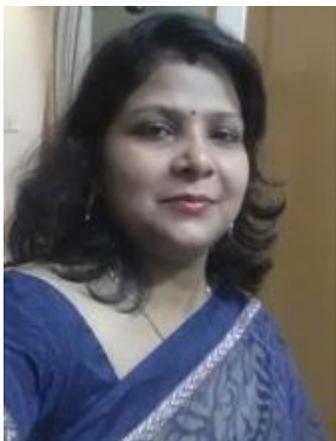


Curriculum Vitae



Name Dr. Bandana Singh
Nationality Indian
Date of Birth 9 July 1982
Gender Female
Present Address House No. C-52; Sector – O; Aliganj; Lucknow-226024. UP, India
Permanent Address House No. C-52; Sector – O; Aliganj; Lucknow-226024. UP, India
Marital status Married
Telephone 9793857019
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Educational Details

- 2010 Ph.D .(Inorganic Chemistry)
Department of Chemistry,
Banaras Hindu University (BHU) Varanasi
Thesis Title: *“Synthesis, Characterization and Properties of Monometallic and Bimetallic Complexes of Dithioligands”.*
- 2005 Master of Science, Inorganic Chemistry, 69.6%
Allahabad University , Allahabad, U.P., India
- 2003 Bachelor of Science, BZC Group,66.3%
Purvanchal University, Jaunpur, U.P., India

Acedemic Achievement:

- Aug. 2012 - 2015 Dr. D. S. Kothari Postdoctoral Fellowship-UGC (24.08-2012 to 23.08.2015)
Title: *“Exploratory of Tellurium Chemistry in Organic Synthesis”*
Department of Chemistry, Faculty of Science; Lucknow University , U.P., India.
- March2010-April 2011 Senior Research Fellowship CSIR, New Delhi, awarded from March 2010 - April 2011
- Jan.2007 - Feb.2010 BHU Research fellowship awarded from January 2007 to February 2010

Teaching Experience

2012 – 2015
&
From November 2020
Six Years Teaching experience (B.Sc & M.Sc.) in the Department of Chemistry, Faculty of Science, Lucknow University.

From March 2021
to till now
Assistant Professors in Career Convent Girls Degree College, Vikash Nagar , Lucknow

Research Experience

Earned Ph.D. degree from Banaras Hindu University (BHU) under the supervision of Prof. Nanhai Singh. My research topic was in the area of Co-ordination chemistry especially synthesis, characterization and properties of mono-metallic and bi-metallic complexes of dithio ligands for application in to solar energy capture and biological studies.

Postdoctoral experience with UGC fellowship was at Lucknow University under the supervision of Prof. Ashok K.S. Chauhan in the field of Tellurium Chemistry utilization in Organic Synthesis. Although less explored, Tellurium chemistry is more advantageous over Magnesium chemistry.

- ✚ Purified Organo-Tellurium complexes by column chromatography and used in synthesis of complex organic molecules which is visible in our publication. Grignard reagents are generated in-situ and give lower yields along with polymeric products. Tellurium intermediates give better yields and more purified products.
- ✚ Have experiences in handling of Gouy Balance (for magnetic susceptibility), UV-visible and Fluorescence spectrophotometer (Shimadzu UV-1700 Pharma Spec. & Varian Cary Eclipse Fluorescence spectrophotometer respectively), Keithley 236 Source Measure Unit (solid state electrical conductivity), and solving the single crystal X-ray data by SHELX.
- ✚ Competent in interpretation of routine spectroscopic data such as IR, NMR (^1H , ^{13}C , ^{31}P and ^{125}Te), EPR, Photoluminescence and ESI-mass

spectra.

Publications:

-
- 2015 *"Hydrotelluration of Acetylenic Esters: Structural Characterization of Stereoisomers of Methyl/Ethyl-(β-aryltelluro)acrylates"*. Bandana Singh, Ashok. K. S. Chauhan,* Ramesh C. Srivastava, Andrew Duthie and R. J. Butcher, *RSC, Adv.*, **2015**, 5, 58246- 58254.
-
- 2014 *"Light harvesting properties of some new heteroleptic dithiocarbamate-diamine/diimine complexes of Ni, Pd and Pt studied as photosensitizer in dye-sensitized TiO₂ solar cells"*. Kiran Diwan, Ratna Chauhan, Bandana Singh, Santosh K. Singh, Michael G. B. Drew, Lal Bahadur,* Nanhai Singh*; *New J. Chem*, **2014**, 38, 97-108.
-
- 2011 *"Unprecedented coordination of dithiocarbamate in multinuclear and heteroleptic complexes"* Bandana Singh, Michael G. B. Drew, Gabriele Kociok-Kohn, Kieran C. Molloy and Nanhai Singh*, *Dalton Trans.*, **2011**, 40, 623-631.
-
- 2011 *"Facile in-situ copper(II) mediated C–S bond activation transforming dithiocarbamate to carbamate and thiocarbamate generating Cu(II) and Cu(I) complexes"*. Kiran Diwan, Bandana Singh, Santosh K. Singh, Michael G. B. Drew, and Nanhai Singh*, *Dalton Transactions* , **2011**, 41,367-369.
-
- 2011 *"Enhanced light harvesting efficiencies of bis (ferrocenylmethyl)-based Sulfur rich sensitizers in dye sensitized TiO₂ solar cells"*. Santosh K. Singh, Ratna Chauhan, Bandana Singh, Kiran Diwan, Gabriele Kociok-Köhn, Lal Bahadur* and Nanhai Singh*, *Dalton transactions* , **2011**, 41, 1373-1380.
-
- 2010 *"Synthesis, X-ray crystal structure and properties of complex salts and sterically crowded heteroleptic complexes of group 10 metal ions with aromatic sulfonyl dithiocarbamates and triphenylphosphine ligand"*. Nanhai Singh*, Bandana Singh, Kamlesh Thapliyal and Michael G. B. Drew; *Inorg. Chimica Acta*, **2010**, 363, 3589-3596.
-
- 2010 *"Synthesis, crystal structures and properties of sterically congested heteroleptic complexes of group 10 metal ions with p-tolyl sulfonyl dithiocarbamate and 1,2-bis (diphenylphosphino) ethane"*. Nanhai Singh*, Bandana Singh, Santosh K. Singh and Michael G. B. Drew; *Inorg. Chem. Comm.*, **2010**, 13, 1451-1454.
-
- 2008 *"Synthesis, characterization, and conducting properties of heterobimetallic salts of Cyanoiminomethanedithiolate Ligand"*. Nanhai Singh* and Bandana Singh; *Bull. Chem. Soc. Jpn.*, **2008**, 81, 262–267.
-
-

Research paper Presentation in Seminars/Symposium/ Conferences:

- Feb.5 – 7, 2010
”Unprecedented coordination ability of dithiocarbamate in the construction of luminescent homodi- and heterotrimetallic complexes”.
Bandana Singh and Nanhai Singh*
Poster presented in “12th CRSI National Symposium in Chemistry (5th – 7th February, 2010) 4th CRSI-RSC Symposium in Chemistry (4th February, 2010)”, Indian Institute of Chemical Technology, Hyderabad
-
- March 5 -6, 2011
”New dinuclear and heterotrinuclear complexes of copper (I) and nickel (II) stabilized by dithiocarbamate and PPh₃ ligands: Synthesis, Crystal structures and properties”.
Bandana Singh, Kiran Diwan, Santosh K. Singh, Gunjan Rajput and Nanhai Singh*
Poster presented in “International Conference on Chemistry: Frontiers and Challenges [Under SAP (DRS-I)]”, Department of Chemistry, Aligarh Muslim University, Aligarh, 5–6 March 2011
-
- Feb. 19 – 20,2011
’Synthesis, structure, optoelectronic and electrochemical properties of heteroleptic complexes of Pt group metals with dithiocarbamate and diamine/diimine ligands’.
Kiran Diwan, **Bandana Singh**, Santosh K. Singh, Gunjan Rajput, Akhilesh Prasad and Nanhai Singh*.
Poster presented in “National Symposium on Emerging Trends in Chemical Sciences (ETCS-2011), Department of Chemistry, B.H.U. Varanasi. 19-20 February 2011
-
- Feb, 4 -6,2011
”Copper(II) Mediated Transformation of Dithiocarbamate into Mono and Tetranuclear Copper(II) Carbamates: Synthesis, Structures and Properties”.
Kiran Diwan, **Bandana Singh**, Santosh Kumar Singh, Gunjan Rajput, Nanhai Singh
Poster presented in “13th CRSI & 5th CRSI-RSC Symposium in Chemistry”NISER & KIIT University, Bhubaneswar, 4-6 February 2011,
-

National and International Seminars/Symposium Attended:

March 24-25, 2006 “**National Symposium of Designing the Molecular World through Chemistry**”, Department of Chemistry, Banaras Hindu University, Varanasi 221005. March 24-25, **2006**.

Feb. 1 – 6, 2007 “**NSC-9 Chemical Research Society of India (CRSI) Sponsored 9th National symposium in chemistry**” New Delhi, February 1-4, **2007**

March 24 -25, 2007 “**National Symposium on Current trends in Chemistry**”, Department of Chemistry, Faculty of Science, Banaras Hindu University, Varanasi. March 24 - 25, **2007**.

March 8 – 9, 2010 “**National Symposium-Cum-Workshop on X-ray Crystallography**”, Department of Chemistry, Banaras Hindu University, Varanasi. March 8 - 9, **2010**.

August 7, 2013 “**National Seminar in Chemistry under DST-PURSE**”, Department of Chemistry, University of Lucknow, Lucknow, August 7, **2013**.

June 25-29,2021 “**National e-workshop on Instrumentation Techniques in Chemical Sciences**” Department of Chemistry, Veer Bahadur Singh Purvanchal University Jaunpur. June 25-29, **2021**.

August 20–21,2021 International Symposium on ‘**Click Chemistry:A powerful tool in organic synthesis, material science, biomedicine and beyond**’ organized by the AICCR, Amity University, Noida, August 20–21, **2021**

Faculty Development Program Participation:

August 17-21,
2020

Five days faculty Development Program on "**Recent advances Molecular Chemistry and Functional Materials**", organized the AICCRS under the Amity University Noida Campus, India,

May 18-22, 2021

Five days faculty Development Program on "**Accelerati Innovations in Material Science Surface Characterizati**
Organized by Department of Chemistry, BMS Institute of Technolo and Management, Bengaluru, India

Personality Traits and Skills

Self discipline, hardworking and optimistic.

Good communication skills.

Positive attitude and goal oriented.

Team spirit and co-operation

Excellent advisory and problem-solving skill.

Thorough knowledge of subject matter.

Good Knowledge of Windows MS Office and Application packages like Chem-Draw and Origin other various Chemistry Software such as WINGX, ORTEP and SHELXS-97, 2013, 2014.
