



ZAKIR HUSAIN DELHI COLLEGE
(University of Delhi)

Title Dr.	First Name Usha	Last Name Bansal	Photograph
Designation	Professor		
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	Residence	-	
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	dr.usha.bansal@gmail.com		
Educational Qualifications			
Degree	Institution	Year	
Doctor of Philosophy (Ph.D.)	Ch. Charan Singh University, Meerut.	1998	
Master of Science (M.Sc.): Chemistry 1 st Division	Delhi University.	1990	
Bachelor of Science (B.Sc.): Chemistry (Hons.) 1 st division (Topped Univ.),	Zakir Husain Delhi College, Delhi University.	1988	
Career Profile			
Total: 34+ Years (Research and Teaching Chemistry in Zakir Husain Delhi College, University of Delhi)			
Pre-Doctoral: July 1990 to June 1998.			
Post-Doctoral: June 1998 till date.			
Administrative Assignments			
Teacher In-charge in the college during 1998-99, 2012-13 and 2023-24			
Areas of Interest / Specialization			
Organic Chemistry			
Subjects Taught			
Organic Chemistry, Inorganic Chemistry, Physical Chemistry			

Research Guidance

One student completed PhD from Mewar University

Publications Profile

- 1) Synthesis and structural studies on Manganese(II) complexes of some N-O and N-S donor ligands.
Syn. React. Inorg. Met-org. Chem. 21(1),131-142 (1991).
Usha Bansal, S.Talwar, S.Chandra, R.Singh and P.Veerawamy.
- 2) Stereo chemical studies of Cobalt(II) complexes of methyl-n-hexylKetone semicarbazone and thiosemicarbazone.
Syn. React. Inorg. Met-org. Chem. 21(4), 653-667 (1991).
Usha Bansal, S.Chandra, S.Talwar, R.Singh and P.Veerawamy.
- 3) Synthesis and characterization of Co(II), Ni(II), Cu(II) & Zn(II) complexes of some thiosemicarbazones.
Syn. React. Inorg. Met-org. Chem., 22(7), 929-940 (1992).
Usha Bansal and S.Chandra.
- 4) Synthesis and characterization of Manganese(II) complexes of ONO and ONS donor ligands.
Syn. React. Inorg. Met-org. Chem., 27(7), 971-981 (1992).
Usha Bansal, Ashok Kumar and S.Chandra.
- 5) Synthesis and characterization of Copper(II) complexes of semicarbazones.
Spectrochimica Acta, 48A, 1133-1137 (1992).
Usha Bansal and S.Chandra.
- 6) Pd(II), Pt(II), Rh(III), Ir(III) and Ru(III) complexes of n-pentyl and n-hexyl ketone thiosemicarbazones.
Syn. React. Inorg. Met-org. Chem., 22(10), 1565-1579(1992).
Usha Bansal and S.Chandra.
- 7) Semicarbazone and thiosemicarbazone complexes of chromium (III).
Trans. Met. Chem., 18, 342-344 (1993)
Usha Bansal, Ashok Kumar and S.Chandra.
- 8) Cobalt(II) complexes of some semicarbazones.
Syn.React.Inorg.Met-org.Chem.,23(4),641-684 (1993).
Usha Bansal, Ashok Kumar and S.Chandra.

- 9) Synthesis and EPR spectral studies on oxovanadium(IV) complexes of some oximes.
J. Indian Chem. Soc., 79(2), 129-131, (2002)
Usha Bansal, S.Chandra, S.Gupta and S.D.Sharma.
- 10) Spectroscopic approach in the characterization of the copper(II) complexes of isatin-3,2-quinolyl-hydrazones and their adducts.
Spectrochimica Acta Part A, 65, 463-466 (2006).
U.Bansal, S.Chandra and Lokesh Kumar Gupta.
- 11) Spectroscopic and physicochemical studies on nickel(II) complexes of isatin-3,2'-quinolyl-hydrazones and their adducts
Spectrochimica Acta Part A, 66, 972-975 (2007).
U.Bansal, S.Chandra and Lokesh Kumar Gupta.
- 12) Synthesis, spectroscopic characterization of Mn(II), Co(II), Cu(II) AND Ni(II) complexes with macrocyclic ligand (I)
European Journal of Pharmaceutical and Medical Research, ejpmr, 2018,5(5), 287-300 (2018)
Usha Bansal, Sumedha Gupta and Bhupendra Kumar Sarma
- 13) Designing, synthesis and spectroscopic studies of co(ii), ni(ii) and cu(ii) transition metal complexes with nitrogen donor tetradentate, novel macrocyclic schiff's base ligand
World Journal of Pharmaceutical Research, Volume 7, Issue 9, 1232-1251 (2018)
Dr.Usha Bansal, Sumedha Gupta and Dr.Bhupendra Kumar Sarma
- 14) Synthesis, Characterization and Antibacterial Activity of Copper(II) Complexes of Acetylacetone Semicarbazone
EDUCARE, Volume IX, Issue No 7, 218-224 (2020)
Dr.Usha Bansal and Dr.Swati Agrawal
- 15) Manganese(II) Complexes of Benzil Semicarbazone: Synthesis, Spectral and Antifungal Studies
EDUCARE, Volume IX, Issue No 7, 237-242 (2020)
Dr.Usha Bansal and Dr.Swati Agrawal
- 16) Synthesis and Spectral Characterization of Mn(II) and Co(II) Complexes with Tetradentate Macrocyclic Ligand
Asian Journal Of Chemistry, Volume 33, Issue 9, 2207-2211 (2021)
Usha Bansal, Samta Goyal and Swati Agrawal
- 17) Biologically Active Schiff Base Nanoparticles: A Review
European Journal of Biomedical and Pharmaceutical sciences, Volume 8, Issue 9, 244-252 (2021)
Usha Bansal, Samta Goyal and Swati Agrawal
- 18) Synthesis And Characterization Of [N4] Macrocyclic Ligand[L] And Its Ni(II) And Cu(II) Complexes
European Journal of Biomedical and Pharmaceutical sciences, Volume 8, Issue 9, 453-458 (2021)

Usha Bansal, Samta Goyal and Swati Agrawal

- 19) A method applied for theoretical designing of novel donor acceptor type copolymer comprising of thiophene
Asian Journal Of Chemistry, Volume 33, Issue 12, 2929-2933 (2021)
Usha Bansal, Swati Agrawal and Geetika Bhalla
- 20) Trends in Food Packaging: A Comprehensive Review
Asian Journal Of Chemistry, Volume 34, Issue 10, 2499-2510 (2022)
Usha Bansal, Namita Gandhi, Shilpi Khurana, Ritu Mathur and Rashmy Nair

Conference Organization/ Presentations (in the last five years)

- 1) Workshop on "Science Communication For Writing Popular Science For Print And Web" organized by Zakir Husain Delhi College at Delhi, 30-31 Aug 2018
- 2) Symposium on "Making Overall Sense of Avenues in Chemistry" organized by Zakir Husain Delhi College at Delhi, 26th Sept 2018
- 3) International Online Workshop cum Webinar entitled "Visual Note Taking" organized by Zakir Husain Delhi College in collaboration with IQAC on 08 Oct 2020
- 4) Resource person and organized "One Week Inhouse Workshop on Laboratory Skills Training" organized by organized by Zakir Husain Delhi College in collaboration with IQAC on 06-13 Dec 2021.
- 5) International Webinar on "Better Living Through Green Chemistry" organized by Zakir Husain Delhi College under the aegis of IQAC on 15 Dec 2021
- 6) National Webinar on "Achieving Excellence in Chemistry in India in 21st Century: Challenges and Opportunities" organized by Zakir Husain Delhi College under the aegis of IQAC on 18 Jan 2022
- 7) Resource person and organized International Conference on "Advances in Chemical Sciences and Nanocomposites" organized by Zakir Husain Delhi College & ISAS on 1st 2nd April 2022
- 8) Attended International Conference on "9th ASIAN NETWORK FOR NATURAL & UNNATURAL MATERIALS (ANNUM-9)" organized by the Department of Chemistry, University of Delhi, India held on 8th April 2022.

Research Projects (Major Grants/Research Collaboration)

Defense Research & Development Organization, New Delhi funded 49.93 lakh project titled "Metal based biologically active compounds derived from novel Schiff's based ligands: Synthesis, characterization, DFT studies, antimicrobial/anticancer cytotoxicity evaluation"

Awards and Distinctions

- 1) "Professor Sheshadri Award" for standing 1st in B.Sc. (Chemistry Honors) at Delhi University in 1988
- 2) "S.P.Suri Memorial Award" for standing 1st in in B.Sc. (Chemistry Honors) at Delhi University in 1988
- 3) "S.P.Suri Memorial Award" for standing 1st in B.Sc. (Chemistry Honors) 3rd year at Zakir Husain Delhi College, Delhi University
- 4) "S.P.Suri Memorial Award" for standing 1st in B.Sc. (Chemistry Honors) 2nd year at Zakir Husain Delhi College, Delhi University
- 5) "S.P.Suri Memorial Award" for standing 1st in B.Sc. (Chemistry Honors) 1st year at Zakir Husain Delhi College, Delhi University

Other Activities

- 1) Refresher course in chemistry (CH-18), organized by CPDHE, University of Delhi, from December 23, 1991 to January 11, 1992.
- 2) Refresher course in chemistry (CH-83), organized by CPDHE, University of Delhi, from September 29 to October 18, 1997.
- 3) Refresher course in chemistry (CH-92), organized by CPDHE, University of Delhi, from April 15 to May 7, 2002.
- 4) Refresher course in chemistry, organized by CPDHE, University of Delhi, from September 1 to September 20, 2003.