319 -6505.DOI:HTTP://dx.doi.org/10.24327/ijcar.2017.5892.0827.

12. Published a paper entitled "Effect Of H₂S Gas Sensing Performance Of Sol-Gel Dip Coated In₂O₃ Thin Films", Rasayan journal of chemistry (RJC) on July-September issue 2017. (ISSN: 0974-1496 / e-ISSN: 0976-0083, Vol.10, No.3, 2017). SCOPUS journal https://rasayanjournal.co.in/admin/php/upload/199_pdf.pdf.
13. Published a paper entitled "Dye Sensitized Solar Cells Behaviors of TCO materials" has been published in the International Journal of Advanced Scientific Technologies in Engineering and Management Sciences (IJASTEMS).(ISSN2454 356X, Vol.2,issue No.10, -october-2016).This journal Impact factor is 3.022.
14. Published a paper entitled "Tin Oxide Thin films grown by acrylamide sol gel dip coating and their H₂S gas detection characteristics-Journal of Applied Physical Science International. 7(1):1-7 2016. ISSN 2395-5260 July 2016. <https://ikprress.org/index.php/JAPSI/article/view/3034>
15. Published a paper entitled "Sol gel dip coated ZnO films for DSSC application-International Journal of Applied Engineering Research (IJAER)ISSN 0973-4562 Vol. 10 No.91 (2015)-SCOPUS JOURNAL <https://www.researchgate.net/publication/292985588>
16. Published a paper entitled "Characteristics of Tin Doped Indium Oxide films-International Journal of ChemTech Research Vol.8 No.8 pp 260-264, 2015. ISSN 0974-4290
17. Published a paper entitled "Dye Sensitized Solar cells with ITO films prepared by the Acrylamide sol gel route-IOSR Journal of Applied Physics Vol.2 Issue No.6 PP 47-50. January-February 2013.
18. Published a paper entitled "Sol gel dip coated Tin Oxide thin films-Elixir Thin film Tech 50 -2012 pp 10588-10590. 2012-10588-10590
19. Published a paper entitled "Sol gel dip coated Indium Oxide films and their properties-The society for solid state science and Electrochemical science and Technology-ECS Transaction 41 (35) 33-38 2012 ISSN1938-5862- SCOPUS JOURNAL.
20. Published a paper entitled "Sol gel dip coated Indium Oxide films-IEEE-2011-SCOPUS JOURNAL [Sol_gel_dip_coated_Indium_oxide_films IEEE paper.pdf](#)
21. Published a paper entitled "Characteristics of Slurry coated lead Selenide film-Chalcogenide Letters Vol-6 No.3 March 2009-SCOPUS JOURNAL <https://chalcogen.ro/Murali-Ramanathan.pdf>.

Books / Book Chapters:

1. Nanomaterials & Hydrogen Energy in solving the Energy crisis – Infinite Research- ISBN: No.978-81-966422-2-8 (Text Book)
2. Challenges and Opportunities in Dye Sensitized Solar Cells Using In₂O₃, SnO₂, ZnO, Indium Tin Oxide Thin Films & Its Various Parameters (Book chapter)- ISBN: 978-81-958752-6-9.

3. Advances in Materials Science and Engineering Research- Infinite Research- ISBN No.978-93-48897-32-9.

Awards:

1. Swamy Vivekananda Academic Excellence Award 2026- Awarded by The INDIAN FORUM- For Social Leaders and Achievers- issued by the Honourable selection committee, Jan.12- National Youth Day-
2. Best Researcher Award — Awarded in recognition of exceptional research contributions, demonstrating innovation, significant impact, and advancement of knowledge in Physics. National Foundation for Innovative Scientific Research and Technology, 6 September 2024.
3. CERTIFICATE OF BEST INNOVATIVE FACULTY AWARD - This certificate is awarded in recognition of pioneering innovative teaching methods, fostering creativity, and demonstrating exemplary leadership in transforming education through novel approaches and impactful contributions. Awarded on 05 September 2024.
4. BEST RESEARCHER AWARD-Awarded for his outstanding contributions to Research and Development. Tech Forum Research Foundations (MSME-registered by the Government of India). 15 March 2024.
5. INSPIRING RESEARCH ASSOCIATE AWARD-Awarded for his outstanding contributions and continued dedication in the field of Research and Development. Advanced Materials & Applications (ISSN: 2582-5070), an international peer-reviewed journal published by Madras Journal Series Pvt. Ltd. 05 September 2020.
6. Best Oral Paper Award — NCAFM-2020 (AICTE-Sponsored National Conference), Dept. of Physics, Thanthai Periyar Government Institute of Technology, Vellore, 08–09 Oct 2020.
7. Best Oral Paper Award — RAINSAT-15 (International Conference on Recent Advances in Nano Science and Technology), Sathyabama University, 08–10 July 2015.
8. Best Oral Paper Award — NCRAM-14 (Second National Conference), Dept. of Physics, B. S. Abdur Rahman University, 03–04 Sept 2014.

Online Courses:

1. NPTEL Online Course – Certificate of Completion Successfully completed the NPTEL online course titled “Thin Film Technology” during Jan-Oct 2025. (12 week course)
2. Successfully completed the course titled “PANCHAYAT ADMINISTRATION AND RURAL DEVELOPMENT SCHEMES”, Conducted by the State Institute of Rural Development and Panchayat Raj (SIRD) Oct. 2025.
3. NPTEL Online Course – Certificate of Completion Successfully completed the NPTEL online course titled

- “Materials Design for Electronic ,Electromechanical and Optical functions” during July-Oct 2025. (12 week course)
4. Successfully completed the course titled “Social Emotional Knowledge to Practice (SEEK)”, offered by the Mahatma Gandhi Institute of Education for Peace and Sustainable Development (MGIEP), UNESCO, in 2025.
 5. NPTEL Online Course – Certificate of Completion Successfully completed the NPTEL online course titled “Fundamentals of Semiconductor Device” during Jan-April 2025. (12 week course)
 6. NPTEL Online Course – Certificate of Completion Successfully completed the NPTEL online course titled “Solar Photovoltaics Principle Technologies & Materials” during Jan-March 2025. (12 week course)
 7. NPTEL Online Course – Elite Certificate - Successfully completed the NPTEL online course titled “Physics of Materials” with an Elite Certificate, during July–October 2024. (12 week)
 8. NPTEL Online Course – Elite Certificate-Successfully completed the NPTEL online course titled “Fundamentals of Electronic Device Fabrication” with an Elite Certificate, during July–August 2024. (4 week)
 9. NPTEL Online Course – Certificate of Completion- Successfully completed the NPTEL online course titled “Fundamentals of Electronic Materials and Devices”, during January–March 2024. (8 week)
 10. NPTEL Online Course – Certificate of Completion- Successfully completed the NPTEL online course titled “Material Characterization”, during January–April 2024. (12 week)
 11. NPTEL Online Course – Certificate of Completion- Successfully completed the NPTEL online course titled “Yoga and Positive Psychology for Managing Career and Life”, during August–October 2023. (8 week)
 12. NITTT Module-1 – Certificate of Completion- Successfully completed Module 1: Orientation towards Technical Education and Curriculum Aspects under NITTT (National Initiative for Technical Teachers Training).- Module1 certificate.pdf
 13. NITTT Module-2 – Certificate of Completion- Successfully completed Module 2: Professional Ethics and Sustainability under NITTT (National Initiative for Technical Teachers Training).
 14. NITTT Module-5 – Certificate of Completion Successfully completed Module 5: Technology-Enabled Learning and Lifelong Self-Learning under NITTT (National Initiative for Technical Teachers Training)..Module 5 certificate.pdf
 15. NITTT Module-6 – Certificate of Completion-Successfully completed Module 6: Student Assessment and Evaluation under NITTT (National Initiative for Technical Teachers Training).
 16. Successfully completed the course “Psychological First Aid” with a grade of 100%.
 17. Successfully completed the course “Materials Science: 10 Things Every Engineer Should Know”.
 18. Successfully completed the course “Air Pollution”.
 19. Successfully completed the course “How Things Work: An Introduction to Physics”

20. Successfully completed the course "COVID-19: What You Need to Know".
21. Successfully completed the course "Ferrous Technology I".
22. Successfully completed the course "Ferrous Technology II".
23. Successfully completed the course "Natural Gas".
24. Successfully completed the course "Materials Processing".
25. Successfully completed the course "Beyond the Sustainable Development Goals (SDGs)".
26. Successfully completed the course "Quantum Mechanics" with a grade of 100%.
27. Successfully completed the course "Spreadsheets for Beginners using Google Sheets" with a grade of 93.8%.
28. Successfully completed the course "Electrodynamics: An Introduction" with a grade of 83.6%.
29. Udemy Online Course – Certificate of Completion- Successfully completed the 7.5-hour course "Essential Physics: Master Classical and Newtonian Mechanics" on 02 April 2020.
30. Udemy Online Course – Certificate of Completion-Successfully completed the 16.5-hour course "Artificial Intelligence A to Z: Learn How to Build an AI" on 14 November 2019.
31. Udemy Online Course – Certificate of Completion-Successfully completed the 1.5-hour course "Quantum Physics for Quantum Computing" on 04 November 2019.

Webinar:

1. Experimental Techniques for the Fabrication & Characterization of Metal Oxide thin films for the various Applications On 28.02.2022 organized by PG & Research Department of Physics, Muthurangam Government Arts and college (A),Vellore-02.
2. Exploring the universe with gravitational waves organized by PG & Research Department of Physics, The New college (Autonomous) Chennai-14 On 22.11.2021
3. Experimental Techniques and Related Analysis Methods in condensed Matter physics jointly organized by Laboratory of Functional Oxides, Department of Physics, Saurashtra University, Rajkot & Gujarat council on science & Technology, Department of science and Technology-Gujarat, Gandhinagar on 9th and 10th July 2021.
4. Raman effect and fiber optics Revolutions Organized by School of studies in Electronics and Photonics & Institute of Renewable energy and Technology and Management Pt Ravishankar shukla University, Raipur Chhattisgarh from 28 Feb 2021.
5. Understanding of program outcome, Program specific outcome and course outcome Organized by S.T.Co.Op. Education society's Ltd. Science senior college shahada District Nandurbar from 09 June 2021.
6. Nuclear power for sustainable Development organized by Public outreach center & Institute of Renewable Energy Technology & Management Pt. Ravishankar shukla University, Raipur Chhattisgarh from

4 September 2021.

7. Ionic Liquids as Environmental Benign solvents for sustainable Developments organized by Rasayan Journal of chemistry from 24 Feb 2021.
8. "My Life My Yoga" organized by Yoga and Meditation club of Sri Ramakrishna engineering college Coimbatore from 25-27 June 2020.
9. Study of Interaction of PAH's with Hydrogen using Mass spectroscopy organized by Department of physics Sacred Heart College (Autonomous) Tirupattur from 19 Aug 2020.
10. Micro & Nanotechnology and Its Applications organized by Department of Physics GTN Arts College (Autonomous) Dindigul from 14 May 2020.
11. Thin films and its Applications organized by School of science and Humanities Department of Physics Sathyabama Institute of science and Technology from 17 May 2020.
12. Taking Research forward during the pandemic organized by Loyola institute of Frontier Energy (LIFE) Loyola College Chennai from 20 May 2020.
13. Research and Innovations in defence sectors organized by Research and Development Sri Sairam engineering college from 24 June 2020.
14. R&D Proposal writing for faculties organized by Department of Mechanical Engineering, Sri Sairam Engineering college from 12 June 2020.
15. Piezoelectric Based Energy Harvesting Techniques organized by Department of electrical and Electronics Mohamed Sathak AJ college of Engineering from 3 June 2020.
16. Magnetic Materials for Energy and storage Devices organized by Dhaanish Ahmed Institute of Technology Coimbatore from 11 July 2020.
17. Solar PV installation & Maintenance for your Home organized by Department of Electrical and Electronics Sri Ramakrishna Polytechnic college Coimbatore from 17 July 2020.
18. Online Lectures in solid state physics Series 1: Electrons in solids Organized by Department of Theoretical physics University of madras from 26-30 May 2020.
19. Exploring the universe with gravitational waves-organized by PG & Research Department of physics, The New college (Autonomous) Chennai on 22 November 2021.
20. Crystal growth and its Technological important-10th International conference-on 18th – 20th March 2024. Organized by SSN Research centre Chennai-603110.
21. 4f-3d Magnetic Interactions in Rare-Earth Ferrite Oxide (RFeO₃) single crystal on 07-10-2021 organised by PG & Research Department of Physics, Muthurangam Government Arts and college (A),Vellore-02.
22. Nano materials for energy applications Organized by PG and Research Department of Physics ,Arul anandar college (Autonomous) from 22 September 2021.
23. Nanotechnologies for Environmental Remediation: Organized by RASAYAN Journal of chemistry from 13

March 2021.

24. Exploration of main group compounds for Promoting metal free transformation in industries organized by Department of science St.Joseph's college of Engineering Chennai from 19 Aug 2020.
25. Functional Novel material for Electrochemical sensors and energy storage devices organized by Thiagarajar college & Ming chi university of Technology New Taipei Taiwan from 15 May 2020.
26. Thin film technologies in our daily life organized by P.G and Research Department of physics ,Nadar Mahajan sangamS.Vellaichamy Nadar college, Madurai from 30 May 2020.
27. Methods and Mechanism of Co₂ and H₂ adsorption in Metal Organic frameworks organized by Chennai Institute of Technology from 1 July 2020.
28. Strengthening Research capabilities Remotely organized by BrightTALK from 25 June 2020.
29. Essential tips for Publishing in high Impact journals organized by BrightTALK from 25 June 2020.
30. Researchers: CiteScore 2019 and the responsible use of metrics organized by BrightTALK from 2 July 2020