

Profile of Prof. Sapana Garg

(h-index = 7 at SCOPUS)

Dept. of Chemistry (former HOD)

M.D.U Rohtak

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Mob. 09896091443

D.O.B: 15-11-1969

Father's Name: Dr. Ram Niwas Gupta,
(Retd. Principal, Vaish College Rohtak)

Address: H. No. 9, Omaxe City, Rohtak, Haryana



Additional Charges:

- Hostel Chief warden of 10 girls' hostels (strength 2500).
- Director of Aryabhata Central Instrumentation Laboratory from 1 January, 2024.

Educational Qualifications:

Exam Passed	Year of Passing	Board/University	Marks Obtained &Percentage
Matriculation	1984	H.B.S.E., Bhiwani	689/900=77%, Topper of School
B.Sc.Medical	1988	M.D.University, Rohtak	661/950=70%, Topper of College
M.Sc. (Chemistry)	1990	M.D.University, Rohtak	719/1000=72%, Topper of Branch
B.Ed.	1995	M.D.University, Rohtak	609/900=68%, Topper of College
CSIR-UGC National Level TEST	1990	University Grant Commission New Delhi	Qualified in 1 st attempt
Ph.D	1994	M.D. University, Rohtak	Fit For Publication

Teaching Experience:

More than 28 years of UG and PG Classes in University College Rohtak and Dept. of Chemistry, MDU, Rohtak.

Research fields:

- Inorganic Chemistry
- Organometallic Chemistry

Research Guidance:

Three Re-search Scholars are working Ph.D under my supervision (seven completed)

Role as a Member/ Advisor:

- Life Member of Professional Association (ISCA, ICC, MRSI, ISAS, ITS) Life Member of Vaish Education Society Rohtak.
- Life Member of Maharaja Aggarsen Education Society, Jhajjar.
- Remained Paper Setter & member of syllabus formation committee for B. Sc.1, 11, 111 Pass Course, Hons. Classes and M.Sc. classes of M.D.U. Rohtak.
- Remained Member of Selection Committee for Recruitments of teachers in Colleges Remained Convenor and Member of Inspection Committee for affiliation to colleges
- Worked as Member of Organizing Committee of Refresher Course in May, 2008 held at Pt. N.R.S. Govt. College, Rohtak.
- Worked as Member Organizing Committee of Science Conclave in Dec. 2011 held at MDU, Rohtak.
- Worked as Co-ordinator in National Conference organized by the Dept. of Chemistry, MDU, Rohtak from 1-2 March, 2013.
- Worked as Organizing Committee in National Conference organized by the Dept. of Chemistry, MDU, Rohtak from 12-13 February, 2019.
- Worked as Organizing Committee in International Conference organized by the Dept. of Chemistry, MDU, Rohtak from 14-15 October, 2019.
- Worked as Organizing Committee in International Conference organized by the Dept. of Chemistry, MDU, Rohtak from 4-5 March, 2020.
- Worked as Convener in National Conference organized by the Dept. of Chemistry, MDU, Rohtak on 29 September, 2023.

List of participated Orientation/ Refresher Course/Summer Institutes/ Seminars/ Conferences/Workshops and presented papers:

Name of the Course	Duration	Name of the Institution
Refresher course	10-30-12-1998	Dept. of Chemistry, MDU., Rohtak
Orientation Course	14-2 to 14-3-2000	Academic Staff College, Jamia Millia Islamia, New
Refresher Course	20-9 to 10-10-10-2001	Dept. of Chemistry, M.D.U., Rohtak.
Refresher Course	16-2to 8-3-2002	Dept. of Chemistry, M.D.U., Rohtak.

Refresher Course	5 to 25-3-2008	Pt. N.R.S. Govt. College, Rohtak
A Seminar on Biological Science, A Current Perspective	12&13-3-2008	Pt. N.R.S. Govt. College, Rohtak
29 th Annual Conference of Indian Council of Chemists	19-21 Dec.,2010	P.U., Chandigarh
National Seminar on “Eliminating Daughter:Paradox of Development in India”	15-16 Dec.,2010	Women’s Studies Centre, M.D.U.ROHTAK
Workshop on Material Science	25 th March,2011	Dept. of Physics, M.D.U., Rohtak.
Science Conclave-2011, “Interaction of Innovative Young Minds with Eminent Scientists	2-3 Dec.,2011	MDU, Rohtak& DST, Govt. of Haryana.
Workshop on “Computer Application in Research”.	4-10 Dec., 2011	Dept. of Commerce, MDU, Rohtak.
2 nd National Conference on “Recent Advances in Chemistry and their Impact on Environment”	4-5 Feb., 2012	A.P.G. College, Panipat.
National Seminar on “Scientific Development for Human Welfare: Promises and Concerns”	10-11 Feb., 2012	J.V.M.G.R.R.P.G. College, CharkhiDadri.
International Conference on “Global Trends and in Pure & Applied Chemical Sciences”	3-4 March, 2012	ICGTCS, Udaipur, Rajasthan.
DHE Sponsored National Seminar on “Chemistry: Our Life Our Future”	12 March,2012	GVM, Girls College, Sonipat.
100 th Indian Science Congress	3-7, Jan. 2013	Kolkata.
TCBNES 9 TH National Conference	17-18, Oct. 2014	Sardar Patel University, vallabh Vidyanagar, Gujrat.
Indian Science Congress	3-7, Jan. 2015	Mumbai University, Mumbai.
Indian Council of Chemists	26-28, Dec. 2017	Andhra University, Visakhapatnam.

List of Presented Papers & Publications:

Sr.No.	Title of Published/Research Work	Name of the Journal/Workshop/Seminar	Date of Publication/Presentation
1	“Triphenyltelluronium Chlorometallates”	Winter School-cum-Workshop On Organometallic Chemistry, IIT Delhi,	6-8 Dec. 1993 {Published}
2	“(Methoxyphenacyl) Telluronium (IV) Halides: Synthesis and Characterization”.	Synth. React. Inorg. Met. – Org. Chem. 24(4), 647-661	1994 {Published}
3	“Synthesis and Characterization of Group – VB Metal Chloride Adducts of Triphenyltelluronium Chloride”.	Synth. React. Inorg. Met. – Org. Chem. 24(6), 979-994	1994 {Published}
4	“Substituted (Phenacyl) Telluronium (IV) Halides: Synthesis and Characterization”.	Synth. React. Inorg. Met. – Org. Chem. 24(10), 1631-1645	1994 {Published}
5	“Trihalotellurium Compounds of Hydroquinone Dimethyl Ether”.	Asian Journal of Chemistry 6(4), 1014-1018	1994 {Published}
6	”Synthesis and Characterization of (2, 3-Dimethyl -4-Hydroxyphenyl)telluronium (IV) Halides”.	Asian Journal of Chemistry 7(1), 196-202	1995 {Published}
7	Studies on some Platinum (II) complexes with Ditelluratetraazamacrocycles	Scholars Research Library	Published in Der Pharma Chemica, 2011, 3(1): 286-292

8	Study on the applications of bis (hydroxyaryl) telluroxides as aldol catalyst	Scholars Research Library	Published in Der Pharma Chemica, 2011, 3(5): 218-225
9	Investigation of some p-methoxyphenyltellurium(IV) trichloridecatalysedknoevenagel Reaction	Scholars Research Library	Published in Der Pharma Chemica, 2011, 3(6): 632-636
10	Study on Some Hydroxyaryltellurium(II) trichloridescatalysedknoevenagel Reactions,	Asian J. Chem, 24 (12), 5619-5621.	2012 {Published}
11	Study on the Applications of some Bis(hydroxyaryl) telluroxides as Oxidizing Reagents in Organic Synthesis	Instasci. J. Chem., 2(3), 69-74.	2012 {Published}
12	Dichloride promoted Oxidation Reactions of Di- and TriorganylPhosphites	Res. J. Pharm. Bio. Chem. Sci., 3(4), 1329-1333.	2012 {Published}
13	“Spectrophotometric Determination of Zinc (II) in food-stuffes and Biological sample with Tris-[2,4,6- (2-Hydroxy-4-sulpho-1 Naphthylazo)- s-Triazine, Trisodium Salt”	Journal of Chemical, Biological and Physical Science, Sec. A, 2(4), 1746-1752.	2012 {Published}
14	Telluride Catalyzed Pinacolization of Aromatic Aldehydes	Chem. Sci. Trans., 2(2), 508-512.	2013 {Published}
15	Studies on the Oxidizing Properties of Some Tellurinic Acid Anhydrides	Chem. Sci. Trans., 2(4), 1491-1495.	2013 {Published}
16	Study on The Reducing Properties of Diaryl Ditellurides	Int. J. Chem., 11(3), 1256-1260.	2013 {Published}

17	Studies on Pyrazine Complexes of some Diaryl Tellurium dihalides	Oriental J. Chem., 29(4), 1339-1349.	2013 {Published}
18	Selective Determination of Uranium using 1-(2-Quinolyazo)-2,4,5-Trihydroxybenzene as Colorimetric Reagent	Chem. Sci. Trans., 2(2), 435-440.	2013 {Published}
19	Tris[2,4,6-(2-hydroxy-4-sulpho-1-naphthlazo)]-S-triazine, trisodium salt as a spectrophotometric reagent for micro-determination of Lead(II) in alloys, environmental and biological samples	Res. J. Chem. Enviorn., 17(3), 53-58.	2013 {Published}
20	Spectrophotometric determination of Uranium using Tris[2,4,6-(2-hydroxy-4-sulpho-1-naphthlazo)]-S-triazine, trisodium salt(THT)	Chem. Sci. Trans., 3(1), 61-66.	2014 {Published}
21	Study on 4-methoxybenzohydroxamate complexes of aryltellurium(IV) and diaryltellurium(IV)	Int. J. Chem. Sci., 14(1), 269-282.	2016 (Published)
22	Synthesis, Characterization and Antimicrobial Studies of Some Aryltellurium (IV) Complexes of 5-Chlorosalicylhydroxamate	Res. J. Pharm. Bio. Chem. Sci., 7(2), 265-274.	2016 (Published)
23	Studies on some 2-methoxybenzohydroxamate complexes of aryltellurium(IV) and diaryltellurium(IV)	Der Pharm Chemica, 8(2), 248-255.	2016 (Published)

24	Studies on some salicyhydroxamate complexes of aryltellurium(IV)	Chem. Sci. Trans., 5(2), 431-441.	2016 (Published)
25	Synthesis, Characterization and antimicrobial studies on some salicylidene-sulphamethoxazole Schiff base tellurium(IV) complexes	Res. J. Pharm. Bio. Chem. Sci., 7(2), 1834-1842.	2016 (Published)
26	Studies on some tellurium (IV) complexes of N, N' – Bis (Indol-2-oxo-3-ylidene) -1,2-Diaminoethane	Int. J. Chem. Sci., 14(1), 387-398.	2016 (Published)
27	Studies on some propylenediamine- bis (isatin) Schiff bases complexes of tellurium(IV)	Der Pharm Chemica, 8(2), 198-203.	2016 (Published)
28	Investigation on some isatin-p-Toluidine Schiff base complexes of tellurium(IV)	Res. J. Pharm. Bio. Chem. Sci., 7(2), 869-877.	2016 (Published)
29	Complexes of Tellurium(IV) with Isatin-Aniline Schiff Base	Chem. Sci. Trans., 5(2), 479-487.	2016 (Published)
30	Tellurium(IV) complexes of tridentate(ONS) Schiff base derived from isatin and 2-Aminothiophenol	Journal of Chemical and Pharmaceutical Research, 8(4) 218-223.	2016 (Published)

31	Synthesis, Characterization and Antimicrobial Studies On Some Complexes Of Tellurium(IV) With Schiff Base Derived From Isatin and 2-Aminophenol	Int. J. Chem. Sci.	2016 (Published)
32	Synthesis, Spectral and Antimicrobial Studies of Some d ¹⁰ Metal-Ions Ditellura Tetraazamacrocyclic Complexes	Chem. Sci. Trans., 6(1), 77-86	2017 (Published)
33	Studies on Some d ¹⁰ Metal-Ion Complexes with Tellurium Containing Dithiadiazamacrocycles	Res. J. Pharm. Biol. Chem. Sci. 7(6) 2526-2534	2017 (Published)
34	Synthesis, Characterization and Antimicrobial Studies of Nitrogen-Sulphur Donor Tellurium Containing Macrocyclic Complexes of Ni ^{II} , Pd ^{II} and Pt ^{II}	J. Chem. Pharm. Res., 9(2), 65-70	2017 (Published)
35	Studies on Some Tellurium Containing Tetraazamacrocyclic Complexes of Co(II), Mn(II), and Cu(II)	J. Chem. Pharm. Res., 9(2), 189-194	2017 (Published)
36	Investigation on Some Tellurium(IV) Complexes of Bidentate(ON) Schiff Base Derived from o-Vanillin and 2-Aminophenol	Chem. Sci. Trans, 6(3), 339-350	2017 (Published)
37	Synthesis, Spectral and Biological Studies of Some Salicylidene-trimethoprim Schiff Base Complexes of Aryltellurium(IV)	Chem. Sci. Trans, 6(3), 437-447	2017 (Published)

38	Some New Aryltellurium(IV) Complexes Containing NO Donor Schiff Base Derived From Vanillin and 4-Aminoantipyrine)	Chem. Sci. Trans, 6(3), 448-456	2017 (Published)
39	Synthesis, characterization and antimicrobial studies on some pyridoxylidene-sulphamethoxazole schiff base tellurium(IV) complexes	Der Pharma Chemica, 2017, 9(8), 59-64	2017 (Published)
40	Preparation, Characterization and Biological Studies on Pyridoxylidene-Cephalexin Schiff Base Complexes of Aryltellurium (IV),	Int. J. Chem. Sci , 15(4), 182-193	2017 (Published)
41	Investigations on Some Divalent Transition Metal Complexes of 10-Membered Tellurium Containing N ₂ S ₂ Donor Macrocycles	Int. J. Chem. Sci , 15(4), 207-217	2017 (Published)
42	Studies on Some Tellurium(IV) Complexes of Salicylaldehyde-2-Aminopyridine Schiff Base	Res. J. Pharm., Biol. Chem. Sci., 8(6), 190-198	2017 (Published)
43	Tellurium(IV) Complexes Containing Bidentate Schiff Base and their Biological Activities	Chem. Sci. Trans, 7(2), 191-200	2018 (Published)
44	Synthesis, Spectral and Antimicrobial Studies of Some o-Vanillin-2- Amino pyridine Schiff Base Complexes of Organytellurium(IV)	Chem. Sci. Trans, 7(2), 329-337	(2018) Published
45	Coordination of Tellurium(IV) with Schiff Base Derived from o-Vanillin and 3-Aminopyridine	Int. J. Chem. Sci, 16, 1-10	(2018) Published

46	N-(2-Pyridyl)-5-chlorosalicylideneimine Schiff Base and its Tellurium(IV) Complexes: Synthesis, Characterization and In Vitro Biological Activities	Chem. Sci. Trans 7(2), 374-383	(2018) Published
47	Investigations on some biologically active divalent transition metal complexes with ditellurium tetraazamacrocycles	Chem. Sci. Trans, 8, 48-59	(2019) Published
48	Some Organotellurium(IV) complexes of 1-Methyl-3-(p-tolylimino)indolin-2-one Schiff Base	Asian Journal of Chemistry, 33, 1236-1244	(2021) Published
49	Spectral, theoretical and biological studies of 3-((4-mercaptophenyl)imino)-1-phenylindolin-2-one schiff base and its organotellurium(IV) complexes.	Asian Journal of Chemistry, 33, 1749-1756	(2021) Published
50	Synthesis, spectroscopic, biological activity, molecular docking and density functional theoretical investigations of novel tellurium (IV) schiff base complexes,	Chemistry Select, 6, 5778-5790	(2021) Published
51	Densities, speeds of sound and molar heat capacities of multicomponent liquid mixtures containing 1-methylpiperidine, pyrrolidin-2-one and cycloalkanones at varying temperatures.	J. Chem. Thermodyn., 156, 106389	(2021) Published
52	Densities, speeds of sound and heat capacities of binary and ternary mixtures containing cyclic amines, lactam and pyridine.	Journal of Solution Chemistry, 50, 355-388	(2021) Published
53	Characterization of multicomponent mixtures containing piperidine, 1-methylpiperidine, 2-pyrrolidinone and isomeric picolines.	Journal of Molecular Liquid, 331, 115736	(2021) Published

54	Thermodynamic properties of liquid mixtures containing cyclic amines and isomeric picolines: excess molar volumes and excess isentropic compressibility and excess heat capacities,	Journal of Thermal Analysis and Calorimetry, 147, 3331-3364	(2022) Published
55	Physico-Chemical Characterization of Binary and Ternary Mixtures of Imidazolium Based Cation and Common Anion Ionic Liquids with Lactams.	Journal Solution Chemistry, 50, 1391–1431	(2022) Published
56	Spectral, theoretical and biological studies of 3-((4-Mercaptophenyl)imino)- 1-phenylindolin-2-one Schiff Base and Its Organotellurium(IV) complexes.	Asian Journal of Chemistry, 33, 1749-1756.	(2022) Published
57	Complexes of Organytellurium(IV) with neutral [N,O] donor Schiff Base derived from substituted furfuraldehyde and toluidine: Synthesis, structural characterization, computational studies and biological evaluation.	Asian Journal of Chemistry, 34, 2008-2016.	(2022) Published
58	Synthesis, characterization and antimicrobial studies of some new Tellurium(IV) complexes derived from 2-[(2-Hydroxyphenyl)imino methyl]-1-naphthol Schiff Base.	Asian Journal of Chemistry, 34, 183-190.	(2022) Published
59	Synthesis, Spectroscopic Analysis, Antimicrobial and Antioxidant Screening of few Tellurium(IV) Complexes.	Asian Journal of Chemistry, 34, 2551-2560	(2022) Published

60	Organyltellurium(IV) bidentate Schiff base complexes: Synthesis, characterization and biological activities.	Asian Journal of Chemistry, 34, 2008-2016.	(2022) Published
61	Molar heat capacities and excess molar heat capacities of mixtures containing ionic liquids and cyclic amides.	Chemical Data Collection, 41, 100939.	(2022) Published
62	Synthesis, structural investigation of Schiff Base endowed Organyltellurium(IV) complexes: Biological activities, molecular docking, quantum chemical computations and ADMET prediction.	Research on Chemical Intermediates, 49, 2889-2917	(2023) Published
63	Organyltellurium(IV) complexes incorporating Schiff Base ligand derived from 2-Hydroxy-1-Naphthaldehyde: Preparation, spectroscopic investigations, antimicrobial, antioxidant activities, DFT, MESP, NBO, molecular docking and ADMET evaluation,	Journal of Molecular Structure, 1287, 135590.	(2023) Published
64	Kumar M, Chauhan S, Sindhu M, Darolia PJ, Bhardwaj A, Garg S, Organotellurium(IV) complexes of N-methylisatin-o-aminothiophenol Schiff base: Preparation, characterization, DFT, molecular docking studies, antimicrobial and antioxidant activity.	Journal of Indian Chemical Society, 100, 100797.	(2023) Published
65	Darolia PJ, Malik S, Kumar M, Sharma D, Garg S, Sharma VK, Molecular interactions in multicomponent liquid mixtures: Excess molar heat capacities,	Journal of Chemical Thermodynamics, 179, 106980.	(2023) Published

66	Darolia PJ, Malik S, Kumar M, Garg S, Sharma VK, Analysis of excess molar heat capacities of three component mixtures comprising of cyclic organic solvents: Graph and Flory theories,	Chemical Data Collection, 2023, 101038.	(2023) Published
67	Organotellurium(IV) complexes derived from thiophene based Schiff base 5-methyl-2-thiophene carboxaldehyde: Synthesis, spectral characterization, thermal analysis potent antimicrobial and antioxidant activities supported by molecular docking, DFT studies and ADMET prediction	Inorganic Chemistry Communications, 157, 111332	(2023) Published
70	Exploring the novel aryltellurium(IV) complexes: Synthesis, characterization, antioxidant, antimicrobial, antimalarial, theoretical and ADMET studies	Inorganic Chemistry Communications, 159, 111743	(2024) Published
71	Synthesis, spectral characterizations and pharmacological assay supported by DFT studies, Molecular Docking and ADMET studies of organotellurium(IV) complexes derived from bidentate schiff base of 5-methyl-2-thiophene carboxaldehyde	Journal of Molecular and Engineering Material (accepted)	(2024) Published
72	Exploring the antimicrobial, antioxidant and cytotoxic activities of organytellurium (IV) complexes incorporating 2-hydroxy-1-naphthaldehyde schiff base ligand: Synthesis, spectroscopic investigations and theoretical studies.	Applied Organometallic Chemistry	(2023) published
73	Theoretical and Experimental In-vitro Studies of Novel Thiophene Based Organotellurium(IV) Complexes.	Chemistry and Biodiversity	(2023) accepted

Participation in Extra Co-Curricular Activities:

- Participated in Science Exhibition during College Time and won 1st position.
- Participated in Science quiz contest during College Time at District and State Level.
- Participated in National Adventure programme as Teacher Incharge (Female) organized by Bharat.
- Scouts & Guides National Adventure Institute Pachmarhi from 11-20 June, 1998.
- Participated in National Winter Sea Beach Trekking Expedition as Teacher Incharge (Female) organized by Youth Hostels Association of India, Orissa State Branch, Konark from 21-31 Dec. 2003.
- Participated in Rock Climbing Camp as Teacher Incharge (Female) organized by Youth Hostel Mussoorie & Sahsi Adventure Himalayan Sports Com from 24-31 May, 2004
- Remained Convener of University College Rohtak, Dance Committee.
- Remained Member of Prize, Decoration and Exam Committee during 1995- 2008
- Remained N.C.C. Officer from Aug.2006 to May 2008.
- Remained member of M.D.U. Sports Selection Committee Gymnastic Club & Table Tennis Remained Staff Secretary from 1995 to March 2017 of Dept. of chemistry.
- Delivered Extension Lecturer in DHE Sponsored National Seminar on “Chemistry: Our Life Our Future” GVM, Girls College, Sonipat on 12 March, 2012.
- Remained member of Judgement Committee for Science Exhibition at college and District Level.
- Delivered Extension Lectures in different P.G. Colleges as resource person.
- Delivered Radio Talks on various topics on Akashvani, Rohtak and SVN News Channel (group discussion on Environment and Study).