Dr. M. V. Leena Chandra

Designation : Associate Professor & Head

Department : Physics

Email ID : leenamanuelravi@gmail.com

Languages Proficiency

Read : Tamil, English, Hindi, Japanese & Italian

Write : Tamil, English, Hindi, Japanese & Italian

Speak : Tamil, English, Hindi, Japanese & Italian

1. Qualification

S. No.	Degree / Diploma / Certificate	Discipline	Name of the Institution	Year of Passing
1.	UG	Physics	Sarah Tucker College, Tirunelveli	1998
2.	PG	Physics	Sarah Tucker College, Tirunelveli	2000
3.	M.Phil.	Physics	St. Joseph's College, Trichy	2002
4.	Ph.D.	Physics	Bharathiyar University, Coimbatore	2017
5.	UGC-CSIR NET	Physical Science	UGC & CSIR	2001
6.	Online Certificate Course	Developing Soft Skill and Personality	IIT Kanpur NPTEL	Aug. - Nov. 2019
7.	Online Certificate Course	Enhancing Soft Skill and Personality	IIT Kanpur NPTEL	Feb. - Apr. 2021

2. Teaching Experience / Other Experience

S. No.	Institution / Organization	From - To
1.	National Institute of Technology, Trichy	2001 - 2002
2.	Fatima College, Madurai	2002 - Till Date

3. Position Held in Fatima (Vice Principal, HoD, Dean, Coordinator, Member etc.)

S. No.	Name of the Position	From - To
1.	AICUF Staff Advisor	2002 - 2003
2.	Adult Education Co-Ordinator	2003 - 2007
3.	Choir In-Charge	2007 - 2008
4.	NSS Program Officer, Red Ribbon Club Program Officer	2008 - 2010

S. No.	Name of the Position	From - To
5.	Choir In-Charge	2010 - 2012
6.	Staff Secretary	2011 – 2012
7.	Students Union-Staff Advisor	2014 - 2016
8.	College Programme Coordinator	2016 - 2018
9.	FONDE (Foundation and Online Course) Committee Member	2018 - 2019
10.	Nad Nodal Officer	2019 - 2020
11.	Member in NAAC Committee -Criteria 6&7 In-Charge	2019 - 2020
12.	Staff in Charge of Room Allotment & Time Table	2019 - 2020 & 2021 - 2022
13.	Member In NAAC Committee- NAAC 4th Cycle	2019 - 2021
14.	Member In AQAR 2020-2021 Committee	2021 - 2022
15.	Member In AQAR 2021-2022 Committee	2022-2023
16.	Coordinator- Room Allotment and Timetable	2022-2023
17.	Dean Of Academic Affairs (Science)	2023-2026
18.	IQAC Committee Member	2023-2026
19.	Calendar Committee Member	2023-2026
20.	Dean of Academic Affairs-Science, Governing Body	2023-2026
21.	Dean of Academic Affairs-Science, Academic Council	2023-2026
22.	Dean of Academic Affairs-Science, Planning and Evaluation	2023-2026
23.	Dean of Academic Affairs-Science, Awards Committee	2023-2026

4. Achievements

S. No.	Name of the Award	Award Received for	Sponsors / Source	Date
1.	University Rank	University XI Rank in B.Sc.	Manonmanium Sundaranar University, Tirunelveli	1998
2.	Gold Medal	University I Rank in M.Sc. Physics	Manonmanium Sundaranar University, Tirunelveli	2000
3.	III Prize	The Science Model in Natural Disaster Management	Science City, Ministry of Higher Education, Tamil Nadu	Feb. 09 - 12, 2017
4.	Topper	Topper In NPTEL Online Certificate Course	IIT Kanpur	Nov. 26, 2019
5.	A.P.J. Abdul Kalam International Award-2023	Contribution Towards Education	International Multidisciplinary Conference Organized by World Tamil Ilakkia Peravai- Thailand Thiruvalluvar College- Papanasam, Tirunelveli	Apr. 04, 2023

5. Membership in Professional / Other Bodies / Committees

S. No.	Name of the Position	Name of the Institution	Duration
1.	Board of Examiner	Arul Anandar College, Karumathur	2007 - 2008

S. No.	Name of the Position	Name of the Institution	Duration
2.	Board of Examiner	St. Xavier's College, Tirunelveli	2008 - 2009 & 2017 - 2018
3.	Board of Examiner	Madura College, Madurai	2011 - 2012
4.	Secretary, Alumni Association	Academic Staff College, Madurai Kamaraj University	2012 - Till Date
5.	Board of Examiner	Gandhigram Rural Institute	2014 - 2015
6.	Board of Examiner	Arul Anandar College, Karumathur	2015 - 2016
7.	Board of Examiner	Kalasalingam University, Krishnankoil	2016 - 2017
8.	Board of Examiner	VVV College, Virudhunagar	2017 - 2018
9.	External Examiner for Practical	S.V.N. College, Madurai	2017 - 2019
10.	Board of Examiner	Arul Anandar College, Karumathur	2018 - 2019
11.	Expert Committee Member	TNPSC, Chennai	2019 - 2020
12.	Subject Expert in Academic Audit of Physics Department	Sacred Heart College, Tirupathur	2019 - 2020
13.	Board of Examiner	Madura College, Madurai	2023 - 2024
14.	Research Advisory Committee Member	The American College, Madurai	2024 - 2025

6. Areas of Specialization

- **Solid State Ionics**

7. Research Guides/Guidance Details

Research Details

S. No.	Name of the University in which Recognized as Guide	Registration Number	Date of Guideship Received	Ph.D. Guideship Details			
				Ongoing		Completed	
				Full Time	Part Time	Full Time	Part Time
1.	Madurai Kamaraj University	2118/21	31.08.2021	3	--	-	-

Ph.D. Guidance Completed/Ongoing

S. No.	Student Name	Title of Thesis	Mode of Ph.D. (Full Time / Part Time	Registration Number	Date of Registration	Name of University/ Institution under which Registered	Registered/ Pursuing/ Submitted/ Pre-Viva/ Viva/ Awarded	Date (Submitted / Pre-Viva/ Viva/ Awarded)
1.		Development of						

	Mohanaa Muthuselvi	Proton Conducting Membrane Using Biomaterial with Ammonium Salts for Electrochemical Devices	Full Time	MKU 22f0810 546	7.06.2022	MKU	Pursuing	
2.	T. Sabeetha	Development and Characterizat Ion of Biomaterial Electrolyte for Electrochemic Al Device Applications	Full Time	MKU 22ffos 10703	19.10.2022	MKU	Pursuing	
3.	M. Mehraj Begum	Development of Magnesium Ion Conducting Biomaterial Electrolyte Based on Centella Asiatica for Electrochemical Device	Full Time	MKU 23ffos1 0780	11.01.2023	MKU	Pursuing	

8. ORIENTATION/REFRESHER/TRAINING PROGRAMMES/FDP ATTENDED

S. No.	Programme	Theme	Organized by	Date
1.	Training Program	Leadership Training	NBCLC, Bangalore	2003
2.	Orientation	UGC Sponsored Orientation Programme for College Teachers	Academic Staff College, MKU, Madurai	Nov. 05 - Dec. 08, 2011
3.	Refresher Course	DST-NRDMS Sponsored Refresher Course on Geospatial Technologies and Applications	Department of Future Studies, School of Energy, MKU, Madurai	May 08 - 28, 2012
4.	Refresher Course	UGC Sponsored Refresher Course on 'Recent Trends in Physics' for College Teachers	School of Physics, MKU, Madurai	Feb. 03 - 23, 2015
5.	FDP	Alternative Teaching Methodology	IQAC, Fatima College, Madurai	Oct. 14, 2017
6.	Refresher Course	UGC Sponsored Refresher Course on 'Recent Trends in Physics' for College Teachers	UGC-HRDC, MKU, Madurai	Nov. 06 - Dec. 06, 2018
7.	Refresher Course	UGC Sponsored Refresher Course on 'Environment and	UGC-HRDC, Bharathidasan University, Tiruchirappalli	Feb. 02 - 15, 2022

S. No.	Programme	Theme	Organized by	Date
		Sustainable Development'		
8.	Five-Day Online Faculty Development Programme	Advanced Materials and Their Applications	PG & Research Department of Chemistry, Auxilium College, Vellore	June 02 - 06, 2020
9.	Edge Leadership Programme	Leadership Programme for Leaders in Academia	Christ University, Bangalore	May 12 - 16, 2025

9. Paper Presented on National/International Seminars, Workshops, Conferences & Symposiums

S. No.	Programme & Theme	Organized by	Date	Title of the Paper
1.	National Seminar on "Enhancing & Sustaining Quality in Higher Education"	IQAC, Fatima College, Madurai	Feb. 27, 2009	The Third Dimension of Higher Education in Fatima College
2.	National Conference On "Recent Trends in Advanced Materials"	Jeyaraj Annapackiam College, Periakulam	Feb. 05 & 06, 2013	Conductivity Studies of Blend Polymer Electrolytes Based on PVAC-PMMA
3.	International Conference on "Materials for Advanced Technologies	Materials Research Society, (MRS) Suntec, Singapore	June 30 - July 05, 2013	Structural, Vibrational and Electrical Properties of PVAC-PMMA Polymer Blend Electrolyte with NH4SCN
4.	International Conference on "Electrochemical Society"	Indian Institute of Science (IISC), Bangalore	Aug. 07 - 09, 2014	Lithium-Ion Conduction in PVAC-PMMA Blend Electrolyte
5.	International Conference on "Electrochemical Society"	Indian Institute of Science (IISC), Bangalore	Aug. 07 - 09, 2014	Characterisatiof Pvac- Pmma Lithium Triflate Polymer Electrolyte
6.				Study Of Proton Conducting Polymer Electrolyte Based On PVAC-PMMA
7.				Lithium-Ion Conduction in Triblock Polymer Electrolyte
8.	International Symposium on "Research Innovation for Quality Improvement in Higher Education"	Bharathiar University, Coimbatore	Oct. 10 & 11, 2014	Conductivity and Thermal Studies of Blend Proton Conducting Polymer Electrolyte with CH3COONH4
9.	International Conference of "Functional Materials and Devices (ICFMD 2015)"	University of Malaya, Malaysia	Aug. 04 - 06, 2015	Lithium Ion Conducting Membrane Based on Biopolymer-Tamarind Seed Polysaccharides
10.	National Conference on "Materials for Energy Devices"	Standard Firework Rajaratnam College for Women	Nov. 23 & 24, 2016	Characterization of Polymer Electrolyte K. Carrageenan Doped with NH4NO3
11.				Characterization of Polymer Electrolyte Gum Arabic Doped with NH4I
12.				Characterization of Polymer Electrolyte K. Carrageenan Doped with NH4SCN
13.				Characterization of Polymer Electrolyte Gum Arabic Doped with

S. No.	Programme & Theme	Organized by	Date	Title of the Paper
				NH4BR
14.	Asian Conference on "Solid State Ionics (ACSSI-2016)"	IIT, Patna	Nov. 27 - 30, 2016	A Study on Polymer Blend Electrolyte Based on PVAC/PMMA with Lithium Triflate Salt and Its Application in Lithium Primary Battery
15.	National Conference on "Advanced Materials and Its Application"	The Standard Fireworks Rajaratnan College for Women, Sivakasi	July 06 & 07, 2017	Study of Polymer Elecrolyte Based on Bio- Polymer Pectin Doped with Magnesium Perchlorate
16.				Study of Lithium Ion Conducting Polymer Elecrolyte Based on Bio-Polymer Pectin Doped with Lithium Perchlorate
17.	National Conference on "Advanced Materials and Its Application"	The Standard Fireworks Rajaratnam College for Women, Sivakasi	July 06 & 07, 2017	Magnesium Ion Conducting Solid Polymer Elecrolyte Based on Bio Polymer Pectin Doped with Magnesium Nitrate
18.				Study of Lithium Ion Conducting Polymer Elecrolyte Based on Bio-Polymer K - Carregeenan Doped with Lithium Perchlorate
19.	National Conference on "Advanced Materials and Its Application"	The Standard Fireworks Rajaratnam College for Women, Sivakasi	July 06 & 07, 2017	Structural and Conductivity Studies on Biodegradable Polymer Electrolyte Based on Bio- Polymer K - Carregeenan Doped with Magnesium Nitrate
20.				Study of Lithium Ion Conducting Polymer Elecrolyte Based on Bio-Polymer K -Carregeenan Doped with Lithium Nitrate
21.				Study of Lithium Ion Conducting Polymer Elecrolyte Based on Bio-Polymer Pectin Doped with Lithium Chloride
22.	6th International Conference on "Functional Materials & Devices 2017 (ICFMD - 2017)"	University of Malaya, Malacca, Malaysia	Aug. 15 - 18, 2017	Proton Ion Conducting Membrane Based on Biopolymer – K-Carrageenan
23.	International Conference on "Science and Engineering of Materials ICSEM 2018"	Sharda University, Noida, U. P., India	Jan. 06 - 08, 2018	Development of Bio- Polymer Gum Arabic with Ammonium Chloride and Its Characterization of Electrochemical Devices
24.	National Conference on "Advances in Material Science and Engineering for Societal Applications"	Sri Ramakrishna Engineering College, Coimbatore	July 19 & 20, 2018	Proton Conducting Polymer Electrolyte Based on PVA, with ania Somnifera Doped with Ammonium Chloride
25.	National Conference on "Advances in Material Science and Engineering for Societal Applications	Sri Ramakrishna Engineering College, Coimbatore	July 19 & 20, 2018	Proton Conducting Polymer Electrolyte Based on PVA, Succinonitrile Doped with Ammonium Bromide

S. No.	Programme & Theme	Organized by	Date	Title of the Paper
26.				Proton Conducting Polymer Electrolyte Based on PVA, Withania Somnifera Doped with Ammonium Bromide
27.	National Conference on "Advances in Material Science and Engineering for Societal Applications"	Sri Ramakrishna Engineering College, Coimbatore	July 19 & 20, 2018	Characterization of Proton Conducting Polymer Electrolyte Based on PVA and with ania Somnifera Doped with Ammonium Iodide
28.				Characterization of Proton Conducting Polymer Electrolyte Based on PVA and Tannic Acid with Ammonium Iodide
29.	15th International Conference on Frontiers of Polymers and Advanced Materials (ICFPAM 2019)	Center for Ionics, University of Malaya	June 17 - 21, 2019	Study of Biopolymer Electrolyte Based on PVA and withania Somnifera Doped with Ammonium Iodide for Proton Battery and Fuel Cell Applications
30.				Study of Proton Conducting Blend Polymer Electrolyte Based on Polyvinyl Alcohol (PVA) - Succinonitrile (Sn) And Ammonium Nitrate (Nh4no3) Applicable to Electrochemical Devices
31.	65th Dae Solid State Physics Symposium	Bhabha Atomic Research Centre (BARC), Mumbai	Dec. 15 - 19 2021	Preparation of Mg Ion Conducting Polymer Electrolyte Based on PVA and Nelumbo Nucifera
32.	International Conference on Women in Electrochemistry (ICWEC – 2023)	The Electrochemical Society of India held at Sathish Dhawan Auditorium, Indian Institute of Science, Bengaluru	April 7 - 8, 2023	Development and characterization of a Biomaterial (Centella Asiatica Leaf) Based Electrolyte for Electrochemical Devices
33.	18th Asian Conference on Solid State Ionics (ACSSI – 2024)	Materials Research Centre run by Subramanian - Thangathai Educational Trust, Coimbatore & Meenakshi College for Women, Kodambakkam, Chennai, India for Asian Society for Solid State Ionics	Feburary 19 - 22, 2024	Biomaterial Electrolyte Based on Pheltophorum Pterocarpum Flower with NH4NO3 and Graphene Quantum Dots for Electrochemical Device Applications.
34.				Development of Magnesium ion Conducting Biomaterial Electrolyte Based on Centella Asiatica for Electrochemical

S. No.	Programme & Theme	Organized by	Date	Title of the Paper
				Devices
35.				Proton – Conducting Electrochemical Devices Developed by Biomaterial, Centella Asiatica Leaf with Ammonium Nitrate
36.	"National Conference on An Interdisciplinary Approach on Innovative Materials – IAIM 2024"	Department of PG Chemistry & PG Physics, V. V. Vanniyaperumal College for Women, Virudhunagar	August 8, 2024	Effectiveness of Graphene Quantum Dot on Biomaterial Based Electrolyte (Pheltophorum Pterocarpum) for the Application of Solid-State Battery
37.				Effect of GQD in Centella Asiatica Leaf (CAL) Based Solid Electrolyte towards the Application of Solid -State Proton Battery & PEM Fuel Cell
38.	Third International Conference on Advanced Nanomaterials for Energy, Environment and Healthcare Applications (ANEH 2024)	Heriot-Watt University, UK, G. T. N Arts College (Autonomous), Tamil Nadu, and ANEH Scientific Foundation, India	August 21-13, 2024	Efficacy of Plasticiser E.C and GQD in Peltophorum Pterocarpum (PP) Flower-Based Electrolyte for the Application of Proton Battery
39.				Mg Ion Conducting Solid Biomaterial Electrolyte Based on Centella Asiatica with Magnesium Chloride for Electrochemical Devices
40.				The Plant-Derived Biomaterial Centella Asiatica (CA) with Ammonium Bromide (NH4Br): A Novel Source for Solid State Electrolyte towards Proton Conducting Electrochemical Applications
41.	National Conference on Emerging Trends in Chemical Sciences for Sustainable Future (NCECSSF-2024)	PG & Research Department of Chemistry, Sacred Heart College (Autonomous), Tirupattur	September 29, 2024	Incorporation of Graphene Quantum Dot on Centella Asiatica Leaf (CAL) with Ammonium Bromide (NH4Br) based Solid Electrolyte for Solid-State Proton Battery
42.				Effect of Plasticiser E. C in

S. No.	Programme & Theme	Organized by	Date	Title of the Paper
				Pheltophorum Pterocarpum Flower Based Solid Electrolyte Towards Tje Application of Solid-State Proton Battery
43.				Sustainable Biomaterial (Centella Asiatica) Electrolyte Infused with Ionic Salt (Magnesium Chloride) for Next- Gen Energy Storage Devices

10. Participated on National/International Seminars, Workshops, Conferences & Symposiums

S. No.	Programme & Theme	Organized by	Date
1.	National Seminar on "Recent Trends in Physics"	St. Joseph's College, Bangalore	OCT. 08, 2005
2.	National Seminar on "Future Trends in Materials and Characterization"	Loyola College, Chennai	Feb. 28, 2006
3.	National Workshop on "Nanostructures Materials and Applications"	Stella Maris College, Chennai, Indian Institute of Technology, Madras	Jan. 23 - 25, 2007
4.	National Workshop on "Recent Trend in Computational Research on Nano Structures"	Thiagarajar College of Engineering	Apr. 08 - 12, 2008
5.	International Seminar on "Advanced Materials and Its Applications"	Kalasalingam University, Krishnankovil	Mar. 04 & 05, 2011
6.	Seminar Cum Workshop on the Theme of India Based Neutrino Observatory Project	Ino Campus, Vadapalangi	July 15, 2018
7.	Three-Day 'Train the Trainer' National Workshop on "Creating Alternative Digital Teaching Learning Environment in Higher Education Institutions"	Fatima College (Autonomous), Madurai	Sep. 06 - 08, 2018
8.	International Web Conference on Advanced Materials (IWCAM 2019)	St. Joseph's College, Tiruchirappalli	Feb. 28 - Mar. 01, 2019

11. Articles Published in Journals/Proceedings/Magazines/Books

S. No.	Journal/Proceeding/ Magazine/Book Name	Title of the Article	Month / Year	Vol. No.	Issue No.	Page No.	ISSN	Publisher
1.	International Journal of Ionics	Characterization of High Ionic Conducting PVAC- PMMA Blend Based Polymer Electrolyte for Electrochemical Applications	June 16, 2016	22	12	2409-2420	0947-7047	Springer Berlin Heidelberg
2.		Study OF PVAC-						

S. No.	Journal/Proceeding/ Magazine/Book Name	Title of the Article	Month / Year	Vol. No.	Issue No.	Page No.	ISSN	Publisher
	International Journal of Polymer Engineering (Jpolyeng)	PMMA-LiCL Polymer Blend Electrolyte and the Effect of Plasticizer Ethylene Carbonate and Nano Filler Titania on PVAC- PMMA- LiCL Polymer Blend Electrolyte for Electochemical Devices	Nov. 2016	37	6	11-22	DOI 10.1515/ POLYENG-2016-0145-	De Gruyter Journal of Polymer Engineering
3.	International Journal of Ionics	Study of Proton-Conducting Polymer Electrolyte Based on K- Carrageenan and NH4SCN for Electrochemical Devices	Mar. 2018	24	11	3535-3542	DOI:10.1007/S11581-018-2521-7	Springer Berlin Heidelberg
4.	International Journal of Ionics	Lithium ion Conducting Biopolar Membrane Based on K – Carrageenan with LiNO3	June 2020	26	10	4311-4326	DOI.ORG/10.1007/S1158 1-020-03604-7	Springer Berlin Heidelberg
5.	International Journal of Ionics	Magnesium ion-Conducting Solid Polymer Electrolyte Based on Cellulose Acetate with Magnesium Nitrate (MG(NO3)2.6H2O) for Electrochemical Devices	June 2020	26	3	4553-4565	DOI.ORG/10.1007/S1158 1-020-03615-4	Springer Berlin Heidelberg
6.	International Journal of Ionics	Development and Characterization of a Biomaterial (Centella Asiatica Leaf)- Based Electerolyte for Electrochemical Devices	June 2023	9		-17	DOI:10.1007/s1 1581-023-05094-9	Springer Berlin Heidelberg
7.	International Journal of Ionics	Study of Biomaterial Electrolyte Based on Pheltophorum pterocarpum incorporated with NH4SCNfor Proton Conducting Battery and Pem Fuel Cell Applications	Nov - 2023	0	0	-15	DOI:10.1007/s1 1581-023-05286-3	Springer Berlin Heidelberg
8.	International Journal of Ionics	Graphene Quantum Dot effect on Biomatereial (Pheltophorum pterocarpum)	Aug.2024	30	11	7137-715	DOI: 10.1007/s115	Springer Berlin Heidelberg

S. No.	Journal/Proceeding/ Magazine/Book Name	Title of the Article	Month / Year	Vol. No.	Issue No.	Page No.	ISSN	Publisher
		Electrolyte Incorporated with NH4No3 for Electrochemical Devices				6	81-024-05753-5	
9.	International Journal of Ionics	Develpoment of Magnesium ion conducting Biomaterial Electrolyte Based on Centella Asiatica for Electrochemical Devices	F eb. 2025			2025:1-17	D OI: 10.1007/s11581-025-06068-9	Springer Berlin Heidelberg

12. Major Assignments (Chief Guest / Keynote / Judge etc.)

S. No.	Major Assignment	Institution	Theme/Title	Date
1.	Resource Person	Research Culture Promotion Cell (RCPC) of Lady Doak College, Madurai	Applications of Mathematics in Major Fields of Science	Dec. 11, 2018
2.	Co-Ordinator	The Research Centre of Physics, Fatima College, Madurai	Green Hydrogen Storage and Fuel Cell Technology	May 19 - 23, 2025
3.	Resource Person	IQAC, Fatima College	Effective Curriculum Implementation: The Role of Teachers	June 06, 2025
4.	Co-Convener	Research Center of Physics, Fatima College, Madurai	Advanced Materials for Energy Storage Applications	July 12 - 14, 2020
5.	Subject Expert	Sacred Heart College, Tirupathur	Academic Audit of Physics Department	Feb. 24, 2020
6.	External Subject Expert	St. Joseph's Girls' Hr. Sec. School, Madurai	Selection of P.G. Asst. Physics Teacher	Sep.07, 2021
7.	Resource Person	Mother Teresa University, Kodaikanal	Biopolymers and Biomaterials as Electrolyte Membranes in Energy Storage Devices	Mar.17, 2022

13. Patents/Copyright if any

S. No.	Patents/Copyrights for	Patents/ Copyright from	Date/Year
1.	Bio-Material Electrolyte Membranes Based on Peltophorum Pterocarpum (Dc.) Flowers for Electrochemical Devices	Indian Patent Under Provisional Application Category with No. 202241004379	Jan. 15, 2022

14. Foreign Countries Visited on Academic Assignments/Training/Invited Programme

S. No.	Name of the Country	Academic Assignments	Organized by	Date

1.	Malaysia	Presenting a Research Paper in a Conference	Center of Ionics University of Malaya	June 17 - 21, 2019