

Curriculum Vitae

Prof. Anil Kumar Nain, D.Sc.

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Scopus: <https://www.scopus.com/authid/detail.uri?authorId=6603833161>

Research gate: <https://www.researchgate.net/profile/Anil-Nain-2>

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Google Scholar: <https://scholar.google.co.in/citations?user=16kTwR4AAAAJ&hl=en>

Present Position: Professor (Physical Chemistry)

Department of Chemistry, Dyal Singh College (University of Delhi), Lodi Road, New Delhi – 110 003

Education:

- ⇒ **Bachelor of Science**, 1990, 1st Division with 1st position, Jamia Millia Islamia (Central University), New Delhi.
- ⇒ **Master of Science** (Chemistry), 1992, 1st Division, Jamia Millia Islamia (Central University), New Delhi.
- ⇒ **Doctor of Philosophy** (Chemistry), 1996, Jamia Millia Islamia (Central University), New Delhi.
Title of Ph.D. Thesis: *Thermodynamic Study of Surfactants and Simple Electrolytes.*
- ⇒ **Certificate in French**, 2005, College of Vocational Studies, University of Delhi, New Delhi.
- ⇒ **Doctor of Science** (Chemistry), 2007, University of Allahabad, Allahabad, UP.
Title of D.Sc. Thesis: *Review and Application of Various Theories and Models Proposed for Elucidation of the Molecular Structure and Estimation of Physicochemical Properties of Liquid Mixtures.*

Research Details:

- ⇒ **Research Experience: Total - 28 years** (including Ph.D.)

Post-Doctoral - 24 years

- ⇒ **Research Area: Molecular Interactions in Solution (Physical Chemistry)**

Thermodynamic, physicochemical and acoustical studies of molecular interactions in binary and ternary solvent systems, extremely diluted solutions (Homoeopathic medicines) and solute-solute and solute-solvent interactions in solutions containing electrolytes/amino acids/carbohydrates/drugs/surfactants by using physical properties such as density, viscosity, sound speed, refractive index, conductivity, etc., their excess functions and other derived parameters from these properties.

⇒ **Research Publications:**

<i>Research Papers Published in Journals</i>		<i>Indian</i>	<i>Foreign</i>	<i>Total</i>
• <i>Number of Research Papers Published</i>	:	45	127	172
• <i>Papers under Revision/Communication</i>	:	00	02	02
<i>Papers Presented/Accepted in</i>		<i>National</i>	<i>International</i>	
• <i>Seminars/Conferences</i>	:	38	05	43
• <i>Invited Talks</i>	:	04	01	05
• <i>Sessions Chaired in Conferences</i>	:	04		

⇒ **Details of Research Citations: 1996 onwards**

Details	Scopus	Google Scholar	Research Gate	Microsoft Academic
<i>Research Articles</i>	136	154	166	138
<i>Citations</i>	> 3230	> 4045	> 3480	> 3300
<i>h-Index</i>	35	37	34	-
<i>i10-Index</i>	-	98	-	-
<i>Highest Cited Article</i>	134	158	RG Score: 38.85	161

⇒ **Research papers published and well-cited in the Journals:**

- *Bulletin of the Chemical Society of Japan*
- *Journal of Chemical & Eng. Data, ACS, USA*
- *Journal of Chemical Thermodyn., Elsevier Ltd.*
- *Journal of Solution Chemistry, USA*
- *Journal of Chemical Research, RSC, UK*
- *Internat. Journal of Thermophysics, USA*
- *Fluid Phase Equilibria, Elsevier Ltd.*
- *Thermochimica Acta, Elsevier Ltd.*
- *Journal of Molecular Liquids, Elsevier Ltd.*
- *Z. Phys. Chemie, Germany*

⇒ **Research Projects Undertaken: 06**

Completed – 02 (funded by CSIR under SRF and RA'ship projects)

01 (funded by DST, SERC Fast Track Young Scientist Scheme, as PI)

01 (Major research project funded by DST, worked on the project)

01 (Major research project funded by CSIR, as PI)

01 (Major research project funded by UGC, as PI)

Ongoing – 01 (Major research project funded by CCRH, as PI)

⇒ **Research Guidance:**

• **Ph.Ds. Awarded under Supervision: 07**

• **Guiding 01 Ph.D. student registered in the Department of Chemistry, University of Delhi, Delhi.**

• **Guided M.Sc. and Ph.D. (Physical Chemistry) students in their research projects and research work during my SRF & RA'ship tenure at Jamia Millia Islamia, New Delhi.**

Scholarships/Awards/Fellowships/Distinctions:

⇒ **Merit Scholarship** (for two years during M.Sc.) for securing **first position** in B.Sc. examination of Jamia Millia Islamia, New Delhi.

⇒ **Project Fellow**, (February, 1995 to March, 1996), University Grants Commission (UGC), New Delhi.

⇒ **Senior Research Fellowship (SRF)**, (April, 1996 to March, 1998), Council of Scientific and Industrial Research (CSIR), New Delhi.

⇒ **Research Associateship (RA)**, (May, 1998 to April, 2003), CSIR, New Delhi.

- ⇒ **Young Scientist Fellowship**, (April, 2004 to March, 2007) under SERC Fast Track Young Scientist Scheme, Department of Science & Technology (DST), New Delhi.
- ⇒ **Biographical data appeared** in “*Who’s Who in the World*” (2008-09) Marquis Who’s Who, USA.
- ⇒ **Included in the World’s Top 2% Scientists 2020** released on basis of research analysis by Stanford University, USA with **Global Rank 227** out of 55,697 researchers in Chemical Engineering Category (**more exactly in the top 0.41% scientists**).
- ⇒ **Included among 18 researchers from University of Delhi** in the **World’s Top 2% Scientists 2020** released on basis of research analysis by Stanford University, USA.
- ⇒ Ranked in **AD Scientific index 2021** rankings of the world based on Google Scholar data of nearly **~one million researchers from all subject areas**. I am ranked **26th in University of Delhi**; **1446th in all India**; **12279th in Asia** and **88677th in the world**.

Teaching Details: Branch - *Physical Chemistry*

- ⇒ **Teaching Experience:** More than **19 Years** (at UG level)

*I have been teaching Physical Chemistry to B.Sc. classes in the Department of Chemistry, Dyal Singh College, Lodhi Road, New Delhi since November 01, 2004 till date. I have taught Physical Chemistry to B.Sc. classes in the Department of Chemistry, Jamia Millia Islamia, New Delhi, during the **Research Associateship** tenure (from July 1998 to April 2003).*

- **General and Physical Chemistry topics taught at UG level:**

- | | | |
|----------------------------------|----------------------------|---------------------------|
| ▪ <i>Chemical Kinetics</i> | ▪ <i>The Gaseous State</i> | ▪ <i>Chemical bonding</i> |
| ▪ <i>Chemical Thermodynamics</i> | ▪ <i>The Liquid State</i> | ▪ <i>Ionic equilibria</i> |
| ▪ <i>Solutions</i> | ▪ <i>The Solid State</i> | ▪ <i>Adsorption</i> |
| ▪ <i>Electrochemistry</i> | ▪ <i>Liquid Crystals</i> | ▪ <i>Catalysis</i> |
| ▪ <i>Phase Equilibria</i> | ▪ <i>Colloidal State</i> | ▪ <i>Photochemistry</i> |

Professional Affiliation with Scientific Societies/Bodies:

- ⇒ Member in the **Editorial Advisory Board** of *Journal of Chemical Thermodynamics*, Elsevier Ltd., The Netherlands.
- ⇒ **Associate Editor** in the *Organic and Medicinal Chemistry International Journal*, Juniper Pub., USA.
- ⇒ Member in the **Board of Associate Editors** of the *Journal of the Indian Chemical Society* (Physical Chemistry Section), ICS, Kolkata (2008-2010).
- ⇒ **Assistant Editor** of the *Journal of the Acoustical Society of India*, NPL, New Delhi (2009-14).
- ⇒ Member in the **Publication Committee** of the *Journal of Pure and Applied Ultrasonics*, Ultrasonics Society of India (USI), NPL, New Delhi (2007-2011).
- ⇒ Member in the **Executive Council** of the **USI**, NPL, New Delhi (2009-2011).
- ⇒ Member **Departmental Research Committee** in the Department of Chemistry, **Sir. J.C. Bose University of Science and Technology**, Faridabad.
- ⇒ **Life Fellow** (LF-93) of the *Ultrasonic Society of India*, NPL, New Delhi.
- ⇒ **Life member of the**
 - *Ultrasonic Society of India* (Membership No. LM – 120) (2001-2010)
 - *Indian Council of Chemists* (Membership No. LF – 575)
 - *Acoustical Society of India* (Membership No. LM – 567)

- *Indian Chemical Society* (Membership No. F/6244 LM, 2003)
- *Indian Society of Analytical Scientists* (Membership No. LM-2071)

Reviewer of Research Papers for Journals: 51

⇒ Foreign Journals:

1. *Journal of American Chemical Society*, American Chemical Society, USA.
2. *Journal of Chemical and Engineering Data*, American Chemical Society, USA.
3. *Journal of Chemical Thermodynamics*, Elsevier Ltd., The Netherlands.
4. *Fluid Phase Equilibria*, Elsevier Ltd., The Netherlands.
5. *Journal of Molecular Liquids*, Elsevier Ltd., The Netherlands.
6. *Food Chemistry*, Elsevier Ltd., The Netherlands.
7. *Thermochimica Acta*, Elsevier Ltd., The Netherlands.
8. *Chemical Physics*, Elsevier Ltd., The Netherlands.
9. *Chemical Physics Letters*, Elsevier Ltd., The Netherlands.
10. *Journal of Solution Chemistry*, Springer, USA.
11. *Chemical Engineering Communications*, Taylor & Francis Group, USA.
12. *International Journal of Physical Sciences*, Academic Journals, Nairobi, RSA.
13. *Turkish Journal of Physics*, Scientific & Tech. Research Council of Turkey.
14. *Monatshefte fur Chemie*, Germany.
15. *Canadian Journal of Physics*, NRC, Canada.
16. *Journal of Thermodynamics*, Hindawi Publishing Corporation, USA.
17. *Surface and Interface Analysis*, Wiley Interscience, USA.
18. *Physica B: Condensed Matter*, Elsevier Ltd., The Netherlands.
19. *Chemical Papers*, Slovak Academy of Sciences, Slovakia.
20. *Journal of Saudi Chemical Society*, Saudi Chemical Society & Elsevier Ltd.
21. *International Journal of Thermophysics*, Springer, USA.
22. *Advances in Physical Chemistry*, Hindawi Publishing Corporation, USA.
23. *Journal of the Brazilian Chemical Society*, BCS, Brazil.
24. *South African Journal of Chemistry*, SACS, South Africa.
25. *Acta Sovenica Chimica*, Slovenian Chemical Society.
26. *Journal of Advanced Research*, Elsevier Ltd., The Netherlands.
27. *Advances in Materials Science and Engineering*, Hindawi Publishing Corporation, USA.
28. *Industrial Crops and Products*, Elsevier Ltd., The Netherlands.
29. *Asia-Pacific Journal of Chemical Engineering*, John Wiley & Sons, USA.
30. *Chemical Data Collections*, Elsevier Ltd., The Netherlands.
31. *Journal of Analytical Science and Technology*, Springer, USA.
32. *Journal of Dispersion Science and Technology*, Taylor and Francis, UK.
33. *Journal of Chemistry*, Hindawi Publishing Corporation, USA.
34. *Advances in Materials Science and Engineering*, Hindawi Publishing Corporation, USA.
35. *Journal of Advanced Research*, Elsevier Ltd., The Netherlands.
36. *Journal of the Iranian Chemical Society*, Springer, USA.
37. *Journal of Taibah University for Science*, Taylor and Francis, UK.
38. *International Journal of Ambient Energy*, Taylor and Francis, UK.
39. *Arabian Journal of Chemistry*, Elsevier Ltd., The Netherlands.
40. *Chemical Thermodynamics and Thermal Analysis*, Elsevier Ltd., The Netherlands.
41. *Journal of the Taiwan Institute of Engineers*, Taiwan Institute of Engineers & Elsevier Ltd.
42. *Physical Chemistry Research*, Iranian Chemical Society, Iran.

⇒ Indian Journals:

43. *Journal of the Indian Chemical Society*, ICS, Kolkata.
44. *Indian Journal of Physics*, IASc, Bangaluru & Springer, USA.
45. *Indian Journal of Pure & Applied Physics*, NISCAIR (CSIR), New Delhi.
46. *Indian Journal of Chemistry A*, NISCAIR (CSIR), New Delhi.
47. *Indian Journal of Chemical Technology*, NISCAIR (CSIR), New Delhi.
48. *Journal of the Acoustical Society of India*, ASI, NPL, New Delhi.

49. *Journal of Pure and Applied Ultrasonics*, USI, NPL, New Delhi.
50. *Indian Journal of Research in Homoeopathy*, CCRH, New Delhi.
51. *Indian Journal of Biochemistry and Biophysics*, NISCAIR (CSIR), New Delhi.

⇒ **Evaluator and Examiner of Ph.D. theses of various Universities: 10**

Refresher and Orientation Courses/Workshops:

- ⇒ Successfully completed the **Orientation Course (OR 55)** conducted by CPDHE, University of Delhi from 11th February 2008 to 10th March 2008.
- ⇒ Successfully completed the **Refresher Course in Environmental Studies (ID)** conducted by UGC-ASC, Kurukshetra University, from 5th to 26th August 2008.
- ⇒ Successfully completed the **Refresher Course in Computer Applications (ID)** conducted by CPDHE, University of Delhi, from 10th to 30th September 2008.
- ⇒ Successfully completed the **Refresher Course in Chemistry** conducted by UGC-ASC, Jamia Millia Islamia, New Delhi, from 28th August to 17th September 2009.
- ⇒ Successfully completed the **ILLL Workshop on ICT (Tier II)** conducted by Institute of Life Long Learning (University of Delhi) at Dyal Singh College, New Delhi, from 18th February to 17th March 2010.
- ⇒ Successfully completed the **online FDP on “Online Teaching & Learning Practices”**, conducted by Virtuality India and Virtual Labs, IIT Delhi (an MHRD initiative, GoI), from 1st to 15th Sept 2020.

Administrative Experience:

- ⇒ **Experience: 11 months** as **Project Officer** under the project entitled, “*Technical Education Quality Improvement Project*” in National Board of Accreditation (NBA), All India Council for Technical Education (AICTE), New Delhi. The project was concerned with the assessment and improvement of qualitative competence of institutions providing technical education in India, in order to assure the quality of technical education.
- ⇒ Nature of duties handled at AICTE: NBA Accreditation visits, Accreditation Database, Meetings, Organization of Accreditation Awareness/Assessors Training Workshops.

IT Skills: Familiar with common operating systems, packages, word processors and graphical packages, viz., Lotus Smartsuite, MSWindows, MSOffice, Adobe Acrobat, SPSS, Origin, etc. Familiar with Internet and related services like e-mail, online teaching tools, etc.

Personal Details:

Date of Birth: December 01, 1969

Nationality: Indian

Birth Place: Shamli, Uttar Pradesh

Marital Status: Married

Languages Known: English, Hindi, Punjabi and French

References:

⇒ **Prof. Anwar Ali**
Department of Chemistry,
Jamia Millia Islamia
Jamia Nagar, New Delhi – 110 025
e-mail: anwarali.chem@gmail.com

⇒ **Dr. V. K. Paliwal**
Principal,
Dyal Singh College (University of Delhi)
Lodi Road, New Delhi – 110 003
e-mail: principal@dsc.du.ac.in



Details of Research projects done/ongoing/sanctioned/submitted:

S. No.	Title of the project	Status	Duration	Funding agency	Co-workers
1.	<i>Thermodynamic studies of binary and ternary systems containing electrolytes and/or surfactants</i>	Completed	2 years (SRF Project)	CSIR, New Delhi	Dr. Anwar Ali (Supervisor)
2.	<i>Physicochemical and thermodynamic studies of multicomponent solvent systems and solutions containing surfactants and polymers</i>	Completed	5 years (RA'ship Project)	CSIR, New Delhi	Dr. Anwar Ali (Supervisor)
3.	<i>Study of biomolecules in aqueous/mixed solvent systems by using physico-chemical, thermodynamic and acoustic methods</i>	Completed	3 years (SYS)	DST, New Delhi	None
4.	<i>Study of molecular interactions in multi-component solvent systems containing acrylate monomers by using physico-chemical, thermodynamic and acoustic methods</i> (Worked on the project)	Completed	3 years	DST, New Delhi	Dr. S. Gopal (PI)
5.	<i>Study of interactions of amino acids with carbohydrates/drugs in aqueous media by using physicochemical, thermodynamic and acoustic methods</i>	Completed	3 years	CSIR, New Delhi	None
6.	<i>Study on intermolecular interactions in industrially important multi-component solvent systems by using physicochemical and acoustic methods</i>	Completed	3 years	UGC, New Delhi	None
7.	<i>Physicochemical studies of homoeopathic drug formulations by using volumetric, acoustic, viscometric, optical and conductometric measurements</i>	Completed	6 months (pilot study)	CCRH, New Delhi	None
8.	<i>Physicochemical studies of homoeopathic drug formulations by using volumetric, acoustic, viscometric, optical and conductometric measurements</i>	Ongoing		CCRH, New Delhi	Dr. R.K. Manchanda Dr. Anil Khurana Dr. Debadatta Nayak

Year-wise Number of Research Publications/Citations: h-index = 35 (Scopus)

Year	No. of Research Articles published in Refereed Journals			Number of Citations
	Foreign	Indian	Total	
1994	1	1	2	0
1996	2	1	3	0
1997	2	4	6	4
1998	1	1	2	10
1999	3	4	7	10
2000	3	4	7	9
2001	2	4	6	20
2002	2	6	8	46
2003	2	1	3	42
2004	3	2	5	58
2005	3	1	4	62
2006	9	2	11	96
2007	7	0	7	91
2008	6	3	9	131
2009	7	2	9	112
2010	3	2	5	158
2011	3	1	4	142
2012	2	0	2	153
2013	9	0	9	199
2014	3	0	3	191
2015	3	0	3	184
2016	11	2	13	279
2017	5	1	6	254
2018	3	1	4	204
2019	5	1	6	225
2020	17	1	18	263
2021	8	0	8	270
2022	2	0	2	15
TOTAL	127	45	172	3228

Number of Publications in Various Journals

S. No.	Name of the Journal	ISSN	Impact Factor 2020/21	No. of Articles Published	Total Impact Factor
1	<i>Journal of Molecular Liquids, Elsevier Ltd.</i>	0167-7322	6.165	37	228.105
2	<i>Bulletin of the Chemical Society of Japan, CS Japan</i>	0009-2673	5.488	3	16.464
3	<i>Fluid Phase Equilibria, Elsevier Ltd.</i>	0378-3812	2.775	2	5.550
4	<i>Journal of Chemical & Engg. Data, ACS, USA</i>	0021-9568	2.694	4	10.776
5	<i>Journal of Chemical Thermodynamics, Elsevier Ltd.</i>	0021-9614	3.178	33	104.874
6	<i>Thermochimica Acta, Elsevier Ltd.</i>	0040-6031	3.115	2	6.230
7	<i>Chinese Journal of Chemistry, CCS & Wiley-VCH</i>	1614-7065	3.826	2	7.652
8	<i>Chinese Journal of Chemical Engineering, CCS & Elsevier</i>	1004-9541	3.171	2	6.342
9	<i>Physics and Chemistry of Liquids, Taylor & Francis</i>	0031-9104	1.915	13	24.895
10	<i>Journal of Chemical Sciences, IASc, Springer</i>	0253-4134	1.573	2	3.146
11	<i>Indian Journal of Physics B, IASc & Springer</i>	0252-9254	1.407	4	5.628
12	<i>Journal of Solution Chemistry, Springer</i>	0095-9782	1.677	7	11.739
13	<i>Journal of the Chinese Chemical Society, Wiley-VCH</i>	2192-6549	1.554	3	4.662
14	<i>Z. Phys. Chemie, De Gruyter, Germany</i>	2196-7156	2.030	1	2.030
15	<i>Collection Czech. Chemical Commun., Wiley-VCH</i>	0010-0765	2.753	1	2.753
16	<i>Organic and Medicinal Chemistry II, Juniper Pub., USA</i>	2474-7610	1.378	3	4.134
17	<i>Internat. Journal of Thermophysics, Springer</i>	0195-928X	0.794	4	3.176
18	<i>Indian Journal of Chemistry (Sect. A), CSIR</i>	0376-4710	0.491	8	3.928
19	<i>Journal of Chemical Research, RSC, UK</i>	1747-5198	0.593	1	0.593
20	<i>Pramana – Journal of Physics, IASc & Springer</i>	0304-4289	1.673	1	1.673
21	<i>South African Journal of Chemistry, SACI</i>	0379-4350	0.329	1	0.329
22	<i>Journal of the Indian Chemical Society, ICS</i>	0019-4522	0.284	4	1.136
23	<i>Chinese Journal of Acoustics, Inst. of Acoust, CAS</i>	0217-9776	0.278	1	0.278
24	<i>Indian Journal of Pure & Applied Physics, CSIR</i>	0019-5596	0.923	5	4.615
25	<i>Acoustics Letters, Parjon Info. Services, UK</i>	0140-1599	0.219	6	1.314
26	<i>J. Surface Science & Technology, ISSST</i>	0970-1893	0.130	1	0.130
27	<i>Journal of Pure & Applied Ultrasonics, USI</i>	0256-4637	-	10	
28	<i>Journal of Acoustical Society of India, ASI</i>	0973-3302	-	7	
29	<i>Conference Proceedings (Refereed)</i>			4	
	<i>Total</i>			172	462.152