

Dr. R. PADMANABAN

Sr. Lab Instructor

B.Sc.,D.Co-op.,M.Sc.,M.Phil.,Ph.D

ACADEMIC PROFILE

COURSE	INSTITUTION	EXAMINATION AUTHORITY	MONTH & YEAR OF PASSING	PERCENTAGE OF MARKS
Ph.D Physics	SCSVMV University	SCSVMV University	OCT 2018	Highly Commented
M.Phil Physics	SCSVMV University	SCSVMV University	Sep 2010	8.7 CGP
M.Sc Physics	Annamalai University	Annamalai University	Dec 2006	59%
D.Co-op	Aringar Anna Institute of Co-operative Management	Tamilnadu Co-operative Union	Aug 2001	58%
B.Sc Physics	Pachiyappa's college for men, Kanchipuram	University of Madras Chennai	April 2000	58%
H.S.C	Govt. Hr. Sec. School, Naickenpet	State Board, Government of Tamilnadu	March 1997	68%
S.S.L.C	Govt. Hr. Sec. School, Naickenpet	State Board, Government of Tamilnadu	April 1995	75%

Total Citation : 113

h-index : 5

i10-index : 3

RESEARCH PROFILE

Journal Publications : (23)

1. R.Padmanaban et al., “Acoustic and Thermodynamic Properties of Binary Liquid Mixtures of Benzaldehyde in Hexane and Cyclohexane”, *Journal of Solution Chemistry (SPRINGER)*, Vol. 38, (2009), 441-448. (IF : 2.000 SCI & SCOPUS Index)
2. R.Padmanaban et al., “A study on the molecular interaction of PPG 3000 and its blend using ultrasonic technique”, *American Institute of Physics conference proceedings*, vol. 1433, (2012), 539-542. (IF : 0.402) (WoS & SCOPUS Index)
3. R.Padmanaban et al., An investigation of compatibility nature of polyblends of PEG 400 / PS 35000 and PEG 4000 / PS 35000 using ultrasonic and related techniques”, *Journal of Pure Applied Ultrasonics*, vol. 35, (2013), 105-108.
4. R.Padmanaban et al., Determination of Compatibility nature of blends of PMMA 350000 in Toluene by Physical methods, *Indian Journal of Science (International Journal)*, vol. 13(39), (2015), 69-74.
5. R.Padmanaban et al. “On the Analysis of Activation Energy of PS 35000 in Various Solvents”, *American Institute of Physics-Conf. Proceedings* (ISSN:1551-7616- online) vol. 1675, (2015), 020019-1-4. (IF : 0.402) (WoS & SCOPUS Index)
6. R. Padmanaban et al. “Acoustic, Thermal and molecular interactions of Polyethylene Glycol (2000, 3000, 6000)”, *Elsevier : Physics Procedia*, Vol. 70, (2015), 1052-1056. (IF : 0.260) (WoS & SCOPUS Index)
7. R. Padmanaban et al. “Study on Rheological characteristics and Molecular Interaction properties of Annona Squamosa (Custard Apple) seed Biodiesel”, *Applied Mechanics and Materials*, Vol. 813-814, (2015), 862-865. (SCOPUS Index)
8. R.Padmanaban et al. “Compatibility and thermal studies of blends of PMMA 350000 in 1,4-dioxane by ultrasonic technique”, *AIP Conference Proceedings*, Vol. 1728, (2016), 020147-1-4 (IF : 0.402) (WoS & SCOPUS Index)
9. R.Padmanaban et al. “Miscibility studies of Polyethylene Glycol with Polystyrene in Toluene by Various Physical and Advanced Techniques”, *Journal of Physics : Conference Series*, Vol. 759, (2016), 012017-1-6. (IF : 0.547) (WoS & SCOPUS Index)
10. R.Padmanaban et al. “Thermodynamic Studies on Biocompatible Polymer”, *Advanced Science Letters*, Vol. 22, No. 11, (2016), 3948-3950. (SCOPUS Index)
11. R.Padmanaban et al. “Thermal and Rheological Studies of Aqueous Solutions of PEG 400 and PEG 1500 Having Pharmaceutical Applications” *SPRINGER Proceedings in Physics*, Vol. 189, En. 58, (2017), 723-730. (SCOPUS Index)

12. R.Padmanaban et al. "Mathematical and Experimental Analysis of Ultrasound Velocity and Refractive Index in binary Mixtures of Pharmaceutically Important Polymer – PEG 600", *SPRINGER Proceedings in Physics*, Vol. 189, En. 58, (2017), 709-722. (SCOPUS Index)
13. R.Padmanaban et al. 'A Study on Comparative Analysis of Polypropylene Glycol', *International Journal of Current Research and Review*, Vol. 9, No. 10, (2017), 89-91 [ISSN 0975-5241]
14. R.Padmanaban et al. 'A study on molecular interaction and excess parameter analysis of Polyethylene Glycol' – *International Journal of Materials Sciences*, Vol. 12, No. 2, (2017), 137-145 [ISSN 0973-4589].
15. Padmanaban R et al. 'Acoustic and Molecular Interaction Studies of PEG 200 in Benzene' – *International Journal of Materials Sciences*, Vol. 12, No. 2, (2017), 123-130 [ISSN 0973-4589].
16. Padmanaban R et al. 'A Study on the Compatibility Nature of Polyblend [PEG/HEC] using Physical Methods' *International Journal of Materials Sciences*, Vol. 12, No. 2, (2017), 131-136 [ISSN 0973-4589].
17. Padmanaban R, et al., "Thermal and acoustical studies of CuO nanofluids", *International Journal of Current Research and Review*, Vol. 10, No. 21, (2018), 81-85
18. Padmanaban R, et al., "A Study on the Acoustic and Rheological Properties of Polystyrene in Different Solvents", *International Journal of Current Research and Review*, Vol. 10, No. 21, (2018), 99-102
19. Padmanaban R. et al., "A comparative study of experimental and theoretical refractive index of binary liquid mixtures using mathematical methods", *IOP Conf. Series: Materials Science and Engineering*, Vol. 390, (2018) 012116 (IF : 0.198) (WoS & SCOPUS Index)
20. Padmanaban R., et al., "A study on Thermodynamic, Acoustic and Elastic properties of aqueous solutions of Hydroxyethyl Cellulose", *IOP Conf. Series: Materials Science and Engineering*, Vol. 390, (2018) 012038 (IF : 0.198) (WoS & SCOPUS Index)
21. Padmanaban R. et al., "A Comparative Evaluation of Physicochemical Properties and Photocatalytic Efficiencies of Cerium Oxide and Copper Oxide Nanofluids" *Catalysts*, Vol. 10(1), (2020), 34. (IF : 4.146 - SCI & SCOPUS Index)
22. Padmanaban R., et al "Acoustic, Rheological and Optical Properties of Binary Mixtures of Aqueous Solutions of PEG 200—A Comparative Analysis", *SPRINGER Proceedings in Materials*, Vol. 7, (2020), 239-244. (SCOPUS)
23. Padmanaban R., et al "Acoustic, thermal and optical properties of organic based Disodium tartrate salt", *Int. J Sci. Res. Archive Vol.* 2(1), (2021), 012-027.

Papers Presented at Various conferences:

Presented a paper on “An investigation of adiabatic compressibility, free volume and internal pressure of polyethylene glycol 200 using ultrasonic technique” at the XIX National Symposium on Ultrasonics, NSU-XIX, organised by CSIR National Physical Laboratory, New Delhi during 30-31 Oct 2012.

Presented a paper on “A study of the molecular interaction of PEG 5000 at 303 K at different concentrations using ultrasonic technique” at the XIX National Symposium on Ultrasonics, NSU-XIX, organised by CSIR National Physical Laboratory, New Delhi during 30-31 Oct 2012.

Presented a paper on “An investigation of compatibility nature of PEG 400 / PS 35000 and PEG 4000 / PS 35000 using ultrasonic and related techniques” at the XIX National Symposium on Ultrasonics, NSU-XIX, organised by CSIR National Physical Laboratory, New Delhi during 30-31 Oct 2012.

Presented a paper on “A study of Activation energy and molecular interaction of Polyvinyl Pyrrolidone (PVP 40000) at different temperatures” at the International conference on Emerging Trends in Physics – ICETP 2013, organised by St. Joseph College of Arts and Science, Cuddalore during 21-22 Feb 2013.

Presented a paper on “Activation energy studies of PEG in toluene” at the International conference on Emerging Trends in Physics – ICETP 2013, organised by St. Joseph College of Arts and Science, Cuddalore during 21-22 Feb 2013.

Presented a paper on “A study on the Activation energy of Aqueous solutions of PEG (400, 1500, 4000) using viscometry techniques” at the International conference on Advanced Polymeric Materials – ICAPM 2013, organised by Mahatma Gandhi University, Kottayam, Kerala during 11-13 Oct 2013.

Presented a paper on “Compatibility and Activation energy studies of PEG 1500 / PS 35000 in Toluene by different Techniques” at the International conference on Advanced Polymeric Materials – ICAPM 2013, organised by Mahatma Gandhi University, Kottayam, Kerala during 11-13 Oct 2013.

Presented a paper on “Thermal and Ultrasonic Investigation of PMMA in benzene” at the National Symposium on Ultrasonics, organised by Ravenshaw University, Cuttack, Odisha during 24-25 Jan 2014.

Presented a paper on “Physico-Chemical Investigation of PMMA using Ultrasonic Technique” at the Second National Conference on Recent Advances in Materials – NCRAM-14, organised by B.S. Abdur Rahman University, Chennai during 3-4 Sep 2014.

Presented a paper on “Compatibility and Activation energy studies of blends of PMMA 350000 in 1,4-Dioxane by ultrasonic and related techniques” at the National Symposium on Acoustics,

organised by All India Institute of Speech and Hearing, Mysore, Karnataka during 12-14 Nov 2014.

Presented a paper on “Determination of Compatibility Nature of Blends of PMMA in Toluene by Physical methods” at the International Conference on Frontier Areas of Physics – INACFAP-2014, organised by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 18-19 Dec 2014.

Presented a paper on “Rheological Investigation of PEG 2000” at the International Conference on Frontier Areas of Physics – INACFAP-2014, organised by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 18-19 Dec 2014.

Presented a paper on “Ultrasound on the determination of Miscibility studies of polyblends of PPG and Polystyrene” at the International Conference on Frontier Areas of Physics – INACFAP-2014, organised by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 18-19 Dec 2014.

Presented a paper on “Acoustical Investigation of PEG” at the International Conference on Frontier Areas of Physics – INACFAP-2014, organised by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 18-19 Dec 2014.

Presented a paper on “Thermo Acoustic Investigation of PEG 6000 ” at the International Conference on Frontier Areas of Physics – INACFAP-2014, organised by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 18-19 Dec 2014.

Presented a paper on “On the Analysis of Activation energy of PS 35000 in various solvents” at the National Conference on Advanced materials and Radiation Physics – AMRP-2015, organised by Department of Physics, SLIET, Longowal, Punjab during 13-14 Mar 2015.

Presented a paper on “Study on Rheological Characteristics & Molecular Interaction properties of Annona Squamosa Seed Biodiesel ” at the International Conference on Mechanical and manufacturing Engineering – ICMME-2015, organised by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 2-3 APR 2015.

Presented a paper on “Acoustic, Thermal and molecular interactions of Polyethylene Glycol (2000, 3000, 6000) ” at the International Congress on Ultrasonics – ICU-2015, organised by Georgia Tech Lorraine, Metz, France during 10-14 MAY 2015.

Presented a paper entitled “Compatibility and thermal studies of blends of PMMA in 1, 4 Dioxane by ultrasonic technique” at International Conference on Condensed Matter and Applied Physics (ICC 2015) organized by Department of Physics, Govt. Engineering College, Bikaner, Rajasthan during 30-31 Oct, 2015.

Presented a paper entitled “Thermal and Rheological Studies of Aqueous Solutions of PEG 400 and PEG 1500 Having Pharmaceutical Applications” at International Conference on Recent Trends in Materials Science and Applications (ICRTMSA-2016) organized by Dept. of Physics, St. Joseph College, Trichy during 29 Feb, 2016.

Presented a paper entitled “Mathematical and Experimental Analysis of Ultrasound Velocity and Refractive Index in binary Mixtures of Pharmaceutically Important Polymer – PEG 600” at International Conference on Recent Trends in Materials Science and Applications (ICRTMSA-2016) organized by Dept. of Physics, St. Joseph College, Trichy during 29 Feb, 2016.

Presented a paper entitled “Optical, Mechanical and surface tension studies of aqueous solutions of PEG 3350” at 3rd National conference on Materials for Modern world (NCMMW-2016) organized by Dept. of Physics, Eswari Engineering College, Chennai during 15-16 Sep, 2016.

Presented a paper entitled “A study on thermodynamic and comparative analysis of Polypropylene Glycol” at International Conference on Functional Materials (ICFM-2017) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 02-03 Mar 2017.

Presented a paper entitled “Acoustic and molecular interaction studies of PEG 200 in benzene (A comparative analysis)” at International Conference on Functional Materials (ICFM-2017) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 02-03 Mar 2017.

Presented a paper entitled “A study of the compatibility nature of polyblend [PEG/HEC] using physical methods” at International Conference on Functional Materials (ICFM-2017) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 02-03 Mar 2017.

Presented a paper entitled “A study on molecular interaction and excess analysis of PEG” at International Conference on Functional Materials (ICFM-2017) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 02-03 Mar 2017.

Presented a paper entitled “A study of thermal and acoustic properties of Disodium tartrate” at International Conference on Functional Materials (ICFM-2017) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 02-03 Mar 2017.

Presented a paper entitled “Acoustic, thermal and compatibility studies of PEG 10000 / HEC using physical methods” at International Conference on Materials Science & Technology (ICMST-2017) organized by Department of Physics, GONZAGA College, Krishnagiri during 05 Oct 2017.

Presented a paper entitled “Ultrasonic study of molecular interactions in binary liquid mixtures of cyclohexane with MMA and 2-Ethylbutanol at various temperature” at International Conference on Functional Materials (ICFM-2018) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 25-26 June 2018.

Presented a paper entitled “Thermal and acoustical studies of CuO nanofluids” at International Conference on Functional Materials (ICFM-2018) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 25-26 June 2018.

Presented a paper entitled “Thermal, acoustic and molecular interaction studies of NiFe₂O₄ nanofluids” at International Conference on Functional Materials (ICFM-2018) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 25-26 June 2018.

Presented a paper entitled “A comparative analysis of ultrasound velocity and refractive index in binary liquid systems of PPG and toluene by theoretical and experimental methods” at International Conference on Functional Materials (ICFM-2018) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 25-26 June 2018.

Presented a paper entitled “A study on the acoustic, optical and rheological properties of Polystyrene in different solvents” at International Conference on Functional Materials (ICFM-2018) organized by Department of Physics, SCSVMV University, Enathur, Kanchipuram during 25-26 June 2018.

Presented a paper entitled “Effect of Sonication on the thermal conductivity of NiFe₂O₄ Nanofluid” at 13th Western Pacific Acoustics Conference (WESPAC 2018-2018) organized by CSIR, NPL, New Delhi during 11-15 Nov, 2018

Presented a paper entitled “Thermo – Acoustic Studies of Polyethylene Glycol (PEG 3350)” at 13th Western Pacific Acoustics Conference (WESPAC 2018-2018) organized by CSIR, NPL, New Delhi during 11-15 Nov, 2018

Presented a paper entitled “Acoustical, Rheological and Optical properties of binary mixtures of aqueous solutions of PEG 200 – A comparative Analysis” International Conference on Materials and Manufacturing Engineering (ICMME-2019) organized by Dept. of Mech. Engg., SCSVMV during 21-22 Mar, 2019

Presented a paper entitled “Thermal & acoustical studies of PEG 3000” International Conference on Materials and Manufacturing Engineering (ICMME-2019) organized by Dept. of Mech. Engg., SCSVMV during 21-22 Mar, 2019

Presented a paper entitled “Miscibility studies of blends of PPG by physical methods” International Conference on Materials and Manufacturing Engineering (ICMME-2019) organized by Dept. of Mech. Engg., SCSVMV during 21-22 Mar, 2019

Presented a paper entitled “Miscibility studies of PPG/PVP blends in water by viscosity, density, refractive index and ultrasonic velocity techniques” at National Conference on Materials for Sustainable Development organized by RAMCO Institute of Technology, Rajapalayam, during 11-12 Jan, 2019

Presented a paper entitled “A study on acoustic, thermal and molecular interaction property analysis of PEG” at National Conference on Materials for Sustainable Development organized by RAMCO Institute of Technology, Rajapalayam, during 11-12 Jan, 2019

Presented a paper entitled “Theoretical and Experimental Analysis of ultrasonic velocity and refractive index studies of binary mixtures of PPG with benzene” at National Conference on Materials for Sustainable Development organized by RAMCO Institute of Technology, Rajapalayam, during 11-12 Jan, 2019

Presented a paper entitled “A systematic analysis on the conductivity and inherent properties of CuO nanofluid towards probing ion transports” Asia-Pacific Symposium on Ion Analysis (2019 APIA), Daejeon (South Korea), during 06-09 Nov, 2019.

Presented a paper entitled “Experimental and Theoretical Estimation of optical and Rheological properties of Polypropylene Glycol – A Comparative study” National Web Conference on Synthesis and Characterization of Novel Materials, organized by Dept. of Physics, Muthurangam Govt. Arts College, Vellore during 06-07, July 2020.

Presented a paper entitled “Compatibility Studies of Polyblends Using Physical Methods-An Overview” International Conference on Materials & Mathematical sciences, organized by School of Advanced Sciences, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, during 19-20 June, 2020

Presented a paper entitled “Thermal and Acoustical studies of Polyethylene glycol (PEG 10000)” International Conference on Materials & Mathematical sciences, organized by School of Advanced Sciences” Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, during 19-20 June, 2020

Presented a paper entitled “Mathematical and Experimental Investigation of Viscosity and Refractive index of Binary liquid Mixtures of Polypropylene glycol with Isopropyl Alcohol” International Conference on Materials & Mathematical sciences, organized by School of Advanced Sciences, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, during 19-20 June, 2020

Presented a paper entitled “Miscibility Studies of Blends of PEG / PS by Physical Methods” International Conference on Materials & Mathematical sciences, organized by School of Advanced Sciences, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, during 19-20 June, 2020

Presented a paper entitled “A Study On Rheological, Optical, Electrical And Magnetic Properties of Fe₂O₃ Nanofluids” International Conference on Materials & Mathematical sciences, organized by School of Advanced Sciences, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, during 19-20 June, 2020.

Presented a paper entitled “Ultrasonic and Thermal Conductivity studies of TiO₂@SiO₂ Core-Shell Nanofluids” International Conference on Advanced Materials and Their Applications - (ICAMA - 2022), V.O. Chidambaram College, Thoothukudi during 29-30 SEP, 2022.

Presented a paper entitled “Molecular Interaction and Thermal conductivity studies of N-doped Carbon Coated Metal Oxides Nanocomposites Nanofluids” International Conference on Advanced Materials and Their Applications - (ICAMA - 2022), V.O. Chidambaram College, Thoothukudi during 29-30 SEP, 2022.

Presented a paper entitled “Theoretical and Experimental Expectations of Ultrasonic Velocity in Binary Liquid Mixtures of Cyclohexane with Isopropyl acetate / Isobutyl acetate - A Comparative Study” International Conference on Advanced Materials (ICAM-2023), Women’s Christian College, Chennai during 21-22 FEB, 2023.

Presented a paper entitled “A Study on the Activation Energy of Binary Mixtures of Poly(methyl methacrylate) (PMMA 15000)” International Conference on Advanced Materials (ICAM-2023), Women’s Christian College, Chennai during 21-22 FEB, 2023.

Presented a paper entitled “One step microwave rapid synthesis of carbon dots from Pumpkin and Guava leaves” International Conference on Advanced Materials (ICAM-2023), Women’s Christian College, Chennai during 21-22 FEB, 2023.

Presented a paper entitled “Determination of Physico-Chemical characteristics of organic liquid using Redlich-Kister coefficients” International Conference on Recent Trends In Applied Mathematics (ICRTAM 2023), organized by Dept. of Mathematics, Loyola College, Chennai during 24-25 FEB, 2023.

RESEARCH OF INTEREST

ULTRASONICS AND POLYMER BLENDS, NANOFLUIDS

WORK EXPERIENCE :

- Teaching Experience (2 years): Handled theory classes in Physics at SCSVMV University, Enathur for First year BE/B.Tech during July 2013 – DEC 2013 (6 months).
Handled theory classes in Physics at SCSVMV University, Enathur for II-year B.Sc Chemistry during July 2015 – Dec 2016 (one and half year).
- Research Lab In-charge : Digital ultrasonic pulse echo meter, Brookfield viscometer, Abbe refractometer, Digital interferometer for solid
- Lab Instructor : Lab Instructor for I-BE / B.Tech Physics lab in Aarupadai Veedu Institute of Technology, Paiyanoor from Oct 2003 to Aug 2007