

PROFILE

Dr. P.P. KANNAN

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Education

Degree/ Examination	Year of Passing	School/Institute	Board/University	Percentage/Gr ade
Ph. D., Physics	2020	Thiagarajar College, Madurai – 625009.	Madurai Kamaraj University, Madurai	----
M. Sc., Physics	2013	Thiagarajar College, Madurai – 625009.	Madurai Kamaraj University, Madurai	75.32%
B. Sc., Physics	2011	Sourashtra College, Madurai – 625004.	Madurai Kamaraj University, Madurai	74.38%
Class XII	2008	Sourashtra Boys Hr. Sec School, Madurai – 09.	State Board	64.25%
Class X	2006	Sourashtra Boys Hr. Sec School, Madurai – 09.	State Board	77.60%

Research experience

2013 – 2019 Ph.D (Full time) scholar - Department of Physics, Thiagarajar College,
Madurai- 625009.

Research Interests

Chemical Physics - Dielectric Studies using Time Domain Reflectometry (TDR) technique, Dipolemoment studies, Fourier Transform Infra-Red (FTIR) spectroscopy, Nuclear Magnetic Resonance (NMR) spectroscopy, Ultra Violet (UV) - visible spectroscopy, Density Functional Theory (DFT) calculations.

Research Publications

1. **P.P. Kannan**, N. K. Karthick, T. Sangeetha, R. Shanmugam, A. Elangovan, G. Arivazhagan, “*FTIR studies and DFT calculations on the associative nature of methyl cellosolve in binary solutions with acetonitrile*” *Journal of Molecular Structure*, 1227 (2021) 129572.
2. **P.P. Kannan**, N. K. Karthick, G. Arivazhagan, “*Hydrogen bond interactions in the binary solutions of formamide with methanol: FTIR spectroscopic and theoretical studies*” *Spectrochimica Acta Part A*: 229 (2020) 117892 (1-8).
3. **P.P. Kannan**, G. Arivazhagan, T. Sangeetha, N. K. Karthick, A.C. Kumbharkhane, “*FTIR Studies, DFT calculations and time domain reflectometry studies on tetrahydrofuran - methanol binary solutions*” *Spectrochimica Acta Part A*: 222 (2019) 117162 (1-8).
4. **P.P. Kannan**, N. K. Karthick, A. Mahendraprabu, A.C. Kumbharkhane, Y.S. Joshi, G. Arivazhagan, “*FTIR spectroscopy, quantum chemical calculations and time domain reflectometry studies on the behavior of methanol molecules in the environment of dibutyl ether*” *Journal of Molecular Structure*, 1183 (2019) 60-69.
5. **P.P. Kannan**, N. K. Karthick, A. Mahendraprabu, R. Shanmugam, A. Elangovan, G. Arivazhagan, “*Red / blue shifting hydrogen bonds in acetonitrile- dimethyl sulphoxide solutions : FTIR and theoretical studies*”, *Journal of Molecular Structure* 1139 (2017) 196 – 201.
6. **P.P. Kannan**, N. K. Karthick, A. Mahendraprabu, R. Shanmugam, A. Elangovan, G. Arivazhagan, “*Corrigendum to Red / blue shifting hydrogen bonds in acetonitrile-dimethyl sulphoxide solutions : FTIR and theoretical studies*”, *Journal of Molecular Structure* 1149 (2017) 812 – 817.

7. S. Nagadeepa, I. Ayswariya, P. Indira, V. Ramalakshmi, **P.P. Kannan**, “*Green Synthesis of iron nanoparticles using leaves extract and their characterization analysis*” International Journal of Creative Research Thoughts 11 (2023) 893-896.
8. N.K. Karthick, G. Arivazhagan, **P.P. Kannan**, “*FTIR spectroscopic studies and DFT calculations on the binary solution of methyl acetate with m-xylene*” Journal of Molecular Liquids, 313 (2020) 113491 (1-8).
9. T. Sangeetha, **P.P. Kannan**, N.K. Karthick, A. Mahendraprabu, G. Arivazhagan, “*Classical/non-classical hydrogen bonds in m-xylene - ethanol solution: FTIR and theoretical approach*” Journal of Molecular Liquids, 312 (2020) 113406 (1-8).
10. A. Mahendraprabu, T. Sangeetha, **P.P. Kannan**, N. K. Karthick, A.C. Kumbharkhane, G. Arivazhagan, “*Hydrogen bond interactions of ethyl acetate with methyl Cellosolve: FTIR spectroscopic and dielectric relaxation studies*” Journal of Molecular Liquids, 301 (2020) 112490 (1-5).
11. A. Mahendraprabu, N.K. Karthick, **P.P. Kannan**, T. Sangeetha, A.C. Kumbharkhane, G. Arivazhagan, “*Molecular interactions in the binary solutions of methyl cellosolve with chlorobenzene: Spectroscopic and dielectric studies*” Journal of Molecular Structure, 1205 (2020) 127565 (1-7).
12. N.K. Karthick, G. Arivazhagan, **P.P. Kannan**, A.C. Kumbharkhane, Y.S. Joshi, “*Homo/heterointeractions in the binary solutions of toluene with acetonitrile: FTIR spectroscopic, theoretical and dielectric studies*” Journal of Molecular Structure, 1192 (2019) 208 – 216.
13. V. Ramalakshmi, **P.P. Kannan**, A. Mahendraprabu, U. Sankar, “*Dielectric relaxation studies on diethanolamine and triethanolamine with N,N – Dimethylformamide using time domain reflectometry technique*” , Journal of Analysis and Computations 13 (2019) 41 – 47.
14. N.K. Karthick, G. Arivazhagan, **P.P. Kannan**, A. Mahendraprabu, “*FTIR spectral studies and dielectric relaxation studies on binary solutions of ethyl acetate and bromobenzene*” Indian Journal of Pure & Applied Physics 56 (2018) 261-264.
15. N.K. Karthick, G. Arivazhagan, **P.P. Kannan**, A. Mahendraprabu, A.C. Kumbharkhane, S.S. Shaikh, Y.S. Joshi, “*Hydrogen bond interactions in the binary solutions of ethyl*

- acetate with nitrobenzene: Spectroscopic, theoretical and dielectric studies*”, Journal of Molecular Liquids 251 (2018) 385 – 393.
16. M. Vigneswaran, **P.P. Kannan**, “*Investigation of hydrogen bond interactions between propionic acid and acetonitrile/acetone using spectroscopic techniques*”, Journal of Analysis and Computations 11 (2018) 1 – 5.
 17. N.K. Karthick, **P.P. Kannan**, A. Mahendraprabu, G. Arivazhagan, N. Suganya, “*Spectroscopic studies on the binary solutions of ethanol with 1,4- dioxane*”, Journal of Molecular Liquids 232 (2017) 147 – 151.
 18. A. Mahendraprabu, A.C. Kumbharkhane, Y.S. Joshi, S.S. Shaikh, **P. P. Kannan**, N.K. Karthick, G. Arivazhagan, “*Spectroscopic and time domain reflectometry studies on acetonitrile – ethylene glycol binary solutions*”, Journal of Molecular Structure 1136 (2017) 303 – 308.
 19. Deepali L. Jadhav, N.K. Karthick, **P.P. Kannan**, R. Shanmugam, A. Elangovan, G. Arivazhagan, “*Molecular interaction forces in acetone + ethanol binary liquid solutions: FTIR and theoretical studies*”, Journal of Molecular Structure 1130 (2017) 497 – 502.
 20. N.K. Karthick, G. Arivazhagan, A.C. Kumbharkhane, Y.S. Joshi, **P.P. Kannan**, “*Time domain reflectometric study on toluene + propionitrile binary mixture*”, Physics and Chemistry of Liquids 54 (6) (2016) 779 – 785.
 21. N.K. Karthick, G. Arivazhagan, A.C. Kumbharkhane, Y.S. Joshi, **P.P. Kannan**, “*Time Domain Reflectometric and spectroscopic studies on toluene + butyronitrile solution*”, Journal of Molecular Structure 1108 (2016) 203 – 208.
 22. G. Arivazhagan, A. Elangovan, R. Shanmugam, R. Vijayalakshmi, **P.P. Kannan**, “*Spectroscopic studies, NBO analysis and dielectric studies on the behaviour of acetone molecules in non-polar solvent environment*” Chemical Physics Letters 627 (2015) 101 – 106.

Papers presented in conferences / seminars

1. **P.P. Kannan**, M. Velmurugan, “*Hydrogen bond interactions between ethanol and isopropyl alcohol: FTIR spectroscopic studies and DFT calculations*”, abstract published in the 2nd International Conference on “**Frontiers in Chemistry and Material Science**

(ICFCMS – 22)” organized by Department of Chemistry, Mannar Thirumalai Naicker College, Madurai, Tamilnadu, India on 19 & 20th December 2022.

2. **P.P. Kannan**, G. Arivazhagan, “*FTIR and ¹³C NMR Spectroscopic studies on the binary solutions of methanol with N,N- dimethylformamide*”, abstract published in the proceedings and **won the first prize for paper presentation** of the “**National Seminar on Advanced Materials**”, organized by the PG & Research Department of Physics, Jamal Mohamed College, Tiruchirappalli, Tamilnadu , India on 23rd January 2020.
3. **P.P. Kannan**, T. Sangeetha, G. Arivazhagan, A.C. Kumbharkhane, “*Molecular interaction forces in liquid solutions of dibutyl ether with N,N-dimethylformamide – time domain reflectometric technique, FTIR spectroscopy and DFT calculations*”, paper published in the proceedings of the “**International Conference on Emerging Trends and Challenges**”, organized by the Science Department, NPR Arts & Science College, Natham, Dindigul, Tamilnadu, India during December 28, 2018.
4. **P.P. Kannan**, G. Arivazhagan, A.C. Kumbharkhane, “*Spectroscopic (FTIR, ¹³C NMR) and time domain reflectometry studies on the binary solutions of tetrahydrofuran with methanol*”, abstract published in the proceedings of the “**National Conference on Dielectric Relaxation and Spectroscopic Techniques**”, organized by the School of Physical Sciences, Swami Ramanand Teerth Marathwada University, Nanded, Maharashtra, India during December 14 – 15, 2017.
5. **P.P. Kannan**, G. Arivazhagan , A. C. Kumbharkhane, “*Inter/intramolecular forces in solutions of dibutyl ether with N, N-dimethylformamide - time domain reflectometric technique, FTIR spectroscopy and DFT calculations*”, abstract published in the proceedings of the “ **International Conference on Recent Advances in Applied Physics**”, organized by the Engineering Physics Section, Faculty of Engineering and Technology, Annamalai University, Annamalai Nagar, Tamilnadu, India during September 21 – 22, 2017.
6. **P.P. Kannan**, N.K. Karthick, A. Mahendraprabu, G. Arivazhagan, “*Homomolecular and heteromolecular interactions in the binary solutions of methyl acrylate with dibutyl ether: Vibrational spectroscopic studies (FTIR) and quantum chemical calculations*”, abstract published in the proceedings of the National Level Seminar on “**Recent Advancements**

in Materials”, organized by the PG and Research Department of Physics, Jamal Mohamed College, Tiruchirappalli, Tamilnadu , India on 15th February 2017.

7. **P.P. Kannan**, G. Arivazhagan, N.K. Karthick, “*Inter and Intra molecular interaction between methyl cellosolve and acetonitrile / formamide by using spectroscopic studies*”- abstract published in the proceedings of the “**II International Conference on Recent Trends in Materials**”, organized by the Department of Physics, Devanga Arts College, Aruppukottai, Virudhunagar, Tamilnadu, India during January 22 – 23, 2016.

Details of E-contents / Modules Developed

Name of the module developed	Date of launching the e-content	Platform on which module has been developed	YouTube Link
Gauss's law	August 16, 2020	YouTube	https://youtu.be/mjqsdt9GGXg
Gauss's law proof	August 16, 2020	YouTube	https://youtu.be/CZtnxmtb5aI
Applications of Gauss law	August 22, 2020	YouTube	https://youtu.be/qzKEdcYfpOI
Electric field due to an infinite plane sheet of charge	August 22, 2020	YouTube	https://youtu.be/lc1Rs5WZa0k
Field near a charged conducting cylinder	August 22, 2020	YouTube	https://youtu.be/nnPtm0gQIxg
Coulomb’s theorem	August 25, 2020	YouTube	https://youtu.be/3IDOsZ_33W0
Poisson's and Laplace equations	August 26, 2020	YouTube	https://youtu.be/y3u0j5RPgNM
The potential of a localized charge distribution	August 27, 2020	YouTube	https://youtu.be/r0K3CTI0ASo
Find the potential of uniformly charged spherical shell of radius R	August 29, 2020	YouTube	https://youtu.be/ih-ELfQRG4
Electrostatic boundary conditions	August 29, 2020	YouTube	https://youtu.be/Rg76ebkIfaU
Work and Energy	August 30,	YouTube	https://youtu.be/Vqwjx0bdZgc

in electrostatics	2020		
The energy of a continuous charge distribution in electrostatics	August 31, 2020	YouTube	https://youtu.be/Pf7SNuO9X5g
Electric potential	September 06, 2020	YouTube	https://youtu.be/92dFavkZReA

Details of conferences/ seminars/ workshops Participated in various institutions

S. No	Name of the Programme	Name of the Institution	Date
1.	National level seminar on “Emerging Technology in Physics”	V.V. Vanniaperumal College for Women- Virudhunagar	Feb 14, 2014
2.	State level seminar on “Recent Trends in Solar technology”	American College- Madurai	Feb 20, 2014
3.	One day national seminar on Nanomaterials Research- VISION NANO 2014	Sri Ramakrishna Engineering College- Coimbatore	Feb 22, 2014
4.	International Workshop on Advanced Materials- IWAM	Alagappa University- Karaikudi	March 20 and 21, 2014
5.	National Conference on Optics, Photonics and Lasers – NCOPL-14	Arul Anandar College- Madurai	July 17 and 18, 2014
6.	HORIZON-14-“National Modelling”	National Institute of Technology- Trichurappalli	Sept 12 and 13, 2014
7.	State level seminar on “Current Trends in Physics”	Zakir Husain College- Ilayankudi	Sept 21, 2014
8.	National level seminar on “Recent Trends in Energy Technologies”	American College- Madurai	Aug 14, 2015
9.	TEQIP II Sponsored Workshop on “Physics in Engineering (PIE)”	Thiagarajar College of Engineering- Madurai	Nov 5 and 6, 2015
10.	State level seminar on “Recent Advancement in Material Synthesis”	Syed Hameedha Arts and Science College- Kilakarai	Feb 24, 2016
11.	Workshop on “Corrosion and its Control”	PSGR Krishnammal College for Women- Coimbatore	June 30 and July 01, 2016
12.	Science Academics Lecture Workshop on “Scope of Nonlinear Physics”	Fatima College, Madurai	Jan 05 and 06, 2017
13.	Recent Advances in Synthesis	Mannar Thirumalai Naicker College,	15 December

	Properties and Applications of nanostructures	Madurai	2019
14.	National Seminar on Advanced Materials	Jamal Mohamed College, Tiruchirappalli	23 January 2020
15.	Supercapacitors: New Age Energy Storage Devies	Ayya Nadar Janaki Ammal College, Sivakasi	19 May, 2020
16.	History of Nuclear Fission	V.O.Chidambaram College, Thoothukudi	25 May 2020
17.	Advancement in Optical Communication through Optical Fibres	V.V.V. College for Women, Virudhunagar	27 May 2020
18.	Metal Complexes to Metal Nanoparticles For Efficient Catalysis	SASTRA University, Tanjavur	28 May 2020
19.	Materials Science and Applications	Arulmigu Palaniandavar Arts College For Women, Palani	29 May 2020
20.	Nanoscale Materials with different dimensions for Advanced Applications	Mannar Thirumalai Naicker College, Madurai	03 & 04 June 2020
21.	Creative Writing of Research Proposals & Articles	Adikavi Nannaya University, Rajamahendravaram	04 June 2020
22.	Nanostructured Materials for Controlling the Flow of Light	SRI Y.N COLLEGE, Andhra Pradesh	05 June 2020
23.	Local probe techniques: A microscopic look at physical properties in matter	National College, Tiruchirappalli	10 June 2020
24.	Nanomaterials For Solar Cell Applications	AMET University, Chennai	10 June 2020
25.	Biomedical Applications of Colloidal Metal Nanoparticles	SRM Institute of Science and Technology, Chennai	10 June 2020
26.	Non Linear Physics	SSN College of Engineering, Chennai	12 June 2020
27.	Penetration of Solar Energy in Home Appliances	Hindustan College of Engineering & Technology, Coimbatore	17 June 2020
28.	Green Energy and Technology	Kings Engineering College, Chennai	19 June 2020
29.	Recent Trends in Advanced Materials Science	The American College, Madurai	19 June 2020
30.	Crystal Engineering: From Molecule to Crystal, Crystal Growth Design	IISER,Kolkata	19 & 20 June 2020
31.	Crystal Growth and after: Structure and Bonding in Magnetic Materials	Hindustan College of Engineering & Technology, Coimbatore	20 June 2020
32.	Basic Author Workshop Research Article Writing & Reference Management Using Mendeley	Annamalai University, Chidambaram	22 June 2020

33.	Powder X-ray diffraction pattern analysis using openwares	V.O. Chidambaram College, Thoothukudi	22 June 2020
34.	Nano-Photonics	Madonna Arts & Science College for Women, Madurai	23 June 2020
35.	Radiation Physics	St. Joseph's College of Engineering, Chennai	23 June 2020
36.	Scholars Who Rocked the World: Rebellion Einstein	Jansons Institute of Technology, Coimbatore	24 June 2020
37.	Basics of IR and Raman Spectroscopy	Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore	24 June 2020
38.	Publishing in International Journals of High Repute: Do's and Don'ts	Saveetha Engineering College, Chennai	25 June 2020
39.	Spectroscopy	Lakshmiipuram College of Arts and Science, Kanyakumari	25 June 2020
40.	Medicinal Plants for Immunity, Strength and Vitality	Kings Engineering College, Chennai	25 June 2020
41.	Advanced Materials	CMR Institute of Technology, Bengaluru	26 June 2020
42.	Scholars Who Rocked the World: Sir Isaac Newton	Jansons Institute of Technology, Coimbatore	26 June 2020
43.	Interdisciplinary Research on Societal Applications: Challenges and Opportunities	Bharathiar University, Coimbatore	26 & 27 June 2020
44.	Advanced Materials for Energy and Environmental Applications	Bharadhidasan University, Tiruchirappalli	26 & 27 June 2020
45.	Scholars Who Rocked the World: Need of Socrates in Modern World	Jansons Institute of Technology, Coimbatore	27 June 2020
46.	DFT, Molecular Dynamics Simulation and Molecular Docking approach on Potential pharmaceutical compounds	, Puratchi Thalaivar Dr. M.G.R Arts and Science College, Chennai	29 June 2020
47.	Scholars Who Rocked the World: Father of Evolutionary Theory- Charles Darwin	Jansons Institute of Technology, Coimbatore	29 June 2020
48.	Semiconductor Design Process in Industries – 2k20	Manonmaniam Sundaranar Univeristy Constituent College, Kanyakumari	29 June 2020
49.	Materials Characterization Techniques	St. Joseph's Institute of Technology, Chennai	29 June 2020
50.	Sample Preparation for TEM and Data Analysis	Madurai Kamaraj University, Madurai	30 June 2020

51.	General Characteristics of d-block Elements-NET Examination	Government Arts College, Salem	01 July 2020
52.	Research Methodology	Annai Hajira Women's College, Tirunelveli	01 July 2020
53.	Advanced Materials for Sustainable Development	Kalasalingam University, Krishnankoil	02 & 03 July 2020
54.	Future Generation Solar Cells	Nehru Institute Technology, Coimbatore	04 July 2020
55.	Exploration of Physical Science and Engineering with Mathematica	Gayathri Vidya Parishad College for Degree and PG Courses, Visakhapattinam	06 July 2020
56.	Nanoscale Nonlinear Optics – An Exciting Glimpse	Vellore Institute Technology, Chennai	07 July 2020
57.	The Exciting Story of Exoplanets	Karunya Institute of Technology and Sciences, Coimbatore	08 July 2020
58.	Development of Advanced Materials for Future Technologies	Jeonbuk National University, South Korea & Vellore Institute of Technology, Chennai	09 & 10 July 2020
59.	Preparation Methods and Deposition Techniques of Nanostructures	V.O. Chidambaram College, Thoothukudi	16 July 2020
60.	Nanostructured Metal Oxide Thin Films for Solar Technology	Saveetha Engineering College, Chennai	16 July 2020
61.	Infrared Spectroscopy of Transient Chemical Species in Helium Nanodroplets	Sacred Heart College, Tirupattur	17 July 2020
62.	Are We Alone in the Universe?	Karunya Institute of Technology and Sciences, Coimbatore	24 July 2020
63.	The Space Scientists - Astronomy Exploring Time & Space	Jansons Institute of Technology, Coimbatore	26 July 2020
64.	Epoch of Nonlinearity in Optics	Mannar Thirumalai Naicker College, Madurai	29 July 2020
65.	Online short term training programme on “Nanomaterials for clean Energy and Environmental Applications”	Dr.M.Mahalingam college of Engineering and Technology, Pollachi	2.11.2020 to 7.11.2020
66.	Biodiversity: Life Insurance for Our Changing World	Mannar Thirumalai Naicker College, Madurai	26 May 2021
67.	India's Three Stage Nuclear Power Programme: Envisioning the Dream of Dr. Homi Jehangir Bhabha	Karunya Institute of Technology and Sciences, Coimbatore	08 June 2021
68.	Recent Developments in	Sree Saraswathy Thyagaraja College,	16.06.2021 to

	Materials Science – 21	Coimbatore	22.06.2021
69.	The Next Generation Planetary Hunters	Karunya Institute of Technology and Sciences, Coimbatore	24 June 2021
70.	The Future of Radio Astronomy	Karunya Institute of Technology and Sciences, Coimbatore	15 July 2021
71.	Recent Trends in Physics	Easwari Engineering College, Chennai	25.07.2022 to 30.07.2022
72.	Thermoelectric Materials and Applications	SSN Research Centre, SSN Institutions, Chennai	24.08.2022 & 25.08.2022
73.	Crystal Growth and Spectroscopy	St. Joseph College, Tiruchirappalli	29.08.2022 to 31.08.2022
74.	Indigenous Materials for Energy Storage Applications	Bharat Institute of Engineering and Technology in collaboration with Centre for Research and Development in Education and Social Integration (CRESIHRD) and Indian Ceramic Society- Hyderabad	03.09.2022
75.	Foremost Frontiers of Material Science	Institute of Science and Technology, Chennai	12.09.2022 to 20.09.2022
76.	Current Scenario in Advanced Materials Research and Nanotechnology	Rajapalayam Raju's College, Rajapalayam	14.09.2022 to 18.09.2022
77.	Advanced Functional Materials	Gonzaga College of Arts and Science for Women, Krishnagiri	28 September 2022
78.	Advanced Materials for Armour Applications	Bharat Institute of Engineering and Technology in collaboration with Centre for Research and Development in Education and Social Integration (CRESIHRD) and Indian Ceramic Society - Hyderabad	01 October 2022
79.	Effective Teaching: Insights from Education Psychology	Bharat Institute of Engineering and Technology in collaboration with Centre for Research and Development in Education and Social Integration (CRESIHRD) and Indian Ceramic Society - Hyderabad	15 October 2022
80.	Chemical Science for Sustainability	Gonzaga College of Arts and Science for Women, Krishnagiri	19 October 2022
81.	Nanomaterials for Sustainable Future	GMR Institute of Technology, Rajam	12.12.2022 to 16.12.2022
82.	Solar Photovoltaics for Sustainable Future	Bharat Institute of Engineering and Technology in collaboration with Centre for Research and Development in Education and Social Integration (CRESIHRD) and Indian Ceramic Society - Hyderabad	24 December 2022

83.	Importance of Preparedness for Educators	Bharat Institute of Engineering and Technology in collaboration with Centre for Research and Development in Education and Social Integration (CRESIHRD) and Indian Ceramic Society - Hyderabad	31 December 2022
84.	Nanomaterials for Novel Applications	Ramco Institute of Technology, Rajapalayam	13 January 2023
85.	Energy Harvesting & Sensors - IEHS 2023	J.K.K. Nataraja College of Arts & Science, Kumarapalayam	17 February 2023
86.	Smart Materials and Applications	Gonzaga College of Arts and Science for Women, Krishnagiri	27.02.2023 & 28.02.2023
87.	Recent Trends in Physics	Jayaraj Annapackiam College for Women, Periyakulam	16.03.2023 & 17.03.2023
88.	Multifunctional Materials	Women's Christian College, Chennai	18 March 2023
89.	VisionNano'23: Webinar on Smart Nanosensor Technology for Medical Diagnostics	Sri Ramakrishna Engineering College, Chennai	24 March 2023
90.	Machine Learning: An Ice Breaker Between Materials Research and Data Science	SSN Institutions, Chennai	12 & 13 April 2023
91.	Application of Statistics in Research	St. Joseph University, Nagaland	21 April 2023
92.	Elucidation of chemical structures and quantification of crystalline phase formation	Vellore Institute of Technology, Chennai	06 June 2023
93.	Higher study opportunities & latest research in portable sensor, bio-chip, metal catalysis, atomic & electronic structure	National Sun Yat-Sen University & Educare, Taiwan	09 June 2023
94.	One Week Virtual Workshop on "Concepts of Computational Chemistry (WCCC-2023)"	Sathyabama Institute of Science and Technology, Chennai	11 to 17 July 2023
95.	Recent Trends in Plant Molecular Farming for the Production of Vaccines and Therapeutics	PSGR Krishnammal College for Women, Coimbatore	20 July 2023
96.	National Webinar on Astrophysics, Exoplanets: Distinct worlds from the Solar System	Karunya Institute of Technology and Sciences, Coimbatore	04 August 2023
97.	International Webinar on Metal Organic Framework Derived Nanomaterials for	Government Arts & Science College for Women, Krishnagiri	19 September 2023

	High Performance Supercapacitors		
98.	One Week Virtual International Workshop on Frontiers in Chemistry	Sathyabama Institute of Science and Technology, Chennai	20 to 28 September 2023
99.	International Conference on Functional Materials and Nanodevices	Chettinad Academy of Research and Education, Kelambakkam	26 September 2023
100.	Webinar on Impact of Quantum dots on Engineering	SRM College for Engineering & Technology, Madurai	23 October 2023
101.	National Webinar on Financial Empowerment through Wealth Creation	Aravali College of Engineering and Management, Haryana	28 November 2023
102.	National Webinar on How We Manage Our Finance	Tawakal Solutions & Pvt. Ltd., Jammu & Kashmir	29 November 2023
103.	Webinar on Magnetic Order in Manganites	SR University, Warangal	23 December 2023

Details of Faculty Development Programs attended in various institutions

S. No	Name of the Faculty Development Programme	Date	Name of the Institution
1.	Outcome Based Education	19 August 2019	Mannar Thirumalai Naicker College, Madurai
2.	Quality Assurance and Sustenance in higher Education	10 March 2020	Mannar Thirumalai Naicker College, Madurai
3.	21 st Century Skills	17 March 2020	Mannar Thirumalai Naicker College, Madurai
4.	Online National Faculty Enrichment Programme	13 to 19 May, 2020	Mannar Thirumalai Naicker College, Madurai
5.	Online short term training programme on “Nanomaterials for clean Energy and Environmental Applications	2.11.2020 to 7.11.2020	Dr. M. Mahalingam college of Engineering and Technology, Pollachi
6.	Faculty Development Programme on “Recent Developments in Materials Science – 21”	16 to 22 June 2021	Sree Saraswathi Thyagaraja College, Pollachi
7.	International Faculty Development Program on Foremost Frontiers of Material Science	12 to 20 September 2022	Sathyabama Institute of Technology, Chennai
8.	Dynamics of Research Publications	15 & 16 September 2022	Mannar Thirumalai Naicker College, Madurai
9.	International online Faculty Development Programme on	14 to 18 November 2022	Rajapalayam Raju’s College, Rajapalayam

	Current Scenario in Advanced Materials Research and Technology		
10.	Faculty Development Program on Nanomaterials For Sustainable Future	12 to 16 December 2022	GMR Institute of Technology, Vizianagaram
11.	Consultancy and Corporate Training	17 March 2023	Mannar Thirumalai Naicker College, Madurai
12.	Faculty Development Program on Computational Modeling of Materials	08 May 2023	Madanapalle Institute of Technology and Science, Andhra Pradesh
13.	Five Days Faculty Development Program on Energy Materials for a Sustainable Environment	19 to 23 June 2023	Vellore Institute of Technology, Chennai
14.	One Week National Level Online Faculty Development Programme (FDP) on “Advanced Research Methodology in Physical Sciences”	03 to 09 October 2023	Rajapalayam Raju’s College, Rajapalayam
15.	Five Days Faculty Development Program on Advanced Materials for Energy and Applications	09 to 13 October 2023	Sathyabama Institute of Technology, Chennai
16.	Virtual Faculty Development Programme on “Quality Improvement of Technical Education and Development Of Research”	05 to 12 December 2023	Sakthi College of Arts and Science for Women, Oddanchatram
17.	One Week National Level Faculty Development Program on “Development of Materials Characterization Techniques and Their Future Prospects”	18 to 22 December 2023	Sri S.V.G. Visalakshi College for Women, Udumalpet

Details of Conferences, Seminars, Workshops and other Programmes Organized

Date	Name of the Programme	Role	Name of the Institution
12.10.2022 & 13.10.2022	Hands-on Training Program on “Circuit debugging for 4G/5G smart phone”	Organizing Secretary	Mannar Thirumalai Naicker College, Madurai

Technical skills

MS Word, MS Excel, PowerPoint, Origin, Photoshop