

Curriculum Vitae

Title	Dr (Mrs)	Name	UMA SHARMA			Photograph
Affiliation	School of Studies in Chemistry & Biochemistry, Vikram University, Ujjain (M.P.) 456 010 INDIA					
Designation	Professor physical chemistry					
Address (Residence)	F-2/33, University Qtrs., Vikram University Campus, Kothi Rd Ujjain (M.P.)					
Phone- Office	+91 734 2511321					
Residence	+91 734 2511703					
Mobile	+91 9826840614					
E-Mail	umasharma10@rediffmail.com					
Educational Qualifications						
Degree	Institution			Year		
Ph.D.	UTD, Vikram University, Ujjain			1985		
M.Phil.	UTD, Vikram University, Ujjain			1982		
M.Sc.	UTD, Vikram University, Ujjain			1981		
B.Sc.	Govt. Girl 's Degree College, Ujjain,			1979		
Carrear Profile						
S.No.	Organization	Designation	From	To	Duty Performed	
01	Govt. College Mahidpur	Lecturer	1984	1986	Taught UG	

02	School of Studies in Chemistry & Biochemistry, Vikram University, Ujjain (M.P.)	Lecturer	1986	1991	Teaching PG (Chemistry, Biochemistry) guiding M.Phil., Ph.D. Research
03		Sr. Lecturer	1991	1994	
04		Reader	1994	2002	
05		Professor	2004	till date	
		Chairman Board of Studies Chemistry	2012		

Research Interests

Supramolecular Chemistry - Design and synthesis of podands, Quinone derived switched ionophores.

Membrane Technology- Carrier facilitated transport of biologically important cations, amino acids etc

Nanotechnology- Biocompatibility of fullerenes and drug encapsulation.

Topics Taught in M.Sc. & M.Phil. course

1. Spectroscopy - IR, NMR, NQR, ESR, UV-Visible, Mössbauer, Raman and Photoelectron spectroscopy.

2. Supramolecular Chemistry & Nanotechnology - Ion Selective Electrodes, Chemical Sensors / Biosensors, Molecular Devices and smart materials

3. Physical Chemistry- X-ray Diffraction, Electron Diffraction, Surface chemistry, Electrochemistry, Polymer Chemistry, Photophysical Chemistry, LASERS

4. Biochemistry - Enzymology, Biomimetic Chemistry, Bioanalytical Chemistry.

Awards and Distinctions

- III M.P. Young Scientists Award, 1988
- Indian Science Congress Young Scientists Award, 1989
- Indian National Science Academy Visiting Fellowship 1994 (worked at BARC, Mumbai)
- UGC awarded Indo-Hungarian Fellowship for 2005-06 (worked on Fullerenes Biocompatibility with Professor Tibor Braun) at Pecs Medical University, Hungary in 2005
- Dr D.S. Bhakuni Award 2013 by Indian Chemical Society, Kolkata

Publication Profile

National

1. Kale D., Muktibodh S., Sharma U., Bhagwat V.W. , *Nat. Acad. Sci. Lett* 12, (1989) 73.
2. Asrani L., Sharma U., Bhagwat V.W. , *Nat. Acad. Sci. Lett* . 4, (1991), 2. .
3. Sharma U., Bhagwat V.W., *Asian J. Chemistry*, 4, (1992), 758.
4. Mahadevan N., Sharma U., *Ind. J. Chem.*, 31A, (1992), 383.
5. Quershi R., Sharma U., Bhagwat V.W., *Nat.Acad. Sci. Lett*, 15, (1992), 18.
6. Mishra D., Sharma U., Bhagwat V.W., *J. Ind. Chem. Soc.* 69, (1992), 70.
7. Mishra D., Sharma U., Bhagwat V.W., *J. Sci. Phys. Sci.* 4, (1992), 74.
8. Mahadevan N., Sharma U., *Nat. Acad. Sci. Lett* 8, (1993).
9. Mishra D., Mahadevan N., Sharma U., Bhagwat V.W. , *Ind. J.Chem.*, 32A, (1993) 608.
10. Sharma U., *J.Ind. Chem. Soc.* 79, (1993), 559.
11. Mishra D., Sharma U., *Chem. Edu.*,14, (1993).
12. Mishra D. and Sharma U., *Chem. Edu.*, 13, (1997), 5.
13. Mishra D. and Sharma U., *Chem. Edu.* 13, (1997), 18.
14. Qureshi K.S., Mishra D., Sharma U., Bhagwat V.W., *J. Ind. Chem.. Soc.*, 70, (1994).
15. Asrani L., Sharma U., *Ind. J. chem.*, 33A (1994) 176.
16. Mishra D. and Sharma U., *J. Ind. Coun. Chem.*,12, (1996), 39.
17. Mishra D. and Sharma U., *Ult. Sci. Phys. Sci.*, 8, (1996), 89.
18. Mishra D. and Sharma U., *Indian J. Chem.*, 35A (1996), 1014
19. Mishra D. and Sharma U., *Ind. J. Chem. Tech.*, 3, (1996), 245.
20. Mishra D. and Sharma U., *Proc. Ind. Acad. Sci. (Chem. Sci.)* 108, (1996), 65-68
21. Mishra D. and Sharma U. *Nat. Acd. Sci. Lett.* 21 (1998) 11.
22. Awasthy A., Joshi N. Sharma U., *Ind. J. Chem.*; 45 (5) (2006) 1170.
23. Joshi P., Joshi N. and Sharma U., *J. Biochem & Biophysics*, 43 (2006), 323-326.
24. Bhatnagar M., Tomar J. Sharma U., *J. Proc. of Natl. Acad. of Sci., Sec.A*, 76 (1) (2007), .
25. Vani A., Vyas V., and Sharma U., *Proc. of Natl. Acad. of Sci. Sec.A*, 80, II, (2010).
26. Ajwani P., Lokwani L. and Sharma U., *J. Chem. Pharm. Res.*, 2(3), 5(2010), 579-586.
27. Raizada P., Vyas V. and Sharma U. *Ind. J. Chem. Technol.* 17, (2010) 267-273.
28. Raizada P., Tomar J. and Sharma U., *J. Ind. Chem.. Soc.* 80, (2011), 505-511.

29. Vyas V. , Raizada P. and Sharma U. , *Proc. of Natl. Acad. of Sci. Sec.A*, 80, II, (2010).
30. Anchaliya D., Vyas V., Vani A. and Sharma U., *J. Chem. Pharm. Res.*, 3(6), (2011), 46-55.
31. Anchaliya D. and Sharma U. *Natl. Acad. Sci. Lett.* (2012), 35(4), 277–284.

International

32. Mishra D., Sharma U., *K. Surf. Sci. Techol.* 9(1993),1.
33. Deepa S. and Sharma U., *J. Sci. Isla. Rep. Iran*, 8, (1997), 2.
34. Mishra D. and Sharma U., *Main Group Metal Chemistry*, 20, (1997), 761.
35. Khamaru S. and Sharma U. *J. Surf. Sci. Technol.*, 11, (1997), 33.
36. Khamaru S. and Sharma U., *Acc. Chem. Res. (M)*, 8, (1998), 1844-1852.
37. Mishra D., Deepa S. and Sharma U., *J. Sep. Sci. Techol.*, 341, (1999) 3113.
38. Bhatnagar M. and Sharma U., *J. Sci. I. R. Iran*, 13, (2002) 113-120.
39. Mishra D. and Sharma U. *J. Sep. Purification Technol.*, 27 (2002) 51-57
40. Deepa S. and Sharma U., *J. Main Group Metal Chemistry*, 26, 1 (2003), 27-34
41. Bhatnagar M., Awasthy A. and Sharma U., *J. Main group Metal Chemistry* 27,3, (2004), 163.
42. Awasthy A., Bhatnagar M., Tomar J. and Sharma U., *J. Bioinorganic Chemistry and Applications*, article ID 97141, (2006) 1–4.
43. Tomar J. and Sharma U., *J. Main Group Metal Chemistry*, 29 (3) (2006) 119.
44. Braun T., Mark L., Ohmacht R. and Sharma U. “*Fullerenes Nanotube Carbon Nanostructures*”, 15 (4) (2007).
45. Tomar J., Awasthy A. and Sharma U., *Desalination*, 232(1-3) (2008), 102-109.
46. Dubey S., Joshi N. and Sharma U., *Main Group Metal Chemistry*, 31, (2008).
47. Bhatnagar M., Awasthy A. and Sharma U., *Main Group Metal Chemistry*. 31, (2008).
48. Vyas V., Vani A., Dubey S., Mimrot M. and Sharma U., *Main Group Metal Chemistry.*, 31, (2008).
49. Mehta B. K., Sharma U., Agrawal S., Pandit V, Joshi N. and Gupta M. , *Medicinal Chem. Res.*, 17, (2-7), (2008) 462-473.
50. Mimrot M, Tomar J. and Sharma U., *Main Group Metal Chemistry*, 31 (6) (2008) 289-294.
51. Khamaru S., Joshi N., Awasthy A. and Sharma U., *Main Group Metal Chemistry*, 31, (6) (2008), 311-318.
52. Tomar J., Awasthy A. and Sharma U., *Desalination*, 232, (2008), 102-109.
53. Dubey S., Joshi N. and Sharma U., *Main Group Metal Chemistry* 31, (2008).
54. .Bhatnagar M, Awasthy A. and Sharma U., *Main Group Metal Chemistry*, 31(3-4), (2008), 203–210.

55. Vyas V., Vani A., Dubey S., Mimrot M. Sharma U., *Main Group Metal Chemistry*, 31,6, (2008), 283
56. Lokwani L. and Sharma U., *Main Group Metal Chemistry*, 31, (2008), 235-242.
57. Dubey S., Joshi N. and Sharma U., *Review in Inorganic Chemistry*, 29, 2, (2009).
58. Ajwani P. , Lokwani L. and Sharma U. , *Main Group Metal Chemistry*, 33, 5, (2010), 4-
59. Raizada P. and Sharma U., *Main Group Metal Chemistry*, 33 (2010), 321-323.
60. Vyas V., Raizada P. and Sharma U., *International Journal of Electrochemistry* (2011), Article ID 798321, 6 pages.
61. Tomar J., Chauhan P.S. and Sharma U. *J. Incl Phenom & Macrocycl. Chem.* 51 (2011)
64. Anchaliya D., Vyas V., Vani A. and Sharma U. *J. Chem. Pharm. Res.*, 3(6), (2011), 46-55.
65. 65. Anchaliya D. and Sharma U. *Natl. Acad. Sci. Lett.* July–August 2012, 35(4), 277–284.
66. Anchaliya D. and Sharma U. *J Incl Phenom Macrocycl Chem.*, 77(1-4), (2014)

Ph.D. Awarded under my supervision

1	Ms Deepti Mishra	1992	Solution studies and isolation of alkali and alkaline earth metal complexes of non -cyclic polyethers.
2	Ms Loni Asrani	1993	Extraction and transport studies of -----Furan containing ionophores
3	Ms Neena Mahadevan	1993	Not available
4	Ms Rafat quereshi	1994	Not available
5	Ms Deepa Shivrajan	1995	Not available
6	Ms Shipra Khamaru	1998	Membrane transport----- non-cyclic carboxylic ionophores.
7	Mr Deepak Kale	1998	Not available
8	Mrs Pratibha Joshi	2002	Extraction and transport -----Urea and drug molecules.
9	Ms Mamta Bhatnagar	2003	Design and synthesis of redox switched ionophores and their use in liquid membrane -----alkali n alkaline earth metal ions
10	Nidhi Joshi	2006	Studies in -----synthetic receptors
11	Anubhuti awasthy	2007	Design & Synthesis ----- metal ions
12	Jyoti Tomar	2007	"Studies in extraction and liquid membrane transport of alkali(Na ⁺ , K ⁺) and alkaline earth metal ions (Ca ²⁺ , Mg ²⁺) by synthetic Photoresponsive ionophores
13	Sangya Dubey	2010	Synthesis of ----- transition metal ions
14	Anshumala Vani	2010	Design and synthesis of redox switched ionophores and their use in liquid membrane extraction and transport studies of alkali and

			alkaline earth metal cations(Li+,K+, Ca++, Mg++)
15	Manjusha mimrot	2011	Liquid membrane technology – extraction and transport studies in alkali and alkaline earth metal cations and some neutral substrates using synthetic ionophores
16	Pankaj Raijada	2011	Studies in interaction of some neutral guests (amino acids & nucleobases) with tailored synthetic receptors- Model for biomimetic systems
17	Vaishali Upadhyaya	2012	Synthesis of anthraquinone derived redox switched lariat ethers – their applications in liquid membrane transport studies of Na+ K+ Ca2+, Mg2+.
18	Disha Ancharia	2013	Synthesis of series of redox switchable naphthaquinone derived ionophores and their use in metal ion recognition

Conferences Organized

1. National Conference on Elemento-Organic Chemistry in 2003
2. Academic workshop on New trends in Chemistry held on 26-27th March 2010
3. National conference on Social, Educational technological and medicinal relevance of Chemistry held on 25th-26th Nov.2011
4. Member n coordinator in Women Science Congress 2012

Research Projects

S.No.	Title	Agency	Funds in INR
1.	X-ray studies of alkali metal complexes with non-cyclic polyethers.	UGC New Delhi 1989	10,000
2.	Carrier facilitated transport of alkali and alkaline earth metal ion by non-cyclic carboxylic ionophores.	MPCOST, Bhopal 1992	90,000
3.	Liquid membrane technology- Extraction and transport of main group metal ion by synthetic receptors	AICTE, New Delhi 1998	1.5 lacs
4	Design and synthesis of supermolecules and their applications in chemical sensors.	UGC major project sanctioned in 2006 and completed	6.7 lacs
5	Studies in interaction of amino acids, nucleobases with synthetic receptors and	MPCOST sponsored project going on	11.9 lacs

applications in biomodelling n separation.

Association with Professional Bodies

Committees and Boards Memberships

- **Life member of Indian Science Congress Association, Kolkata**
- **Life member of Indian Council of Chemists, Agra**
- **Life member of Indian Membrane Society, Vadodara**
- **Life member of Indian Association for History & Philosophy of Science,Ujjain.**

Popular Articles –

- Application perspectives of extraction and membrane technology for separation of metal ions in Chemistry Education, (1998)UGC, New Delhi
- Chapter on Infrared Spectroscopy for manual of INGNOU ,New Delhi

Invited Lectures delivered at

- Symposium on Membrane Science applications at **Convention of Chemists Rewa 1992**
- 21st Conference, **Indian Council of Chemists** at **Jabalpur, 2002.**
- 22nd Conference **Indian Council of Chemists** at **Roorkee, 2003.**
- Lecture on **Supramolecular Chemistry** at Govt P G College Neemuch 2003
- National seminar on “**Modern trends in Nanotechnology & Supramolecular Assemblies**” at Ahmedabad, 2007
- Lecture on **Mossbauer Spectroscopy** at P M Gujrati College,Indore 2007
- National seminar lecture **Nanotechnology-a biomimetic approach** at Khalsa College Indore 2008
- Academic Workshop lecture on **Nanotechnology & Supramolecular Chemistry** at Kota University Raj. 2009
- Invited talk on **Molecular Recognition – a link between Supramolecular Chemistry & Nanotechnology** at **National seminar on Confluence of Supramolecular Chemistry & Nanoscience** at **Gujrat University2010**
- Invited lecture on **Liquid membrane transport studies of anthraquinone derived lariat ethers** at **IIT MUMBAI Apr. 2010**
- Invited talk at **NSRAC -2011** at Department of Pure and Applied Chemistry University of Kota Raj.2011
- Invited lecture on **Recent trends in Chemistry** at Pacific University **Udaipur.** Jan. 2012
- Invited lecture at **Symposium on Rerearch methodology** on **Science day 2013** at **MPCST Bhopal.**
- Invited lecture on **Membrane Separation Techniques** at **SGSITS ,Indore 2013**
- Invited lecture on **Supramolecular Chemistry & Nanotechnology** at Mohanlal Sukhadia University,Udaipur Rajasthan 2014
- Invited talk on **Supramolecular Chemistry - an approach to Molecular engineering and soft matter.** at **MANIT Bhopal May 2015**

Forthcoming Research plans

Synthesis of new supermolecules (Cucurbituril and rotaxanes) for specific purpose i.e. sensors and molecular devices.

Inorganic and organic hybrid materials n their applications

Biocompatibility of fullerenes.

Membrane transport studies- Biomodelling and use of vesicles as carrier. Soft matter etc.

