

*Dr. Md Nayeem*



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**Qualifications: M.Sc (Physics), B.Ed., M.Phil., Ph.D., CSIR-NET., APSET**

**Date of Appointment in Government Service: 17-12-2004**

**Total length of Government service: 18 yrs**

**Designation: Lecturer in Physics**

**Present College Address:**

**KRK Government Degree College, Addanki-523201, Prakasam Dist, Andhra Pradesh.**

**Awards: Pratibha Award from Government of Andhrapradesh**

<https://www.adscientificindex.com/scientist.php?id=2004927>

**UGC project completed: Thermo acoustic investigations in some binary mixtures**

**UGC sponsored National seminars organized: 03**

<https://scholar.google.co.in/citations?user=b8Ksf10AAAAJ&hl=en>

**(A) Research publications:**

<i>S. No</i>	<i>Title of the article</i>	<i>Name of the publisher// Journal with ISBN / ISSN Number</i>	<i>Year</i>
1.	Ultrasonic Investigations of Molecular Interaction in Binary Mixtures of Benzyl Benzoate with Isomers of Butanol	International Journal of Pharma Research & Review, Feb 2014; 3(2):65-78	2014
2.	Volumetric and viscometric study of aqueous ethylene glycol in butan-2-ol and propan-2-ol	Journal of Chemical, Biological and Physical Sciences Aug 2014 – Oct. 2014, Vol. 4, No. 4; 3092-3108; E- ISSN: 2249 –1929	2014
3.	Ultrasonic Investigations of Molecular Interaction in Binary Mixtures of Cyclohexanone with Isomers of Butanol	<b>Hindawi Publishing Corporation,</b> Journal of Applied Chemistry Volume 2014, Article ID	2014

		741795, <a href="http://dx.doi.org/10.1155/2014/741795">http://dx.doi.org/10.1155/2014/741795</a>	
4.	Thermoacoustic, Volumetric, and Viscometric Investigations in Binary Liquid System of Cyclohexanone with Benzyl Benzoate at T = 308.15, 313.15, and 318.15K	<b>Hindawi Publishing Corporation</b> Journal of Thermodynamics Volume 2014, Article ID 487403, <a href="http://dx.doi.org/10.1155/2014/487403">http://dx.doi.org/10.1155/2014/487403</a>	2014
5.	Ultrasonic and volumetric study of aqueous solution of ethyleneglycol, propylene glycol in iso-propanol	Journal of Chemical and Pharmaceutical Research, 2014, 6(4):1243-1258; ISSN : 0975-7384; CODEN(USA) : JCPRC5	2014
6.	Volumetric and viscometric study of aqueous solution of ethylene glycol, propylene glycol in iso-propanol	International Journal of Pharmaceutical, Chemical and Biological Sciences; IJPCBS 2014, 4(3), 691-705; ISSN: 2249-9504	2014
7.	Densities, viscosities, and excess properties for binary mixtures of ethylene glycol with amides at 308.15 K	<b>SPRINGER;</b> Journal of Thermal Analysis and Calorimetry; DOI 10.1007/s10973-014-4019-5; ISSN 1388-6150	2014
8.	Study of some thermodynamic and acoustic properties in the solutions of acrylamide with equimolar mixture of ethanol and isopropyl alcohol/isobutyl alcohol/isoamylalcohol;	National Conference on Advanced Functional Materials and Computer Applications in Materials Technology (CAMCAT-2014) Indian Journal of Research in Pharmacy and Biotechnology ISSN: 2320-3471 (Online); 2321-5674 (Print)	2014
9.	Ultrasonic, Volumetric and Viscometric Study of Aqueous - Electrolyte Solutions	Journal of Chemical, Biological and Physical Sciences; MAY 2014 – JULY 2014, Vol. 4, No. 3; 2401-2415; E-ISSN: 2249 –1929	2014
10.	Comparative study of molecular interactions in aromatic, cyclic and aliphatic ketones with 1-octanol at 308.15 K: An insight from ultrasonic velocity and density	<b>ELSEVIER;</b> Journal of Molecular Liquids 207 (2015) 286–293	2015
11.	Acoustic and volumetric investigations in aromatic, cyclic and aliphatic ketones with dimethyl sulphoxide at 308.15 K	<b>ELSEVIER;</b> Arabian Journal of Chemistry, <a href="http://dx.doi.org/10.1016/j.arabjc.2015.08.005">http://dx.doi.org/10.1016/j.arabjc.2015.08.005</a>	2015
12.	Experimental and Theoretical Investigations of Ultrasonic Speed in Binary Liquid Mixtures of Benzyl Benzoate with Isomers of Butanol at T=308.15K;	Journal of Chemical and Pharmaceutical Sciences; ISSN: 0974-2115	2015

13.	Comparative analysis of molecular interactions between drugs of aqueous propylene glycol with certain alcohols at 308.15K: an insight from density and viscosity studies	International Journal of Pharmaceutical Sciences and Research, 2015; Vol. 6(9): 3961-3974. E-ISSN: 0975-8232; P-ISSN: 2320-5148	2015
14.	Experimental and theoretical investigations of ultrasonic speed in binary liquid mixtures of ascabin with isomers of butanol at T=313.15K;	Journal of Chemical and Pharmaceutical Sciences; ISSN: 0974-2115.	2015
15.	Thermoacoustic, volumetric, and viscometric investigations in the binary mixtures of 1,4-dioxane with n-hexane or n-heptane or n-octane	<b>SPRINGER;</b> Journal of Thermal Analysis and Calorimetry; DOI 10.1007/s10973-015-4994-1	2015
16.	Viscometric Study of Molecular Interactions in Dimethyl Carbonate +n-Alkoxyethanol Mixtures at Different Temperatures	Journal of Thermodynamics & Catalysis; J Thermodyn Catal 2016, 7:4; DOI: 10.4172/2157-7544.1000177; ISSN: 2160-7544	2016
17.	Investigation of molecular interactions in binary mixture (benzyl benzoate + ethyl acetate) at T = (308.15, 313.15, and 318.15) K: An insight from ultrasonic speed of sound and density	<b>ELSEVIER;</b> Journal of Molecular Liquids 218 (2016) 676–685	2016
18.	The study of solute–solvent interactions in 1-ethyl-3-methylimidazolium tetrafluoroborate + 2-ethoxyethanol from density, speed of sound, and refractive index measurements	<b>SPRINGER;</b> Journal of Thermal Analysis and Calorimetry; DOI 10.1007/s10973-015-5205-9	2016
19.	Excess Thermodynamic Properties for Binary Mixtures of Ionic Liquid 1-Ethyl-3-methylimidazolium Ethyl Sulfate and 2-Methoxyethanol from T=(298.15 to 328.15) K at Atmospheric Pressure	<b>SPRINGER;</b> Journal of Solution Chemistry; DOI 10.1007/s10953-016-0465-y	2016
20.	Computation of (i)activity coefficients (ii) excess chemical potential (iii) excess molar enthalpy by prigogine-flory-patterson theory for binary liquid system at T=308.15K;	National seminar GDC(A), Guntur; Full length Proceedings ISBN:978-93-85132-12-4.	2016
21.	Study of molecular interactions in binary liquid mixtures of[Emim][BF4] with 2-methoxyethanol using thermo acoustic,volumetric and optical properties	<b>ELSEVIER;</b> Thermochimica Acta 630 (2016) 37–49	2016
22.	The study of solute–solvent interactions in 1-ethyl-3-methylimidazolium ethylsulfate + 2-ethoxyethanol from	<b>ELSEVIER;</b> Journal of Molecular Liquids 218 (2016) 83–94	2016

	density, speed of sound and refractive index measurements		
23.	Molecular interaction studies in the binary mixture of 1-ethyl-3-methylimidazolium trifluoromethanesulphonate+1-butanol from density, speed of sound and refractive index measurements	<b>Taylor &amp; Francis;</b> Physics and Chemistry of Liquids ISSN: 0031-9104	2017
24.	Steric and electronic effects to interpret non-covalent interactions in binary mixtures of dimethyl carbonate and isomeric cresols through thermophysical, acoustic and spectroscopic studies	<b>SPRINGER;</b> Journal of Thermal Analysis and Calorimetry; ISSN 1388-6150	2017
25.	Investigation of molecular interactions & prediction of calorimetric potentials of a binary liquid system at T = 308.15 K: An insight from physicochemical parameters	<b>ELSEVIER;</b> Karbala International Journal of Modern Science, ISSN: 2405-609X	2017
26.	<a href="#">Investigation of solute-solvent interactions in {1-butyl-3-methylimidazoliumBis(trifluoromethyl sulfonyl)imide + dimethylcarbonate} mixture using physicochemical properties</a>	<b>ELSEVIER;The Journal of Chemical Thermodynamics;</b> <a href="#">Volume 115</a> , December 2017, Pages 133-147	2017
27.	Investigation of molecular interaction in binary system through activity coefficients and application of prigogine-flory-patterson theory to evaluate excess molar enthalpy at T=308.15K	Proceedings of the Intemational Seminar on Physics and Chemistry of Materials and Applications (ISPCMA-2017) - SPMH Kalasala, Machilipatnam. ISBN:978-93 -82570	2017
28.	Exploring molecular interactions of binary mixture (dimethyl carbonate + benzyl benzoate): Measurements and correlation	<b>ELSEVIER;</b> Journal of Molecular Liquids; 249 (2018) 1183–1194	2017
29.	Thermophysical investigations and prediction of calorimetric potentials in binary mixture of 1-butyl-3-methylimidazolium trifluoromethanesulfonate with 1-pentanol	<b>SPRINGER;</b> Journal of Thermal Analysis and Calorimetry; <a href="https://doi.org/10.1007/s10973-017-6887-y">https://doi.org/10.1007/s10973-017-6887-y</a>	2017
30.	A new approach- investigation of molecular interactions in binary liquid system: an insight from activity coefficients and excess chemical	National seminar Proceedings of GDC(A), Kadapa. ISBN:978-93-86251-45-9	2017

	potentials;		
31.	Thermo-physicochemical investigation of molecular interactions in binary combination (dimethyl carbonate + methyl benzoate) Measurements and correlation	<b>SPRINGER;</b> Journal of Thermal Analysis and Calorimetry	2017
32.	Acoustic and volumetric investigations in aromatic, cyclic and aliphatic ketones with dimethyl sulphoxide at 308.15 K	<b>Elsevier;</b> Arabian Journal of Chemistry (2019) 12, 3129–3140 <a href="http://dx.doi.org/10.1016/j.arabjc.2015.08.005">http://dx.doi.org/10.1016/j.arabjc.2015.08.005</a>	2019
33.	Binary mixtures of 2-methylcyclohexanone with various functional groups (m-cresol, p-cresol and o-chlorophenol)	<b>Elsevier;</b> Chemical Data Collections Chemical Data Collections 28 (2020) 100386 <a href="https://doi.org/10.1016/j.cdc.2020.100386">https://doi.org/10.1016/j.cdc.2020.100386</a>	2020
34.	Computational and theoretical exploration for clinical suitability of Remdesivir drug to SARS-CoV-2	<b>Elsevier;</b> European Journal of Pharmacology; <a href="https://doi.org/10.1016/j.ejphar.2020.173642">https://doi.org/10.1016/j.ejphar.2020.173642</a>	2020
35.	A molecular interactions study between 1-butyl-3-methylimidazolium hexa-fluorophosphate ([Bmim][PF6]) and N-methylpyrrolidone	<b>Elsevier: The Journal of Chemical Thermodynamics;</b> <a href="https://doi.org/10.1016/j.jct.2020.106330">https://doi.org/10.1016/j.jct.2020.106330</a>	2021
36.	Target SARS-CoV-2: computation of binding energies with drugs of dexamethasone/umifenovir by molecular dynamics using OPLS-AA force field	Springer: Research on Biomedical Engineering <a href="https://doi.org/10.1007/s42600-020-00119-y">https://doi.org/10.1007/s42600-020-00119-y</a>	2021
37.	Target SARS-CoV-2: theoretical exploration on clinical suitability of certain drugs	Taylor & Francis: Journal of Biomolecular Structure and Dynamics <a href="https://doi.org/10.1080/07391102.2021.1924262">https://doi.org/10.1080/07391102.2021.1924262</a>	2021

**(B) Conferences/Seminars Attended**

<i>S.No</i>	<i>Title of the paper</i>	<i>Year</i>
1.	Study of some thermodynamic and acoustic properties in the solutions of acrylamide with equimolar mixture of ethanol and isopropylalcohol/isobutyl alcohol/isoamylalcohol; ISSN: 2320-3471.	2014
2.	Thermo-acoustical and excess thermodynamic investigations in certain ketones with DMSO at 308.15 K	2014
3.	Volumetric and Viscometric studies in aqueous Ethylene	2014

	Glycol in certain alkanols	
4.	<u>Experimental and theoretical investigations of ultrasonic speed in binary liquid mixtures of ascabin with isomers of butanol at T=313.15K; Journal of Chemical and Pharmaceutical Sciences; ISSN: 0974-2115.</u>	2015
5.	Experimental and Theoretical Investigations of Ultrasonic Speed in Binary Liquid Mixtures of Benzyl Benzoate with Isomers of Butanol at T=308.15K; Journal of Chemical and Pharmaceutical Sciences; ISSN: 0974-2115	2015
6.	Computation of (i)activity coefficients (ii) excess chemical potential (iii) excess molar enthalpy by prigogine-flory-patterson theory for binary liquid system at T=308.15K; ISBN:978-93-85132-12-4.	2016
7.	Investigation of molecular interaction in binary system through activity coefficients and application of prigogine-flory-patterson theory to evaluate excess molar enthalpy at T=308.15K	2017
8.	A new approach- investigation of molecular interactions in binary liquid system: an insight from activity coefficients and excess chemical potentials; ISBN:978-93-86251-45-9	2017
9.	Rare earth phosphors - significances	2017
10.	Prediction of Density from SRK/PR Cubic EoS for a binary liquid-SRR	2017
11.	An application of computational study: Prediction of density from SRK and PR Cubic Equation of State for a binary liquid at $T=308.15K$	2017
12.	Applied Physics and Materials Science (APMS-2018)-	2018
13.	Higher Edn System in the Light of Reorganization of the states: Trends, Opportunities and Challenges	2018
14.	Fundamentals of Instrumental Analysis-Theory and Practical Training programm on NMR & HPLC-JKC	2019
15.	Recent Developments and Applications of Physico-Chemical Characterization Techniques-JKC	2019

<b>(C) Invited talks delivered at Conferences / Seminars / Colleges :</b>			
S. No	Title of the Conference / Seminar with duration	Title of the talk	Year
1.	Recent trends in Chemistry/2 days	Volumetric and Viscometric studies in aqueous Ethylene Glycol in certain alkanols	2014
2.	Recent trends in Applied Physics/2 days	Experimental and Theoretical Investigations of Ultrasonic Speed in Binary Liquid Mixtures of Benzyl Benzoate with Isomers of Butanol at T=308.15K; Journal of Chemical and Pharmaceutical Sciences; ISSN: 0974-2115	2015
3.	Awareness on Human Health/ 1 day	Got Balance?	2016
4.	Advanced trends in material science/1 day	A new approach- Investigation of molecular interactions in binary liquid system: an insight from activity coefficients and excess chemical potentials; ISBN:978-93-86251-45-9	2017

**(D) Research Publications (Books, chapters in books, other than referred journal articles)**  
**Chapter Contribution:**

<b>2017-18; December</b> <b>-Cellulose-Reinforced Nanofibre composites-</b>	Chapter in knowledge based volumes in International publishers with ISBN numbers <b>ISBN:978-0-08-100957-4</b>	Published by <b>ELSEVIER (WP)</b> <b>ISBN:978-0-08-100957-4</b>
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**(E) Life member of INDIAN THERMODYNAMIC SOCIETY**

**(F) RC/OC/FDP/Trainings/MOOCs certificate courses completed:**

<b>RC/OC/FDP/Trainings/MOOCs certificate courses completed</b>			
<b>S. No</b>	<b>Title</b>	<b>Place</b>	<b>Year</b>
1.	Disaster Management -11-07-2016 to 30-07-2016:(108 hrs)--RC	UGC HRDC-SVU, Tirupathi	2016
2.	42 nd OC : 02-02-2015 TO 28-02-2015 ---OC	UGC-JNTUH, Hyderabad	2015
3.	Research Methodology: 20July-03 August: Ministry of Education, TLC-RC, University of Delhi--FDP	Delhi	2021
4.	Chemistry for Societal Advancements: 26-07-2021 to 31-07-2021---FDP	KLU, APKS, Amaravathi	2021
5.	Five Day e-Workshop on LaTeX-5-07-2021 to 9-07-2021	Gitam, Bangalore	2021
6.	NLW on RT & O in Physics (Online)-10-05-2021 to 17-05-2021- Workshop	VIT-AP,	2021
7.	Material Characterization Techniques--5 day FDP: 2-03-21 to 6-03-2021	Bhavan's Vivekanda College, Secunderabad	2021
8.	5 day APCCE-US FDP on New Knowledge & Energy...6-07-20 to 10-07-20	APCCE, Vijayawada	2020
9.	2 day FDP " Advances in Photonics"- 06-07-20 to 07-07-20	RGMCET, Nandyal	2020
10.	Open source Tools for Research-1 week FDP: 8-06-20 to 14-06-20	MHRD, TLC-RC, University of Delhi	2020
11.	Technology Assisted Teaching & Virtual Learning through ICT Tools--1 week International Level FDP: 25-05-20 to 30-05-20	SBVR Degree College, Badvel, Kadapa	2020
12.	SWAYAM- ARPIT :	IIT, Bombay	2020
13.	Electronic Theory of Solids: 12 week course: NPTEL	IIT, KHARAGPUR	2020
14.	Non-conventional Energy Resources: NPTEL (12 week course)	IIT, Madras	2020
15.	IYPT 2019 International Short-Term Certificate Course	IARC/ CENTRE FOR United Nations, Mumbai	2019
16.	FDP: NPTEL-AICTE: Jul-Oct 2019 (12 weeks)	IIT Madras	2019
17.	Physics of Materials: NPTEL	IIT Madras	2019



	Certificate Course (12 week)		
18.	Nanomaterials: Experimental Design & Theoretical Modelling: 40 hr FDP	NIT Warangal, IIIT Kurnool	2021
19.	Computational Chemistry and Classical Molecular Dynamics: NPTEL: Certificate Course (8 weeks)	IIT Bombay	2018
20.	Experimental Physics-1; NPTEL (12 Weeks course)	IIT Kharagpur	2019