CURRICULUM VITAE

Dr. Ramesh C. Thakur
Director IQAC,
Associate Professor, Department of Chemistry
Associate Director, Centre for Green Energy and Nanotechnology
Himachal Pradesh University, Summer Hill, Shimla-171005 (H.P.)
E-mail: drthakurchem@gmail.com, drthakur@hpuniv.ac.in
Phone: +91-9876071296, +91-7888720256
Google Scholar ID: http://scholar.google.co.in/citations?user=5lKGcs4AAAAJ
Scopus ID: 56489833300
Research Gate: https://www.researchgate.net/profile/Ramesh-Thakur-7

Personal details

Native Place: VPO, Marhana, Tehsil Ghumarwin, Distt. Bilaspur, Himachal Pradesh-174028
Nationality: Indian
Correspondence Address: Department of Chemistry, Himachal Pradesh University, Shimla, India – 171005

Key research areas of interest and fields of work:

- Solution chemistry, electrochemistry, Thermodynamic, Transport and electrochemical studies of electrolytic and non-electrolytic solutions
- Ionic Liquids, Deep Eutectic Solvents, Hybrid Electrolytes, Aqueous organic electrolytes
- Materials for Energy storage devices

Educational qualifications:

Degree	Details	Year
Ph.D.	Chemistry, Himachal Pradesh University, Shimla. **Thesis Title:** A study of Thermodynamic and Transport properties of divalent Transition metal sulphates and Magnesium sulphate in binary aqueous mixtures of Glycols.	2002

Academic and Administrative Experience Details:

Designation	From	To	Period
Associate Professor Department of Chemistry, Himachal Pradesh University, Shimla	Dec 2020	Working	
Associate Director Centre for Green Energy and Nanotechnology, HPU, Shimla	Aug 2025	Working	
Director Internal Quality Assurance Cell (IQAC), HPU, Shimla	Nov 2022	Working	2+ years
Deputy Director Internal Quality Assurance Cell (IQAC), HPU, Shimla	06-11-2021	29-11-2022	1+ years
Coordinator University Institute of Technology, HPU	16-10-2021	24-08-2023	1.10 years
Professor / Associate Professor / Asst. Professor Lovely Professional University	Sep 2007	Dec 2020	13.3 years
Additional Dean School of Chemical Engineering & Physical Sciences, Lovely Professional University	Jan 2019	Dec 2020	2 years
Head Centre for Research Degree Programmes, Lovely Professional University	Aug 2016	Dec 2020	4.4 years
Associate Dean Lovely Professional University	Aug 2015	Dec 2018	3.5 years
Head School of Chemical Engineering and Physical Sciences, Lovely Professional University	Jul 2013	Dec 2020	7.5 years

Research grants & projects:

Sr. No	Project Title	Year	Responsibility	Funding Amount & Funding Agency	Status
1	Dynamic Research Ecosystem for Advanced Materials (DREAMS)	2025	Principal Investigator	**Rs.10.23 Crore** ANRF under PAIR Grant	Ongoing

2	Sustainable Hybrid Materials for Electrochemical Energy Storage	2025	Principal Investigator	**Rs. 2.0 Lac** Himachal Pradesh University under MERU Component of PM-USHA Grant	Ongoing
3	Synthesis and analysis of green deep eutectic solvent systems for energy storage applications	2024	Principal Investigator	**Rs. 7.0 Lac** Department of Environment, Science Technology and Climate Change, Govt. of Himachal Pradesh	Ongoing
4	Physicochemical Investigation of some organic electrolytes in binary aqueous mixtures of propylene carbonate for energy storage applications	2021	Principal Investigator	**Rs.0.55 Lac** Himachal Pradesh University under RUSA - Equity Initiative	Completed

PUBLICATIONS

Published Articles:

1. M.L. Parmar, D.K. Dhiman **R. Thakur**; A study on viscosity B-coefficients of some mineral salts in binary aqueous solutions of urea at various temperatures; **Indian J. Chem**., 41A, (2002) 2032. CSIR-NISCAIR.
2. **R.C. Thakur**, M.L. Parmar; Effect of temperature on the viscosities of some divalent transition metal sulphates and magnesium sulphate in water and water + ethylene glycol mixtures; **Indian J. Chem**., 45A, (2006) 1631. CSIR-NISCAIR.
3. **R.C. Thakur**, M.L. Parmar; Effect of Temperature on the partial molar volumes of some divalent transition metal sulphates and magnesium sulphate in the water-rich region of aqueous mixturesof ethylene glycol; **J. Molecular Liquids**, 128, (2006)85.https://doi.org/10.1016/j.molliq.2005.12.011 (Elsevier)
4. **R.C.Thakur,** M.L.Parmar; Effect of temperature on the partial molar volumes of some divalent transition metal sulphates and magnesium sulphate in binary aqueous mixtures of diethylene glycol; Proc**. Nat. Acad. Sci. India,** 76(A), III, (2006) 183**.** (Springer)
5. **R.C.Thakur** and Ashish Kumar; Nanomagnetites Green Synthesis Assisted by Sunflower Oil; **Research Journal of Pharmaceutical, Biological and Chemical Sciences**,5(6), (2014)1053. (Peer Reviewed Journal)
6. **R.C.Thakur**, Ravi Sharma, Ashish Kumar, Sanjay Kumar and M.L.Parmar; Partial Molar Volumes of Aluminium Chloride, Aluminium Sulphate and Aluminium Nitrate in Water-rich Binary Aqueous Mixtures of Tetrahydrofuran; **Oriental Journal of Chemistry;** 30(4),(2014)2037. http://dx.doi.org/10.13005/ojc/300469. (Scopus)
7. **R.C.Thakur** and Sonica; Effect of Temperature on Partial Molar Volumes of Some Bivalent Transition Metal Chlorides and Magnesium Chloride in the Water-Rich Region of Binary Aqueous

Mixtures of Ethanol; **Research Journal of Pharmaceutical, Biological and Chemical Sciences**,5(6),(2014)1298. (Peer Reviewed Journal)

8. **R.C.Thakur** and Sonika; Effect of temperature on the partial molar volumes of some bivalent transition metal chlorides in water and binary aqueous mixtures of methanol; **International Journal of Chem Tech Research**,7(5), (2014-15)2222. (Peer Reviewed Journal).
9. Ashish Kumar, **R.C.Thakur**, Wasim Raja; Mustard oil assisted green synthesis of Nanomagnetites, **J. Mater. Environ. Sci**. 6 (4) (2015)1105. (Scopus).
10. **R.C. Thakur**, Ravi Sharma, Ashish Kumar, M.L. Parmar; Thermodynamic and transport studies of some aluminium salts in water and binary aqueous mixtures of tetrahydrofuran; J**. Mater. Environ. Sci**. 6 (5) (2015) 1330. (Scopus)
11. Balwinder Saini, Ravi Sharma and **R.C.Thakur**; Thermodynamics and transport properties of L-Proline in water and binary aqueous mixtures of acetonitrile at 303.15 K; **International Journal of Chem Tech Research**, 8 (12) (2015) 395. (Peer Reviewed Journal)
12. **R. C. Thakur**, Ravi Sharma, Anu Rana and Sanjay Kumar; Thermodynamic study of calcium chloride and magnesium chloride in binary aqueous mixtures of sucrose at different temperatures; **Journal of Chemical and Pharmaceutical Research**,7(1) (2015) 176. (Peer Reviewed Journal).
13. **R. C. Thakur**, Ravi Sharma, Annu and Ashish Kumar; Transport studies of alkaline earth metal chlorides in binary aqueous mixtures of sucrose at different temperatures; **Journal of Chemical and Pharmaceutical Research**, 7(1), 2015) 255. (Peer Reviewed Journal).
14. Sanjay K. Pathania, Vivek Sharma, **Ramesh C. Thakur**, Radhika Sharma and Reema Sharma; Influence of bovine serum albumin (BSA) on micellization behaviour of sodiumdodecylsulphate (SDS) in aqueous rich mixtures of dimethylsulfoxide at different temperatures; **Journal of Chemical and Pharmaceutical Research**, 7(3), (2015)1. **(**Peer Reviewed Journal)
15. **R.C.Thakur,** Ravi Sharma, Meenakshi and Ashish Kumar; Thermodynamic Study of Copper Sulphate and Zinc Sulphate in Water and Binary Aqueous Mixtures of Propylene Glycol; **Oriental Journal of Chemistry**; 31(1), (2015) 363 http://dx.doi.org/10.13005/ojc/310143 (Scopus)
16. Sanjay K Pathania, Vivek Sharma, **Ramesh C Thakur**, Ashish Kumar, and Sitansh Sharma; A Comparative Study of Interactions between Protein (Lysozyme) and Ionic Surfactants (SDS, CTAB) in Aqueous Rich Mixtures of DMSO At Different Temperatures; **Research Journal of Pharmaceutical, Biological and Chemical Sciences**; 6 (1), (2015) 721. (Peer Reviewed Journal)
17. Sonika and **Thakur RC**; Effect of Temperature on Viscosity B- Coefficients of Some Transition Metal Chlorides and Magnesium Chloride in Water and In Water + Methanol Mixtures; **Research Journal of Pharmaceutical, Biological and Chemical Sciences**, 6(1),(2015) 664. (Peer Reviewed Journal)
18. **R.C. Thakur,** Ravi Sharma and Manju Bala; Partial Molar Volumes of Cobalt Nitrate and Nickel Nitrate in Water and Binary Aqueous Mixtures of DMSO at Different Temperatures**; J. Mater. Environ. Sci.** 7 (9), (2016) 3415. (Scopus)
19. Balwinder Saini, Ravi Sharma, **R.C.Thakur** and R.K. Bamezai; Study of Molecular Interactions of Ternary L-Arginine –Water -1-Ethyl – 3- Methylimidazolium Chloride Solutions; **Asian Journal of Chemistry** 28 (7), (2016) 1599. (Scopus)
20. **Ramesh Thakur,** Ravi Sharma and Balwinder Saini; Activation Energy Parameters for Hydrodynamic Permeability of Divalent Transition Metal Sulphates and Magnesium Sulphate in Binary Aqueous Mixtures of Ethylene Glycol; **Asian Journal of Chemistry** ;28 (9), (2016) 2043. (Scopus)

21. **R. C. Thakur**, Ravi Sharma and Vishali Gill; Effect of Temperature on the Volumetric Studies of some Thiocyanates in Water; **Rasayan J.Chem**.; 9 (1), (2016) 44. (Scopus)
22. Ravi Sharma, **R.C.Thakur,** and Balwinder Saini ; Thermo physical Properties of Binary Aqueous Mixtures of Cyclopentanone and Isomeric Forms of n-Butyl Alcohol at 303.15 K; **Asian Journal of Chemistry** ; 28(10), (2016) 2331. https://doi.org/10.14233/ajchem.2016.20010 (Scopus)
23. **R.C.Thakur,** Ravi Sharma, Sonika Singh and M.L.Parmar; Activation Energy Parameters for Hydrodynamic Permeability of Divalent Transition Metal Sulphates and Magnesium Sulphate through an inorganic membrane of Aluminium Oxide; **Asian Journal of Chemistry**; 29 (9), (2017) 2095. https://doi.org/10.14233/ajchem.2017.20834 (Scopus)
24. Ravi Sharma, Sonika, and **R.C.Thakur;** Viscometric Studies of Nicotinic Acid in Binary Aqueous Mixtures of D-Lactose; **Oriental Journal of Chemistry**; 33 (3), (2017) 1483. http://dx.doi.org/10.13005/ojc/330352 (Scopus)
25. Ravi Sharma and **R.C.Thakur** ; Study of Thermodynamic and Acoustic Behaviour of Nicotinic Acid in Binary Aqueous Mixtures Of D-Lactose; Recent Advances in Fundamental and Applied Sciences, AIP Conf. Proc. 1860, 020054-1–020054-10; https://doi.org/10.1063/1.4990353 **AIP Publishing**, 978-0-7354-1534-8/$30.00. (Scopus)
26. **Ramesh C. Thakur** and Ravi Sharma; Viscometric Studies of Divalent Transition Metal Sulphates in Mixtures of Water–Diethylene Glycol at 298.15–318.15 K; **Russian Journal of Physical Chemistry A**, 91(9), (2017) 1703. https://doi.org/10.1134/S0036024417090254 (Springer).
27. Ravi Sharma, **R. C. Thakur**, Balwinder Sani, and Harsh Kumar; Properties of L-Ascorbic Acid in Water and Binary Aqueous Mixtures of D-Glucose and D-Fructose at Different Temperatures; **Russian Journal of Physical Chemistry A,** 91(12), (2017) 2389. https://doi.org/10.1134/S0036024417120251 (Springer)
28. Ravi Sharma, **R. C. Thakur** & Harsh Kumar; Study of viscometric properties of L-ascorbic acid in binary aqueous mixtures of D-glucose and D-fructose; **Physics and Chemistry of Liquids**; 2018; https://doi.org/10.1080/00319104.2018.1432049 (Taylor & Francis -IF: 1.915-2020)
29. Ravi Sharma and **R. C. Thakur**; Molecular Interactions of Pyridoxine Hydrochloride in Aqueous Mixtures of D-Glucose, D-Fructose and D-Lactose at Different Temperatures; **Russian Journal of Physical Chemistry A**, 2018, Vol. 92, No. 13, pp.2685-2692. https://doi.org/10.1134/s0036024418130241 (Springer).
30. Sonika, **R. C. Thakur**, S. Chauhan and Kuldeep Singh; Molecular Interactions of Transition Metal Chlorides in Water and Water–Ethanol Mixtures at 298–318 K on viscometric Data, **Russian Journal of Physical Chemistry A**, 2018, Vol. 92, No. 13, pp. 2701–2709. https://doi.org/10.1134/S0036024418130307 (Springer).
31. Vivek Sharma, Osvaldo Yanez, Melissa Alegria-Arcos, Ashish Kumar, **Ramesh C Thakur**, Plinio Cantero-Lopez; A Physicochemical and conformational Study of co-solvent effect on the molecular interactions Between similarly charged protein surfactant (BSA-SDBS) system; **J. Chem. Thermodynamics;** 142(2020). https://doi.org/10.1016/j.jct.2019.106022 (Elsevier- IF : 3.178-2020).
32. **R.C.Thakur**, Ravi Sharma and Arshdeep Sharma; Molecular interactions analysis of some aluminium salts in binary aqueous solutions of tetrahydrofuran (THF): Acoustic and Conductometric approach; **Journal of Physics: Conference Series;** 1531 (2020) 012112. DOI 10.1088/1742-6596/1531/1/012112 (Scopus)

33. Harpreet Kaur, **R.C. Thakur**, Harsh Kumar; Effect of proteinogenic amino acids L-serine/L-threonine on volumetric and acoustic behavior of aqueous 1-butyl-3-propyl imidazolium bromide at T = (288.15, 298.15, 308.15, 318.15) K; **J. Chem. Thermodynamics**; 150(2020)106211. https://doi.org/10.1016/j.jct.2020.106211 (Elsevier- IF : 3.178-2020).
34. **Ramesh Chand Thakur**, Ramandeep Kaur and Harpreet Kaur; Transport Properties of Thiamine hydrochloride in Binary Aqueous mixtures of galactose; **European Journal of Molecular and Clinical Medicine**; Volume 07. Issue 07,2020. (Peer Reviewed Journal)
35. Ishrat Fatma, Vivek Sharma, **Ramesh Chand Thakur**, Ashish Kumar; Current trends in protein-surfactant interactions: A review, **Journal of Molecular Liquids**; 341 (2021) 117344. https://doi.org/10.1016/j.molliq.2021.117344 (Elsevier, IF : 6.633-2020).
36. Harpreet Kaur, **Ramesh Chand Thakur**, Harsh Kumar, Arjuna Katal; Effect of α–amino acids (Glycine, L-alanine, L-valine and L-leucine) on volumetric and acoustic properties of aqueous 1-Butyl-3-propylimidazolium bromide at T = (288.15, 298.15, 308.15, 318.15) K**; J. Chem. Thermodynamics**, 158(2021) 106433. https://doi.org/10.1016/j.jct.2021.106433 (Elsevier- IF : 3.178 -2020).
37. **R.C.Thakur**, Ravi Sharma1 and Vishali; Thermo physical properties of some thiocyanates in binary aqueous Mixtures of acetonitrile at five equidistant working temperatures; **Plant Archives** Vol. 20, Supplement 2, 2020 pp. 3079-3082.(Scopus)
38. **Ramesh Thakur;** Study on transport phenomenon of some divalent transition metal sulphates and magnesium sulphate in binary aqueous mixtures of diethylene glycol (DEG); **Plant Archives**; Vol. 20, Supplement 2, 2020 pp. 3083-3088. (Scopus)
39. Harpreet Kaur, **Ramesh C. Thakur**, Vivek Singh Pathania, Shrutila Sharma; Effect of Choline-based ionic liquid (Cholinium ethanoate) on volumetric and acoustic properties of aliphatic amino acids (glycine and L-alanine) at T = (288.15, 298.15, 308.15 and, 318.15) K; **Journal of Molecular Liquids**, 346(2022) 118247. https://doi.org/10.1016/j.molliq.2021.118247 (Elsevier, IF : 6.165 -2020).
40. Sonika Kumari, Ajay Sharma, Satish Kumar, Abhinay Thakur, **Ramesh Thakur**, Shashi Kant Bhatia, Anil Kumar Sharma; Multifaceted potential applicability of hydrotalcite-type anionic clays from green chemistry to environmental sustainability; **Chemosphere**, 306 (2022) 135464. https://doi.org/10.1016/j.chemosphere.2022.135464 (Elsevier, IF : 8.943 -2020).
41. S. Kumari, N. Thakur**, R.C. Thakur**, R. Kumar and A. Sharma ; Effect of Synthetic Parameters on Crystallinity of Hydrotalcite-Like Anionic Clays with Elucidation and Identification through X-Ray Diffraction Analysis; **ECS Transactions**, 107 (1) 18903-18921 (2022), 10.1149/10701.18903ecst ©The Electrochemical Society (IF : 4.316 -2020).
42. Sapna Rana and **Ramesh C Thakur**; Thermophysical and conductometric study of lithium perchlorate in binary aqueous mixture of polyethylene glycol (PEG-400); **Journal of Physics**: Conference Series, 2267 (2022) 012096l; doi:10.1088/1742-6596/2267/1/012096 (Scopus).
43. Chitra Sharma and **Ramesh Chand Thakur**; Potential solvents and electrolytes for energy storage applications: A Review; **Journal of Physics: Conference Series**, 2267 (2022) 012051; doi:10.1088/1742-6596/2267/1/012051(Scopus).
44. Ishrat Fatma, Vivek Sharma, Nisar Ahmad Malik, Humira Assad, Plinio Cantero-López, Julio Sánchez, Roberto López-Rendón, Osvaldo Yañez, **Ramesh Chand Thakur**, Ashish Kumar; Influence of HSA on micellization of NLSS and BC: An experimental - theoretical approach of its

binding characteristics, **Journal of Molecular Liquids;** 367 (2022) 120532 https://doi.org/10.1016/j.molliq.2022.120532 (Elsevier, IF: 6.633 -2022).

45. Ishrat Fatma, Humira Assad, Vivek Sharma, Praveen Kumar Sharma, Asha Sharmhal, **Ramesh Chand Thakur** and Ashish Kumar; Interaction Behavior of *N*-Lauroyl Sarcosine Sodium Salt (NLSS) and Benzethonium Chloride (BC) in Aqueous Human Serum Albumin (HSA) at Different Temperatures: A Volumetric and Acoustic Study; **Journal of Chemical Engineering Data;** (ACS Publication) 2022, 67, 11, 3385–3399. https://doi.org/10.1021/acs.jced.2c00489 (I.F:2021: 3.119).
46. Varruchi Sharma, Anil K. Sharma, Anil Panwar, Imran Sheikh, Ajay Sharma, Sunny Dhir , Kuldeep Dhama , **Ramesh Thakur**; In-silico designing of an inhibitor against mTOR FRB domain: Therapeutic implications against breast cancer; **Journal of Experimental Biology and Agricultural Sciences**; October - 2022; Volume–10(5)1016–1023. DOI: https://doi.org/10.18006/2022.10(5).1016.1023 (Scopus).
47. Vivek Pathania , Shrutila Sharma , B.K. Vermani, Harpreet Kaur, **R.C. Thakur**; Investigating the solvation behavior of some perchlorates in nonaqueous medium and predicting their ion-solvation thermodynamics using Born formula; **Journal of Molecular Liquids;** 371 (2023) 121067 https://doi.org/10.1016/j.molliq.2022.121067 (Elsevier, IF: 6.633 -2022).
48. **Ramesh C. Thakur**, Akshay Sharma , Renuka Sharma , Harpreet Kaur; A comparative analysis of volumetric, viscometric and conductometric properties of Triethylmethylammonium Tetrafluoroborate (TEMABF4) and Tetraethylammonium Tetrafluoroborate (TEABF4) in pure propylene carbonate (PC) and binary aqueous propylene carbonate solvents, **Journal of Molecular ;** 374 (2023) 121244. https://doi.org/10.1016/j.molliq.2023.121244 (Elsevier, IF: 6.633 -2022).
49. Akshay Sharma, Renuka Sharma, **Ramesh C. Thakur** a, Lakhveer Singh; An overview of deep eutectic solvents: Alternative for organic electrolytes, aqueous systems & ionic liquids for electrochemical energy storage; **Journal of Energy Chemistry;** 82 (2023) 592–626. https://doi.org/10.1016/j.jechem.2023.03.039 (Elsevier, IF: 13.599 -2023).
50. Sapna Rana, **Ramesh C. Thakur**, Harpreet Kaur, Akshay Sharma, Renuka Sharma, Vikas Thakur, Harmanjit Singh, and Ishrat Fatma; Investigating the Solvation Behaviour of Some Lithium Salts in Binary Aqueous Mixtures of 1-Ethyl-3-methylimidazolium Tetrafluoroborate ([EMIM][BF4]) at Equidistant Temperatures (*T* =298.15, 303.15, 308.15, 313.15, 318.15) K**; *J. Chem. Eng. Data* 2023,** 68, 1291−1304, https://doi.org/10.1021/acs.jced.3c00037 (ACS Publication I.F- 3.119, 2021).
51. Ishrat Fatma , Vivek Sharma , Praveen Kumar Sharma , Plinio Cantero-Lopez , Humira Assad , Julio Sanchez , Melissa Alegría-Arcos , Osvaldo Yanez , **Ramesh Chand Thakur** , Ashish Kumar ; An experimental and theoretical exploration of the impact of co-solvent on the micellization behaviour of ionic surfactants; **Chemical Physics** 573 (2023) 111997. https://doi.org/10.1016/j.chemphys.2023.111997 (Elsevier, IF: 2.552 -2023).
52. Sapna Rana, **Ramesh Chand Thakur**. Harmanjit Singh Dosanjh; Ionic liquids as battery electrolytes for lithium ion batteries: Recent advances and future prospects; **Solid State Ionics** 400 (2023) 116340. https://doi.org/10.1016/j.ssi.2023.116340 (Elsevier, IF: 3.2 -2023).
53. Harpreet Kaur, **Ramesh C. Thakur**, Nidhi Singh, Ashish Kumar; Ruby Gill, Abhinay Thakur, Shrutila Sharma; Influence of 1-butyl-3-propylimidazolium bromide on viscometric and conductometric behavior of proteinogenic amino acids (glycine and L-alanine); **AIP Conf. Proc**. 2800, 020092 (2023); https://doi.org/10.1063/5.0163118 (Scopus).

54. Ishrat Fatma, Humira Assad, Vivek Sharma, **Ramesh Chand Thakur**, Ashish Kumar; A Comprehensive Review on Types, Properties and Applications of Biomaterials; **AIP Conf. Proc**. 2800, 020040 (2023) https://doi.org/10.1063/5.0162871. (Scopus).
55. Nidhi; Harpreet Kaur; **Ramesh Chand Thakur**; Ashish Kumar Effect of temperature on conductance studies of 1,4-dimethyl-4H-1,2,4-triazolium iodide in binary aqueous solutions of benzylamine and benzamide; **AIP Conf. Proc**. 2800, 020229 (2023) https://doi.org/10.1063/5.0163221. (Scopus).
56. Sapna Rana, **Ramesh Chand Thakur**, Harmanjeet Singh Dosanjh Mixed Solvents – Thermodynamic and Transport Properties: A Review**; AIP Conf. Proc**. 2800, 020094 (2023)https://doi.org/10.1063/5.0163544. (Scopus).
57. Nidhi, Abhinay Thakur, Ishrat Fatma, Humira Assad, Shveta Sharma, Richika Ganjoo, Savas Kaya, Ashish Kumar, **Ramesh Chand Thakur**; Recent Progress in the Application of Electrochemically Rechargeable Metal-air Batteries: A Focus Review**; AIP Conf. Proc.** 2800,020047(2023)https://doi.org/10.1063/5.0162874. (Scopus).
58. Akshay Sharma, Renuka Sharma, **Ramesh Thakur**, Nidhi, "Investigating the physicochemical properties and interactions behaviour of lithium perchlorate in ternary solutions of ethaline DES and bio-additives; **Biomass Conversion and Biorefinery**; https://doi.org/10.1007/s13399-024-05795-9 (2024). (Springer IF:3.5; 2024)
59. Savita Soni , Anjali Kumari, Saurabh Sharma, Ajay Sharma , Vivek Sheel , **Ramesh Thakur**, Shashi Kant Bhatia , Anil Kumar Sharma; Recent advances in metal (*M*=Ni/Fe/Cu/Zn) oxide nanomaterials-mediated removal of dyes from wastewater; **Journal of the Taiwan Institute of Chemical Engineers** https://doi.org/10.1016/j.jtice.2024.10556 (2024). (Elsevier, IF: 5.5-2024).
60. Nidhi, **Ramesh Chand Thakur**, Ashish Kumar, Praveen Kumar Sharma and Kuldeep Singh, "Effect of Additive (1-Butyl-1-methyl Pyrrolidinium Tetrafluoroborate) on Volumetric, Acoustic and Conductance Properties of Binary Aqueous Solutions of Benzylamine at T = (288.15, 298.15, 308.15, 318.15) K; **Asian Journal of Chemistry**; Vol. 36, No. 7 (2024), 1620-1632; https://doi.org/10.14233/ajchem.2024.31771 (2024). **(Scopus).**
61. Nidhi, **Ramesh Chand Thakur**, Ashish Kumar, Praveen Kumar Sharma, Vivek Pathania & Ankita Garg; Effect of triazolium-based ionic liquid (1, 4- dimethyl- 4H-1, 2, 4-triazolium iodide) on volumetric and ultrasonic properties of binary aqueous solutions of benzamide/benzylamine: experimental and computational study; **Physics and Chemistry of Liquids**; DOI: 10.1080/00319104.2024.2382143 (2024). (Taylor and Francis IF-1.2-2024).
62. Ishrat Fatma , Plinio Cantero-L´opez , Vivek Sharma , Osvaldo Ya˜nez , Cristian Correa ,Julio S´anchez , **Ramesh Chand Thakur** , Ashish Kumar ; Investigating micelle formation in systems with benzethonium chloride and n-lauroyl sarcosine sodium salt: The impact of thermal effects and ethyllactate concentration using volumetric, statistical, acoustic, and molecular dynamic methods; **Journal of Molecular Liquids** 411 (2024) 125739.) (Elsevier, IF: 5.3-2024).
63. Nidhi, **Ramesh Chand Thakur**, Ashish Kumar, Praveen Kumar Sharma, Akshay Sharma, Renuka Sharma, Nancy George, Jandeep Singh; Effect of Pyrrolidinium Based Ionic Liquid on Thermo Physical and Electrochemical Properties of Binary Aqueous Solutions of Benzylamine and Benzamide at Different Equidistant Temperatures (288.15 K to 318.15 K); **Chemistry Africa** (Nov-2024); https://doi.org/10.1007/s42250-024-01111-0(Springer, IF: 2.3-2024).
64. Renuka Sharma , Akshay Sharma , **Ramesh Chand Thakur**; Effect of Deep Eutectic Solvent (DES) on physicochemical and electrochemical properties of triethylmethylammonium

tetrafluoroborate in propylene carbonate and aqueous propylene carbonate solvent systems for energy storage applications: A comparative analysis; **Journal of Molecular Liquids** 416 (2024) 126494; https://doi.org/10.1016/j.molliq.2024.126494 (Elsevier, IF: 5.3-2024).

65. Chitra Sharma, Harpreet Kaur, Abhinay Thakur, Akshay Sharma, **Ramesh Chand Thakur**, Harmanjit Singh Dosanjh, and Vivek Pathania; Investigating Molecular Interactions through Computational Modeling, Thermodynamic Analysis, and Acoustic Measurements of LiOTf in Aqueous TEGDME and DME Solutions at Different Temperatures; **ACS Omega** (Dec-2024); https://doi.org/10.1021/acsomega.4c07709 (ACS, IF 3.6-2023).
66. Harpreet Kaur, Abhinay Thakur, **Ramesh Chand Thakur**, and Ashish Kumar; A Review on Multifaceted Role of Ionic Liquids in Modern Energy Storage Systems: From Electrochemical Performance to Environmental Sustainability; **ACS energy and Fuels** (Feb-2025); https://doi.org/10.1021/acs.energyfuels.4c05274 (ACS, IF 5.2-2023).
67. Shivani, **RameshChand Thakur**, Akhil Thakur, Akshay Sharma, Renuka Sharma;Unravelling the prospects of electrolytes containing ionic liquids and deep eutectic solvents for next generation lithium batteries; **Journal of Energy Chemistry**; https://doi.org/10.1016/j.jechem.2025.01.060 (March-2025); (Elsevier, IF: 14.0).
68. Akshay Sharma, Renuka Sharma, **Ramesh Chand Thakur**; Intermolecular dynamics and quantum insight of lithium perchlorate in the deep eutectic solvent (DES) solutions with nitriles for energy storage applications; **Journal of the Taiwan Institute of Chemical Engineers** Volume 171, June 2025, 106041; https://doi.org/10.1016/j.jtice.2025.106041(Elsevier, IF: 6.3-2025).
69. Chitra Sharma, Harpreet Kaur, Abhinay Thakur, **Ramesh Chand Thakur**, Harmanjit Singh Dosanjh; Hybrid Lithium Electrolytes as Potential Electrolytes for Energy Storage Devices: A Pathway to Sustainable and High-Efficiency Solutions; **Topics in Catalysis**; Springer Nature; https://doi.org/10.1007/s11244-025-02154-4 (July-2025)(Springer Nature, IF:3.0-2024).
70. Akshay Sharma, Renuka Sharma, **Ramesh Thakur**, Akhil Thakur, Shivani, and Nidhi; Unraveling the Prospects of Nano Hybrid Electrolytes for Lithium Ion Batteries: Review and Outlook; **Energy and Fuels** (Aug 2025); https://doi.org/10.1021/acs.energyfuels.5c0246 (ACS, IF : 5.3-2024)
71. Renuka Sharma, Akshay Sharma, and Ramesh Chand Thakur; Analyzing the Solvation and Electrochemical Behavior of Triethylmethylammonium Tetrafluoroborate in Pure and Aqueous Ethaline Deep Eutectic Solvent: Experimental and Computational Approaches; **The Journal of Physical Chemistry B (Oct 2025);** https://doi.org/10.1021/acs.jpcb.5c05019 (ACS, IF:2.9-2024)

Patents:

S. No	Title	Type / Status	Date
1	Tracking Audience Admiration and Level of Involvement to Derive Emotions	Published	27-09-2019
2	A process of recycling of PET waste into BHET monomer	Granted	13-02-2023
3	A process of recycling of polycarbonate waste into bisphenol A (BPA) monomer	Granted	11-09-2023

Books and book chapters:

1. **Editor:** ACS Symposium Series; Volume 1504; eISBN: 9780841296466 (June-2025).
2. Authored a textbook, **Engineering Chemistry**, published by Wiley (ISBN-10: 8126537418).

3. Nidhi, **Ramesh Chand Thakur**, Shimaa M. Elsaeed and Ashish Kumar; Book Chapter entitled "Potential of ionic liquids in green energy resources" in the Book, "Green Energy Systems, Design, Modeling, Synthesis and Applications; Academic Press, Elsevier; ISBN: 978-0-323-95108-1; Dec-2022.
4. Akshay Sharma, **Ramesh C. Thakur**, and Renuka Sharma; Book Chapter entitled "**Biomedical Applications of Ferrites"** in the Book; Materials Horizons: From Nature to Nanomaterials; Engineered Ferrites and Their Applications; **Springer**; ISSN 2524-5384; ISSN 2524-5392 (electronic); June-2023.
5. Harpreet Kaur , Abhinay Thakur **, Ramesh Chand Thakur** and Ashish Kumar; Book Chapter entitled " Challenges and future outlooks" from the book Corrosion Mitigation Coatings; https://doi.org/10.1515/9783111016160-019; 2023 Walter de Gruyter GmbH, Berlin/Boston; October,2023.
6. Harpreet Kaur, Abhinay Thakur, **Ramesh Chand Thakur** and Ashish Kumar; Book Chapter entitled "Hybrid Nanomaterials for Environmental Sensing and Monitoring" DOI: 10.4018/979-8-3693-3268-9.ch006-May,2024.
7. Harpreet Kaur, Abhinay Thakur, **Ramesh Chand Thakur** and Ashish Kumar; Book Chapter entitled "Ethical and Safety Considerations in Nanomaterial Use" DOI: 10.4018/979-8-3693-7640-9.ch013-July,2024.
8. Harpreet Kaur, Abhinay Thakur, **Ramesh Chand Thakur** and Ashish Kumar; Book Chapter entitled "Interaction of nanoparticles with Proteins" DOI: 10.4018/979-8-3693-7640-9.ch010-July,2024.
9. **Ramesh C. Thakur** , Akshay Sharma and Renuka Sharma; Chapter 5: Recent advances in the discovery of drug molecules: trends, scope, and relevance; Bioinformatics https://doi.org/10.1515/9783111568584-005 Published by De Gruyter. Nov 2024.
10. Akshay Sharma, Renuka Sharma and **Ramesh Chand Thakur** (2024); Chapter six - Vitamins production from probiotic bacteria in Book entitled "Microbial Vitamins and Carotenoids in Food Biotechnology: Novel Source and Potential Applications" ISBN -978-0-443-15528-4, Academic Press; https://doi.org/10.1016/B978-0-443-15528-4.00007-6
11. Chitra Sharma, **Ramesh Chand Thakur** and Harmanjit Singh (2024); Chapter eleven - Microbial vitamins in dairy products in Book entitled "Microbial Vitamins and Carotenoids in Food Biotechnology: Novel Source and Potential Applications" ISBN -978-0-443-15528-4, Academic Press; https://doi.org/10.1016/B978-0-443-15528-4.00011-8
12. Nidhi , **Ramesh Chand Thakur** , Ashish Kumar , Praveen Kumar Sharma (2024); Chapter thirteen - Microbial carotenoids in nutrition and baby foods in Book entitled "Microbial Vitamins and Carotenoids in Food Biotechnology: Novel Source and Potential Applications" ISBN -978-0-443-15528-4, Academic Press; https://doi.org/10.1016/B978-0-443-15528-4.00013-1
13. Nidhi Singh, **Ramesh Chand Thakur,** Ashish Kumar, Praveen Kumar Sharma; Chapter 2: Application of Fullerene-Based Materials in Fabrication of Photovoltaic Devices; Advanced Nanomaterials for Solution-Processed Flexible Optoelectronic Devices; CRC Press; https://doi.org/10.1201/9781032960500(March-2025).
14. Nidhi Singh, **Ramesh Chand Thakur,** Ashish Kumar, Praveen Kumar Sharma; Chapter 3: Solution-Processed Advanced Materials as Hole Transporting Layer for Application in Optoelectronic Devices; Solution-Processed Advanced Materials as Hole Transporting Layer for Application in Optoelectronic Devices; CRC Press; https://doi.org/10.1201/9781032960500 (March-2025).
15. Harpreet Kaur, Abhinay Thakur**, Ramesh Chand Thakur;** Chapter 4**:** Fabrication and Challenges for Fabrication of Solution-Processed Optoelectronic Devices; Solution-Processed

Advanced Materials as Hole Transporting Layer for Application in Optoelectronic Devices; CRC Press; https://doi.org/10.1201/9781032960500(March-2025).

16. **Editor of the Book** Published by ACS Symposium Series; Volume1504; eISBN: 9780841296466; DOI: 10.1021/bk-2025-1504; https://pubs.acs.org/doi/10.1021/bk-2025-1504. (June-2025).
17. Renuka Sharma, Akshay Sharma, Shivani, Yojana Sharma, and **Ramesh Chand Thakur;** Chapter 10: DESs Based Electrolytes for Zn Batteries; Deep Eutectic Solvents; ACS Symposium Series; Volume1504; eISBN: 9780841296466; DOI: 10.1021/bk-2025-1504; https://pubs.acs.org/doi/10.1021/bk-2025-1504. (June-2025).
18. Akshay Sharma, Renuka Sharma, Akhil Thakur, and **Ramesh Chand Thakur;** Chapter 5:Physicochemical Properties of Deep Eutectic Solvents; Deep Eutectic Solvents; ACS Symposium Series; Volume1504; eISBN: 9780841296466; DOI: 10.1021/bk-2025-1504; https://pubs.acs.org/doi/10.1021/bk-2025-1504 (June-2025).

Students Supervision & Mentorship:

Ph.D

S.No.	Name	Reg. No.	Status / Awarded	Title of Thesis
1	Ms. Sonika	41000234	Awarded – May 2017	A study of thermodynamic and transport properties of transition metal chlorides and Magnesium chloride in water and water + organic solvents
2	Mr. Ravi Sharma	11412716	Awarded – Oct 2018	Study of thermodynamic and transport properties of some water-soluble vitamins in binary aqueous mixtures of sugars
3	Mr. Vivek Sharma	11412696	Awarded – May 2019	Micellization behavior of some ionic surfactants in DMSO-Water and glycerol–Water mixture solvent system and influence of BSA
4	Ms. Harpreet Kaur	11720114	Awarded – Oct 2022	Thermodynamic, acoustic and spectroscopic studies of some biomolecules in aqueous imidazolium and choline-based ionic liquids
5	Ms. Sapna Rana	41800854	Awarded – Oct 2023	Thermophysical and conductance studies of imidazolium based ionic liquids and ternary aqueous mixtures of some lithium salts and glycols
6	Ms. Chitra Sharma	41900185	Awarded – Oct 2025	Thermophysical and conductometric studies of aprotic lithium electrolytes in aprotic organic solvents for energy storage applications
7	Ms. Ishrat Fatima	11919132	Awarded – May 2023	Effect of Co-solvent and Temperature on Protein-Surfactant Interactions: A Physicochemical Study
8	Ms. Nidhi	11916781	Awarded – March 2025	Physicochemical and Conductometric Studies of some Triazolium and pyrrolidinium based

				Ionic liquids in binary aqueous amines for energy storage applications
9	Mr. Akshay	682182178	Pursuing Since 2021	Effect of Some Additives on the Thermophysical and Electrochemical Properties of Lithium Perchlorate in Ethaline Deep Eutectic Solvent for Energy Storage Applications
10	Ms. Renuka	743018127	Pursuing Since 2021	–
11	Mr. Akhil Thakur	–	Pursuing Since 2024	–
12	Ms. Shivani	–	Pursuing Since 2024	–

M.Phil.

S.No.	Name	Year	Title of Dissertation
1	Anu Rana	2007	A study on partial molar volumes and viscosity B-Coefficients of alkaline earth metal chlorides in binary aqueous mixtures of sucrose
2	Anju Bala	2007	A study of ultrasonic velocity and viscosity measurements of drug hostacycline in aqueous alcoholic mixtures
3	Meenakshi	2008	A study of partial molar volumes of some divalent transition metal sulphates in binary aqueous mixtures of propylene glycol
4	Manju	2008	A study of Thermodynamic properties of some divalent transition metal nitrates in binary aqueous mixtures of dimethylsulphoxide
5	Amanpreet	2011	A comparative study on Partial molar volumes and viscosity B-Coefficients of hydrated and anhydrous alums (Potash Alum and Ammonium Alum) in water and binary aqueous mixtures of methanol

M.Sc. Pass & Hons. (Research Project & Dissertations)

S.No.	Name	Reg. No.	Year	Title of Dissertation
1	Gurpreet	–	2008	A study of partial molar volumes of some divalent metal sulphates ($MgSO_4$ and $MnSO_4$) in aqueous mixtures of urea
2	Rajbir	–	2008	A study of transport properties of potassium halides (KCl and KBr) in aqueous sucrose solutions
3	Shailja	–	2008	A study of partial molar volumes of some organic acids (Ascorbic acid and Tartaric acid) in aqueous mixtures of glucose
4	Vikram Kalsi	–	2009	A study of partial molar volumes of alkali metal halides in aqueous mixtures of sucrose

5	Kanwalpreet	–	2010	A study of partial molar volumes of some organic acids (citric acid and ascorbic acid) in aqueous mixtures of sucrose
6	Taruneet	11009240	2012	A comparative thermodynamic study of hydrated and anhydrous salts in water
7	Ravi Sharma	11203040	2014	A study of thermodynamic and transport properties of some aluminium salts in water and binary aqueous mixtures of tetrahydrofuran
8	Tanya	11203290	2014	A study of B-coefficients of some transition metal nitrates in water and binary aqueous mixtures of dimethylsulphoxide
9	Vishali Gill	11411102	2016	Study of thermodynamic and transport properties of some thiocyanate salts in water and binary aqueous mixtures of acetonitrile
10	Veerpal Kaur	11309889	2016	A study of Thermodynamic properties of Nicotinic acid in binary aqueous mixtures of KCl and $FeCl_3$
11	Ramandeep	11509123	2017	Study on transport properties of thiamine hydrochloride in some binary aqueous mixtures of some carbohydrates
12	Sukhmeen	11604325	2018	Study of thermodynamic and transport properties of some water-soluble vitamins in binary aqueous mixtures of urea
13	Arshdeep Sharma	11605533	2018	Acoustic and conductometric properties of some aluminium salts in water and binary aqueous solution of tetrahydrofuran
14	Harshita Rana	11706891	2018	Thermodynamic and transport properties of some water-soluble amino acid in binary aqueous mixtures of HCl at different temperatures
15	Vineeta	11709883	2019	Study on molecular interactions of some water-soluble amino acids in binary aqueous mixtures of some mineral salts

Professional Skills & Memberships

➤ **Editorial and Reviewer Experience:**

S.No.	Role	Journal / Publisher	ISSN	Impact Factor (IF)	Year
1	Reviewer	Journal of Chemical & Engineering Data, ACS	0021-9568 (print); 1520-5134 (web)	2.1	2024
2	Reviewer	Journal of Cleaner Production, Elsevier	0959-6526; 1879-1786	11.72	2023

			(web)		
3	Reviewer	Journal of Energy Storage Materials, Elsevier	2405-8297	20.4	2023
4	Reviewer	Energy Conversion and Management, Elsevier	0196-8904	10.4	2023
5	Reviewer	Journal of Molecular Liquids, Elsevier	0167-7322	6.0	2023
6	Reviewer	Oriental Journal of Chemistry	0970-020X (Print); 2231-5039 (Online)	–	–
7	Editorial Team Member	Asian Journal of Chemistry	0975-427X (Online); 0970-7077 (Print)	–	–
8	Associate Editor	International Journal on Emerging Technologies	0975-8364	–	–
9	Editorial Board Member	Journal of Materials and Environmental Science	2028-2508 (Print); 2737-890X (Online)	–	–

➤ **Professional Memberships:**

- **Member** (1100450843) of The Institution of Engineering and Technology (Founded 1871 Incorporated by Royal Chapter 1921).
- **Life Member** (L38282) of The Indian Science Congress Association
- **Life Member** of Himachal Pradesh Congress Association (HPCA)
- **RSC** Membership with ID 663521
- **ACS Membership** with ID 31637925

Other Academic and Administrative Positions:

S.No.	Position / Role	Organization / Event	Details / Responsibilities
1	Member, Academic Council	Himachal Pradesh University and Sardar Vallabh Bhai Patel University	Participated in academic decision-making and policy formulation.
2	Member, Board of Studies (BOS)	Sardar Patel University Mandi, Central University of Himachal Pradesh, and Himachal Pradesh Technical University	Contributed to curriculum design, academic planning, and review.

3	Member, Core Committee for NEP Implementation	Himachal Pradesh University	Involved in planning and implementation of the National Education Policy (NEP) in the state.
4	Convener, IPR Committee	Himachal Pradesh University	Led initiatives and activities related to Intellectual Property Rights.
5	Chairman / Member, Technical & Administrative Committees	Himachal Pradesh University	Worked on ERP implementation, research guideline framing, and policy development.
6	General Secretary, Alumni Association	Himachal Pradesh University	Coordinated alumni engagement and institutional activities.
7	Sectional Secretary (Physical Sciences)	106th Indian Science Congress, Lovely Professional University (Jan 2019)	Played a key role in organizing and coordinating sectional activities.

References:

Prof. Nagesh Thakur Professor, Department of Physics, HP University Shimla, Himachal Pradesh -171005
Email: ntb668@gmail.com , Ph. No: +91-7018615360

Prof. Mahavir Singh
Vice Chancellor,
HP University Shimla, Himachal Pradesh -171005
Email: mahavirhpu@gmail.com