Professor Rajeev Gupta
Department of Chemistry
University of Delhi

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1. **Name:** Rajeev Gupta
2. **Designation:** Senior Professor
3. **Affiliation:** Department of Chemistry, University of Delhi
4. **Education:**
   - B.Sc. (1992), Kanpur University, Kanpur (U.P.), 1st Division (72%)
   - M.Sc. (1994), Kanpur University, Kanpur (U.P.), 1st Division (66%)
   - Ph.D. (2000), Department of Chemistry, Indian Institute of Technology – Kanpur, India. Supervisor: Professor R. N. Mukherjee
     Ph. D. Thesis Title: *Studies on Copper Complexes Using Macrocyclic and Non-macrocyclic Nitrogen Donor Ligands*
5. **Professional Experience:**

   (i) **Senior Professor**, University of Delhi, India (Since May 2019)
   (ii) **Professor**, University of Delhi, India (2009 – 2019)
   (iii) **Associate Professor**, University of Delhi, India (2006 – 2009)
   (iv) **Reader**, University of Delhi, India (2003 – 2006)
   (v) **Post-doctoral Associate**, University of Kansas, Lawrence, Kansas, USA (Supervisor: Professor A. S. Borovik; June 2000 – May 2003)
   (vi) **Research Associate**, Indian Institute of Technology – Kanpur, India (Supervisor: Professor R. N. Mukherjee; July 1999 – May 2000)

6. **Awards, Honors and Recognitions:**
   - **Council Member**, Chemical Research Society of India (**CRSI**) (**2020 – 2023**)
   - **Member – Special Assistance Program –** University Grant Commission (**UGC**), Sardar Patel University, Vallabh Vidyanagar, Gujrat (**2018 – 2022**)
   - **Member – Expert Committee**, INSPIRE Fellowship Program, Department of Science & Technology (**DST**), Govt. of India
   - **Co-opted Member**, **Programme Advisory Committee (PAC) – Inorganic & Physical Chemistry**, Science and Engineering Research Board (**SERB**), Govt. of India **(2018 – 2021**)
   - **Co-opted Member**, **SERB-SUPRA**, Science and Engineering Research Board (**SERB**), Govt. of India
   - **Co-opted Member**, **SERB-STAR**, Science and Engineering Research Board (**SERB**), Govt. of India
   - **Co-opted Member**, **SERB-POWER**, Science and Engineering Research Board (**SERB**), Govt. of India

- **Member**, **SERB-VORTEX**, Science and Engineering Research Board (**SERB**), Govt. of India
- **Co-opted Member**, **Young Scientist Expert Committee**, Chemical Sciences, Science and Engineering Research Board (**SERB**), Govt. of India **(2015 – 2018**)
- **Member – Editorial Board**, *Journal of Chemical Sciences*, jointly published by the Indian Academy of Sciences, Bangalore & Springer (**2017 – 2022**)
- **Membership Award** from the American Chemical Society (**ACS**) in Recognition of Engagement with ACS's Mission of Service to the Global Community of Chemists (**2015 – 2018**)
- **Bronze Medal** for the year **2016** from the Chemical Research Society of India (**CRSI**) for Contribution to Research in Chemistry
- **Science Flame Award** (**2015**) from the World Science Congress
- **Indo – US Research Fellowship** awarded by the Department of Science & Technology (**DST**) and Indo – US Science & Technology Forum (**2009**)
- **Young Scientist Project** (**2004**) from the Department of Science & Technology (**DST**), Govt. of India
- **CSIR – JRF** from the Council of Scientific & Industrial Research (**1994**)
- **Leelavati N. Modi Scholarship**, Christ Church College, Kanpur University, Kanpur (**1992**)

7. Teaching Experience:

- Teaching/taught M.Sc., M.Phil., M.Tech. (CSPT), and Ph.D. students in the Department of Chemistry, University of Delhi since 2003
- Courses taught at the Department of Chemistry, University of Delhi:
  (i) Coordination Chemistry
  (ii) Supramolecular Chemistry
  (iii) Photoinorganic Chemistry
  (iv) Bioinorganic Chemistry
  (v) Organometallic Chemistry
  (vi) Solid State Chemistry
  (vii) Nuclear and Radiation Chemistry
  (viii) Industrially Important Solids
  (ix) Chemistry of Trace Elements in Human Body
  (x) Synthetic Chemical Modeling of Metalloproteins and Metalloenzymes
  (xi) Laboratory Practical Courses for M.Sc. students
  (xii) Laboratory Practical Courses for M.Tech. (CSPT) students
- Assisted in the General Chemistry Courses at I.I.T. Kanpur during PhD as a Teaching Assistant (1995 – 2000)

8. Supervisory Experience:

- Number of PhD Students Supervised: **Eighteen**
  (i) Dr. Anurag Mishra (**2008**) Synthesis and Characterization of Novel Heterometallic Complexes Utilizing Coordination Complexes as the Building Blocks

(ii) Dr. Jyoti Singh (**2009**) Studies on Coordination Complexes with Synthetically Designed Tetradentate Amide–Based Ligands

(iii) Dr. Savita Kumari (**2009**) Effect of Ligand Architecture on the Structure and Properties of Nickel Complexes with Amide–Based Macrocyclic Ligands

(iv) Dr. Amit Pratap Singh (**2010**) Development of Coordination Complexes as the Building Blocks for the Generation of Novel Heterobimetallic Complexes

(v) Dr. Megha Munjal (**2011**) Synthesis and Characterization of Nickel and Copper Complexes with Amide-Based Ligands

(vi) Dr. Afsar Ali (**2012**) Coordination Complexes with Appended Functional Groups: Hydrogen Bonded Networks and Heterobimetallic Complexes

(vii) Dr. Girijesh Kumar (**2013**) Coordination Complexes Appended with Pyridine or Arylcarboxylic Acid Groups: Extended Ensembles and Functional Materials

(viii) Dr. Sushil Kumar (**2013**) Studies on Selected Transition Metal Complexes of Amide-Based Ligands: Evaluating the Role of e^--Withdrawing and e^--Donating Substituents on Ligand

(ix) Dr. Sumit Srivastava (**2017**) Metalloligands Appended with Pyridine or Arylcarboxylic Acid Groups: Discrete Complexes, Hydrogen Bonded Assemblies and Coordination Networks

(x) Dr. Deepak Bansal (**2017**) Coordination Chemistry with Amide-Based Ligands Containing Additional Thiazole, Thiazoline, Benzothiazole and Benzimidazole Donors

(xi) Dr. Sunil Yadav (**2018**) Coordination Complexes of Amide-Based Ligands: Synthesis, Characterization, Catalysis and Mechanistic Investigation

(xii) Dr. Saurabh Pandey (**2018**) Synthesis and Characterization of Bimetallic Complexes and Coordination Polymers Based on Metalloligands

(xiii) Dr. Gulshan Kumar (**2018**) Coordination Polymers Based on Metalloligands: Synthesis, Characterization and Their Catalytic Applications

(xiv) Dr. Vijay Kumar (**2020**) Development of Chemosensors Bearing Different Fluorophores for the Selective Detection of Assorted Analytes

(xv) Dr. Divya Prabha (**2022**) Coordination Complexes Offering Hydrogen Bonding Cavities: Applications in Sensing and Catalysis

(xvi) Dr. Sanya Pachisia (**2022**) Molecular Assemblies and Coordination Polymers Decorated with Hydrogen Bonding Functional Groups

(xvii) Ms. Samanta Yadav (**2022**) Ruthenium Complexes of Amide-Based Ligands: Synthesis, Characterization and their Catalytic Applications (***Thesis submitted***)

(xviii) Mr. Devender Singh (**2023**) Development of Schiff Base Based Chemosensors for the Detection of Selected Analytes (***Thesis submitted***)

(xix) Ms. Hina Goyal (**2023**) Polycyclic Aromatic Hydrocarbon–based Soft Materials: Gel, AIEE, Mechanochromism and Sensing Properties/Applications (***Thesis submitted***)

- Number of PhD Students Registered: **Five**

  (i) Ms. Ruchika Gupta, Date of Registration: **22.05.2018**
  (ii) Mr. Aashish, Date of Registration: **06.11.2018**
  (iii) Mr. Ibrahim Annan (International Std.), Date of Registration: **09.04.2021**
  (iv) Ms. Upma, Date of Registration: **09.03.2022**
  (v) Ms.

- Number of MPhil Students Supervised: **Three**

  (i) Mr. Amit P. Singh **(2005)** Synthesis and Characterization of Copper(II) Complexes of Amide–Amine–Based Ligands with Potential of HIV–1 Protease Inhibition Activity
  (ii) Ms. Anupama Mishra **(2006)** Synthesis and Characterization of Copper(II) Complexes of Amide–Amine–Based Tri–aza Macrocyclic Ligands Having Potential of Synthetic Rotamase Activity
  (iii) Ms. Divya Pandey **(2007)** Synthesis and Characterization of Cobalt(II) Complexes of Amide–Based Macrocyclic Ligands

- Number of DS Kothari Post-doctoral Students Supervised: **Six**
  (i) Dr. Akhilesh Prasad (BHU, Varanasi)
  (ii) Dr. Santosh Kumar Dubey (BHU, Varanasi)
  (iii) Dr. Neetu Singh (BHU, Varanasi)
  (iv) Dr. Poonam Shukla (CDRI, Lucknow)
  (v) Dr. Pramod Kumar (IIT – Roorkee)
  (vi) Dr. Anoop Kumar Saini (IIT – Indore)
- Number of SERB National Post-doctoral Fellow Supervised: **Two**
  (i) Dr. Paranthaman Vijayan (Periyar University)
  (ii) Dr. Sudheer Malik (IIT – BHU/SRM University)
- Number of M.Tech. (CSPT) Students Supervised: **Two**
- Number of Project Students (including IAS Summer Fellowship Program) Supervised: ~80

9. Research Projects:

(i) *Tuning Catalytic and Sensing Applications of Designer Architectures by the Judicious Introduction of Hydrophilic and Hydrophobic Functional Groups*
Funded by the *Science & Engineering Research Board* (**SERB**)
Project Duration: January 21, 2022 – January 20, 2025
Reference: CRG/2021/001700
Budget: Rs. 37,25,056

(ii) *Molecular Assemblies and Coordination Polymers Decorated with Hydrogen Bonds: Recognition, Binding, and Activation of Analytes/Substrates*
Funded by the *Science & Engineering Research Board* (**SERB**)
Project Duration: December 26th 2016 – December 25th 2020 (**Completed**)
Reference: EMR/2016/000888
Budget: Rs. 49,35,040

(iii) *Metal Complexes with Secondary Coordination Sphere: Recognition and Binding of Analytes and Activation of Substrates*
Funded by the *Council of Scientific & Industrial Research* (**CSIR**)
Project Duration: June 1st 2016 – May 31st 2019 (**Completed**)
Reference: 01(2841)/16/EMR-II
Budget: Rs. 6,00,000

(iv) *Coordination Complexes as the Building Blocks: Supramolecular Organization and Catalysis*
Funded by the *Science & Engineering Research Board* (**SERB**)
Project Duration: April 1st 2012 – December 31st 2015 (**Completed**)
Reference: SR/S1/IC–43/2011
Budget: Rs. 49,62,000

(v) *Studies on Coordination Complexes of Macrocyclic Ligands and their Open-Chain Analogues: Coordination and Bioinorganic Chemistry Perspectives*
Funded by the *Council of Scientific & Industrial Research* (**CSIR**)
Project Duration: February 24th 2012 – February 28th 2015 (**Completed**)
Reference: 01(2515)/11/EMR–II
Budget: Rs. 23,92,000

(vi) *Development of indicators for anthropogenic, environmental and chemical stress on urban ecosystem: A study of aquatic and terrestrial ecosystems of Yamuna River catchment from National Capital Region (Delhi)*
Funded by the *University of Delhi under the* ***DST-PURSE*** *Program*
Project Duration: January 2010 – December 2013 (**Completed**)
Budget: Rs. 2,00,00,000 (A collaborative project between Botany, Chemistry, Geology, Microbiology, Physics & Zoology)

(vii) *Development of Coordination Complexes as the Building Blocks to Generate Novel Heterometallic Complexes*
Funded by the *Department of Science & Technology* (**DST**)
Project Duration: September 2008 – August 2011 (**Completed**)
Reference: SR/S1/IC – 04/2008
Budget: Rs. 37,07,000

(viii) *Synthesis and Characterization of Iron Complexes with Synthetically Designed Nitrogen Donor Ligands: Emphasis to the Development of Biomimetic Oxidation Catalysts*
Funded by the *University Grant Commission* (**UGC**)
Project Duration: May 2006 – April 2009 (**Completed**)
Reference: F.No.31-103/2005(SR)
Budget: Rs. 7,91,600

(ix) *Coordination and Oxidation Chemistry with Synthetically Designed Mono-functionalized Macrocyclic Ligands*
FAST–TRACK Project for Young Scientists
Funded by the *Department of Science & Technology* (**DST**)
Project Duration: December 2004 – December 2007 (**Completed**)
Reference: SR/FTP/CS-27/2004
Budget: Rs. 11,54,000

(x) Recipient of the **Faculty Research Programme Grant** of the **Institution of Eminence, University of Delhi** for the financial years:

(i) Reference No.: IoE/FRP/PCMS/2020/27; Rs. 2,50,000 (**2020-2021**)

(ii) Reference No.: IoE/2021/12/FRP; Rs. 3,00,000 (**2021-2022**)

(iii) Reference No.: IoE/2021/12/FRP-213; Rs. 5,00,000 (**2022-2023**)

(xi) Recipient of **University of Delhi Research Grant** for the financial years:

(i) Reference: Dean(R)/R&D/2007/116; Rs. 2,50,000 (**2007-2008**)

(ii) Reference: Dean(R)/R&D/2008/230; Rs. 2,50,000 (**2008-2009**)

(iii) Reference: Dean(R)/R&D/2009/487; Rs. 2,50,000 (**2009-2010**)

(iv) Reference: Dean(R)/R&D/2010/1311; Rs. 2,50,000 (**2010-2011**)

(v) Reference: Dean(R)/R&D/2011/423; Rs. 2,50,000 (**2011-2012**)

(vi) Reference: Dean(R)/R&D/2012/917; Rs. 2,50,000 (**2012-2013**)

(vii) Reference: DRCH/R&D/2013-2014/4155; Rs. 2,80,000 (**2013-2014**)

(viii) Reference: RC/2014/6820; Rs. 2,80,000 (**2014-2015**)

(ix) Reference: RC/2015/9677(882); Rs. 3,00,000 (**2015-2016**)

10. Academic Experiences and Assignments:

- **Member** – Central Pollution Control Board (Ministry of Environment, Forest & Climate Change, Govt. of India), New Delhi since September 2016
- **Member** – Food Analyst Examination Board, Food Safety & Standards Authority of India (Ministry of Health & Family Welfare, Govt. of India), New Delhi (2013 – 2019)
- **Coordinator / Content Writer**, Inorganic Chemistry Course(s) for UGC's Project on ***e – PG Pathshala*** under the NMEICT (MHRD), Govt. of India
- **Member** – Board of Studies, Banaras Hindu University, Varanasi (U.P.)
- **Member** – Board of Studies, Central University of Sikkim, Gangtok
- **Member** – Department Research Committee and Board of Studies; Central University of Haryana, Mahendragarh (Haryana)
- **Member** – Board of Studies, Maharshi Dayanand University (MDU), Rohtak (Haryana)
- **Member** – Board of Studies, Kurukshetra University (Haryana)
- **Member** – Board of Studies, Ch. Bansi Lal University, Bhiwani (Haryana)
- **Member** – Board of Studies, Banasthali Vidyapith, Banasthali (Rajasthan)
- **Member** – Board of Studies, NCCE Technical University, Panipat (Haryana)
- **Member** – Board of Studies, Amity School of Applied Science, Amity University, Manesar Campus (Haryana)
- **Member** – Board of Studies, Department of Applied Science, Delhi Technological University (DTU), Delhi
- **Member** – Board of Studies, Amity School of Applied Science, Amity University, Noida Campus (U.P.)
- **Member** – Board of Studies, YMCA University of Science and Technology, Faridabad (Haryana)

- **Member** – Board of Studies, IIS University, Jaipur (Rajasthan)
- **Member** – Faculty of Physical Sciences & Technology, Guru Jambheshwar University of Science & Technology, Hisar (Haryana)
- **Member** – Research Advisory Committee, Dr. BR Ambedkar NIT– Jalandhar
- **Member** – Research Advisory Committee, Institute of Advanced Research, Gandhinagar, Gujarat, India
- **Member** – Board of Research Studies (Sciences), University of Delhi (2013 – 2015; 2018 – 2019)
- **Member** – Faculty of Science, University of Delhi
- **Secretary / Member** – Department Research Committee (DRC), Department of Chemistry, University of Delhi (2009 – 2012)
- **Member** – Department Research Committee (DRC), Department of Geology, University of Delhi
- **Member** – Department Research Committee (DRC), Department of Computer Science, University of Delhi
- **Convener** – Inorganic Chemistry Section of the Department (2009 – 2010)
- **Convener/Member** – Faculty of Science for the visit of constituent college of the University of Delhi for the recognition of sole supervisors
- **Member – Executive Committee, National Organizing Committee, National Advisory Committee** for the organization of various National and International Conferences and Symposia
- **Mentor** for the University Innovation Project at the Dyal Singh College, University of Delhi (**DS – 103**)
- **Jury Member** for the INSPIRE Scheme of DST, New Delhi
- **Judge** for the "Centre for Science Education and Communication" Programs (University of Delhi)
- **Judge** for the Inter-College Project Presentations at the St. Stephen's College (University of Delhi)
- **Convener** to organize One–Day Symposium on "*Frontiers in Chemical Sciences*" at the Department of Chemistry, Indian Institute of Technology – Kanpur on September 7, 2013
- Resource Person in the CPDHE Refresher Courses at the University of Delhi
- Delivered Lectures in the Refresher Courses and Faculty Development Programs at the following universities: (i) University of Kashmir, Srinagar; (ii) Jammu University, Jammu; (iii) Guru Nanak Dev University, Amritsar; (iv) Himachal Pradesh University, Shimla; (v) Kumaun University, Nainital; (vi) Dr. B. A. Marathwada University, Aurangabad; (vii) Guru Jambeshwar University of Science & Technology, Hisar; (viii) Aligarh Muslim University, Aligarh; (ix) Jamia Milia Islamia, New Delhi; (x) Jawaharlal Nehru University, New Delhi.
- Delivered Motivational Lectures under the INSPIRE or similar academic programs at several colleges under the University of Delhi (Hindu College, Deshbandhu College, St. Stephen's College, DDU College, Ramanujan College, Miranda House) as well as other institutions (SRM University, Sonepat, Haryana; Amity University, Noida Campus, UP)

11. Reviewing Experiences and Assignments:

- Acting as the **Reviewer/Referee** for various International Journals published from the ACS, RSC, Wiley, Wiley-VCH, Nature Publishing Group, Elsevier, Springer, Taylor & Francis societies
- Acting as the **Reviewer/Referee** for various National Journals such as J. Chem. Sci., Ind. J. Chem. Sec-A, Pro. Nat. Acad. Sci. India, Sec-A: Physical Sciences, Indian J. Chem. Tech., etc.
- Acting as the **Reviewer/Referee** for a few Popular Science Journals
- Acting as the **Reviewer** for several National Funding Agencies such as Science and Engineering Research Board (**SERB**), Department of Science & Technology (**DST**), Council of Scientific & Industrial Research (**CSIR**), University Grant Commission (**UGC**), and Board of Research in Nuclear Sciences (**BRNS**)

12. Examination Experiences and Assignments:

- Served in the Question Paper Setting Committee for the "Kishore Vaigyanik Protsahan Yojana" (**KVPY**), Department of Science & Technology (**DST**)
- Served in the Paper Setting Committee (Chemical Sciences) for the "CSIR-JRF Examination" of Council of Scientific & Industrial Research (**CSIR**)
- Served in the Paper Setting Committee (Chemical Sciences) for the JEE examination of Central Board of Secondary Education (**CBSE**)
- Served in the Paper Setting and Evaluation Committee for the Union Public Service Commission (**UPSC**) Examinations
- Served in the Question Paper Setting/Evaluation Committee for the Uttrakhand Public Service Commission (**UkPSC**)
- Served in the Question Paper Setting/Evaluation Committee for the Himachal Pradesh Public Service Commission (**HPPSC**) Examinations
- Served in the Question Bank Committee (Chemical Sciences) for the UPSC Entrance Examinations
- Served in the Paper Setting (Chemistry) for M.Sc., M. Tech., Ph.D. Entrance Examinations of the University of Delhi
- Served in the Paper Setting for several Competitive Medical and Engineering Entrance Examinations of the University of Delhi
- Served in the Paper Setting Committee for Entrance and other Competitive Examinations (Medical, Engineering, etc.) of other universities
- **Member** – Examination Disciplinary Committee, University of Delhi (2013 – 2014 and 2014 – 2015)
- **Member** – Examination Disciplinary Committee, South Campus, University of Delhi (2015 – 2016)
- **Deputy Superintendent of Examinations**, M.Sc. Practical Examinations, Department of Chemistry, University of Delhi
- **Deputy Superintendent of Examinations**, M.Sc. Theory Examinations, Department of Chemistry, University of Delhi
- **Superintendent of Examinations**, PhD Course Work Examinations, Department of Chemistry, University of Delhi

- **Coordinator – Centralized Evaluation Center**, M.Sc. (Chemistry) and M. Tech. (CSPT) Examinations, Department of Chemistry, University of Delhi
- **Superintendent of Examinations**, Rector Prize Examination, University of Delhi (2013)

13. Administrative Experiences and Assignments:

- **Chief Executive Officer**, Institution of Eminence, University of Delhi (since September, 2022)
- **Chairman**, Special Taskforce on Global Ranking (since December, 2021)
- **Dean Students' Welfare**, University of Delhi (October 2018 – December 2021)
- **Chairperson**, Admissions (2019 – 2020)
- **Chairperson**, Admissions (2020 – 2021)
- **Chairperson**, Admissions (2021 – 2022)
- **Chairperson**, FSR Admission Committee (2020 – 2021)
- **Chairperson**, FSR Admission Committee (2021 – 2022)
- **Chairperson**, Non-Collegiate Women Education Board, University of Delhi (2018 – 2021)
- **Provost**, *International Students House, University of Delhi* (2016 – 2021)
- **Warden** – *International Students House, University of Delhi*, (2005 – 2016)
- **Member** – Governing Body, School of Open Learning, University of Delhi (2017 – 2021)
- **Member,** Standing Committee, Non-Collegiate Women Education Board, University of Delhi (2021)
- **Member** – Governing Body, Gargi College, University of Delhi (2016–2018)
- **Member** – Central Recruitment Committee, University of Delhi (2016–2018)
- **Member** – Garden Committee, University of Delhi (2011 – 2019)
- **Chief Election Officer**, DUSU – Executive Council Elections (2017 – 2018)
- **Chief Returning Officer**, DUSU Elections (2017 – 2018)
- **Chairman / Member** – Procurement Committee for the Equipment/ Consumables/Chemicals, University of Delhi
- **Convener** – Single Crystal X-Ray Diffraction Facility, USIC, University of Delhi (2008 – 2018)
- **Chairperson/Convener/Member** for various University of Delhi Committees
- **Member/Convener** for various Departmental Committees

14. Publication Profile:

(A) Publications (From the University of Delhi):

(127) Discriminative 'Turn-on' Detection of Al^{3+} and Ga^{3+} Ions as Well as Aspartic Acid by Two Fluorescent Chemosensors
H. Goyal, I. Annan, D. Ahluwalia, A. Bag, Rajeev Gupta*, *Sensors*, **2023**, *23*, 1798.
(**Invited Article:** *Special Issue Editorial Board Members' Collection Series:* ***Fluorescent Sensors***)

(126) Oxo-bridged Tri- and Tetra-nuclear Cobalt Complexes Supported with Amide-Based Nitrogen Donor Ligands
D. Bansal, S. Yadav, Rajeev Gupta*, *European Journal of Inorganic Chemistry,* **2023**, *26*, e202200601. (**Invited Article:** *University of Delhi Special Collection*; **Cover Page Illustration**)

(125) A multifunctional Schiff base with aggregation-induced enhanced emission, gelation, and mechanochromic properties for anti-counterfeiting applications
H. Goyal, V. Kumar, A. K. Saini, G. Kedawat, B. K. Gupta, Rajeev Gupta*, *Materials Today Chemistry*, **2023**, *27*, 101306.

(124) A fluorescent pH switch probe for the 'turn-on' dual-channel discriminative detection of magnesium and zinc ions
D. Singh, S. Tomar, S. Singh, G. Chaudhary, A. P. Singh, Rajeev Gupta*, *Journal of Photochemistry & Photobiology, A: Chemistry*, **2023**, *435*, 114334.

(123) Cobalt Complexes as Efficient Cooperative Catalysts for Transfer Hydrogenation
S. Yadav, D. Prabha, D. Ahluwalia, A. Bag, Rajeev Gupta*, *European Journal of Organic Chemistry,* **2022**, e202201059. (**Invited Article:** *University of Delhi Special Collection*)

(122) Coumarin-Based Reversible Fluorescent Chemosensors for the Sequential Detection of Copper and Citrate Ions
D. Singh, A. Ibrahim, Rajeev Gupta*, *ChemistrySelect*, **2022**, *7* (45), e202203326. (**Invited Article:** *University of Delhi Special Collection*)

(121) Hydration of Nitriles Catalyzed by Ruthenium Complexes: Role of Dihydrogen Bonding Interactions in Promoting Base-free Catalysis
S. Yadav, Rajeev Gupta*, *Inorganic Chemistry,* **2022**, *61*, 15463–15474.

(120) Methylene Spacer Mediated Detection Switch Between Copper and Zinc Ions by Two Coumarin-Pyrene Based Chemosensors
D. Singh, A. Ibrahim, P. Kumar, Rajeev Gupta*, *ChemistrySelect*, **2022**, *7* (32), e202202574. (**Invited Article:** *University of Delhi Special Collection*)

(119) Tailored Inorganic-Organic Architectures via Metalloligands
S. Pachisia, Rajeev Gupta*, *The Chemical Record*, **2022**, 22, e202200121. (**Invited Article:** *Materials Chemistry in India*; **Cover Page Illustration**)

(118) Encapsulation-Led Adsorption of Neutral Dyes and Complete Photodegradation of Cationic Dyes and Antipsychotic Drugs by Lanthanide-Based Macrocycles
R. Gupta, G. Kumar, Rajeev Gupta*, *Inorganic Chemistry,* **2022**, *61*, 7682-7699.

(117) Molecular Assemblies Offering Hydrogen Bonding Cavities: Influence of Macrocyclic Cavity and Hydrogen Bonding on Dye Adsorption
S. Pachisia, R. Gupta, Rajeev Gupta*, *Inorganic Chemistry,* **2022**, *61*, 3616-3630.

(116) Sensing and formation of a stable gel in the presence of picric acid by a low-molecular-weight-gelator
H. Goyal, Rajeev Gupta*, *Journal of the Indian Chemical Society,* **2022**, *99*, 100521.
(**Invited Article:** Special Issue on *Soft Matter*)

(115) Turn-on fluorescent detection of nickel and zinc ions by two related chemosensors containing naphthalimide ring(s)
V. Kumar, D. Singh, P. Kumar, G. Chaudhary, A. P. Singh, Rajeev Gupta*, *Journal of Molecular Structure*, **2022**, *1261*, 132091.

(114) Selective Detection of Picric Acid and Pyrosulfate Ion by Nickel Complexes Offering a Hydrogen-Bonding-Based Cavity
D. Prabha, D. Singh, P. Kumar, Rajeev Gupta* *Inorganic Chemistry*, **2021**, *60*, 17889 − 17899.

(113) Supramolecular catalysis: the role of H-bonding interactions in substrate orientation and activation
S. Pachisia, Rajeev Gupta* *Dalton Transactions,* **2021**, *50*, 14951 – 14966. **(Invited Article)**

(112) Ruthenium complexes of N/O/S based multidentate ligands: Structural diversities and catalysis perspectives
S. Yadav, P. Vijayan, Rajeev Gupta* *Journal of Organometallic* Chemistry, **2021**, *954-955*, 122081. (**Invited Article:** Special Issue on *Frontiers in Organometallic Chemistry*)

(111) Selective turn-on sensing of fluoroquinolone drugs by zinc complexes of amide-based ligands
D. Prabha, D. Singh, Rajeev Gupta* *Journal of Chemical Sciences,* **2021**, *133*, 88. (**Invited Article:** Special Issue on *Beyond Classical Chemistry*)

(110) Turn-on detection of assorted phosphates by luminescent chemosensors
P. Kumar, S. Pachisia, Rajeev Gupta* *Inorganic Chemistry Frontiers,* **2021**, *8*, 3587 – 3607. **(Invited Article)**

(109) Cobalt mediated *N*-alkylation of amines by alcohols: role of hydrogen bonding pocket
D. Prabha, S. Pachisia, Rajeev Gupta* *Inorganic Chemistry Frontiers,* **2021**, *8*, 1599 – 1609.

(108) Ruthenium complexes of phosphine-amide based ligands as efficient catalysts for transfer hydrogenation reactions
S. Yadav, P. Vijayan, S. Yadav, Rajeev Gupta* *Dalton Transactions,* **2021**, *50*, 3269 – 3279.

(107) Bis(μ-thiolato)-dicopper Containing Fully Spin Delocalized Mixed Valence Copper–Sulfur Clusters and Their Electronic Structural Properties with Relevance to the Cu_A Site
S. Mishra, A. Bhandari, D. Singh, Rajeev Gupta, M. M. Olmstead, A. K. Patra* *Inorganic Chemistry,* **2021**, *60*, 5779 – 5790.

(106) Half-Sandwich Ruthenium Complexes of Amide-Phosphine Based Ligands: H–Bonding Cavity Assisted Binding and Reduction of Nitrosubstrates
S. Pachisia, R. Kishan, D. Singhal, Rajeev Gupta*, *Inorganic Chemistry,* **2021**, *60*, 2009 – 2022.

(105) Effect of pyridyl donors from organic ligands versus metalloligands on material design
G. Kumar, G. Kumar, Rajeev Gupta* *Inorganic Chemistry Frontiers,* **2021**, 8, 1334 – 1373. **(Invited Article)**

(104) Architectural and catalytic aspect of designer materials build using metalloligands of pyridine-2,6-dicarboxamide based ligands
S. Pachisia, Rajeev Gupta* *Dalton Transactions,* **2020**, *49*, 14731 – 1474. **(Invited Article)**

(103) Design and synthesis of new functionalized 8-(thiophen-2-yl)-1,2,3,4-tetrahydroquinolines as turn-off chemosensors for selective recognition of Pd^{2+} ions
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(4) Synthesis, Magnetism, ^{1}H NMR and Redox Activity of Dicopper(II) Complexes having a Discrete $\{Cu_2(\mu\text{-phenoxide})_2\}^{2+}$ Unit Supported by a Non-macrocyclic Ligand Environment. Crystal Structure of $[Cu_2(L)_2(OClO_3)_2]$ [HL = 4-methyl-2,6-bis(pyrazol-1-ylmethyl) phenol]
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(3) Synthesis, Structure and Properties of a Dicopper(II) Complex
N.R. Sangeetha, K. Baradi, Rajeev Gupta, C.K. Pal, V. Manivannan, S. Pal*, *Polyhedron,* **1999**, *18*, 1425-1429.

(2) Synthesis, Spectra and Redox Properties of Mononuclear Five-coordinate Copper(II) Complexes with Non-communicable Pyrazole/Pyridyl Containing Ligands. X-ray Structure of [2,6-bis(3,5-dimethylpyrazol-1-ylmethyl)pyridine] [2-(3,5-dimethylpyrazol-1-ylmethyl)pyridine]copper(II) diperchlorate
T.K. Lal, Rajeev Gupta, S. Mahapatra, R. Mukherjee*, *Polyhedron* **1999**, *18*, 1743-1750.

(1) A New Tyrosinase Model System: Formation of a Phenoxy- and Hydroxy-bridged Copper(II) Complex with Partial Hydrolysis of a Tetraaza Macrocyclic Schiff Base Ligand
Rajeev Gupta, R. Mukherjee*, *Inorganica Chimica Acta* **1997**, *263*, 133-137 (**Special Issue:** Dedicated to the 70th Birthday of Professor RH Holm).

(D) Patents:

1. Indian Patent Application No. 201611008186; Single step method for individual synthesis of *ortho-*, *meta- and para*-diphenylphosphinoanilines (**Indian Patent No. 309321**; Granted on March 18, 2019; Patent Application No. 201611008186; Filed on March 9, 2016).

(E) Books/Book Chapters:

1. Ruchika Gupta, Sanya Pachisia and Rajeev Gupta (**2022**) Supramolecular Coordination Complexes from Metalloligands: Hydrogen Bonding Based Self-Assemblies; Chapter – 2; Ed. S. Shanmugaraju; Elsevier; ISBN: 9780323905824.

2. Ruchika Gupta, Sanya Pachisia and Rajeev Gupta (**2022**) Supramolecular Coordination Complexes from Metalloligands: Heteronuclear Complexes and Coordination Polymers and their Applications in Catalysis; Chapter – 3; Ed. S. Shanmugaraju; Elsevier; ISBN: 9780323905824.

3. Pramod Kumar, Sandeep Kaur, Rajeev Gupta and Kristin Bowman-James (**2018**) Pincers Based on Dicarboxamide and Dithiocarboxamide Functional Groups; Chapter –

14; Ed. David Morales-Morales; Elsevier. **e-Book ISBN: 9780128129326**; **Paperback ISBN: 9780128129319**.

4. Rajeev Gupta, A. P. Singh, A. Mishra (**2012**) Coordination Compounds as Building Blocks: Complexes & Networks (**ISBN: 978-3-8433-5840-8**)
LAP LAMBERT Academic Publishing GmbH & Co. Saarbrücken, Germany.

15. Invited Talks / Keynote Addresses / Inaugural Lectures:

92. Recognition, Sensing and Catalysis within the Confined Space of Molecular Assemblies and Coordination Polymers, Rajeev Gupta, International Conference on Aggregation Induced Emission – From Fundamental to Applications, Department of Chemistry, BITS Pilani – Goa Campus, December 16 – 18, 2022.

91. Two-In-One: Integrating Photosensitizer and Reaction Center for Visible-Light Driven Photocatalysis, Rajeev Gupta, International Conference on Recent Advances in Chemical Sciences (RACS-2022), Department of Chemistry and Chemical Sciences, Central University of Jammu, November 10 – 11, 2022.

90. Luminaries of Indian Science: Life & Work of a Few Indian Scientists, Rajeev Gupta, National Workshop on "Indian Contribution to Chemical Sciences" (ICCS 2022), Department of Chemistry, University of Delhi, May 6 – 7, 2022.

89. Luminaries of Indian Science: Life & Work of a Few Indian Scientists, Rajeev Gupta, S. P. Suri Memorial Lecture, Zakir Husain Delhi College, University of Delhi, April 19, 2022.

88. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities: Applications in Catalysis & Photocatalysis, Rajeev Gupta, Department of Chemistry, C. V. Rama Global University, Bhubaneswar, Odisha, April 9, 2022 via Online Platform.

87. Molecular Assemblies Offering Hydrogen Bonding Cavities: Analyte Binding and Substrate Activation, Rajeev Gupta, Recent Advances in Inorganic Chemistry, School of Basic Sciences (Chemistry), IIT Bhubaneswar, Odisha, India, March 25-26, 2022 via Online Platform.

86. Importance of Indian Languages in Science & Technology, Rajeev Gupta, International Mother Language Day, Daulat Ram College, University of Delhi, February 21, 2022 via Online Platform.

85. History of Coordination Chemistry, Rajeev Gupta, Dr. P. K. Singh Memorial Seminar, Department of Chemistry, Kirori Mal College, University of Delhi, January 21, 2022 via Online Platform.

84. Supramolecular Chemistry: Fundamentals and Intriguing Examples, Rajeev Gupta, Department of Chemistry, H. N. B. Garhwal University, January 20, 2022 via Online Platform.

83. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities, Rajeev Gupta, 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on 'Recent Advances in Chemical Science', Jointly Organized by JNU – Delhi, BHU – Varanasi and IAPS – Prayagraj, October 26 – 28, 2021 via Online Platform.

82. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities, Rajeev Gupta, 'Contemporary Advances and Innovations in Physical Chemistry', Department of Chemistry, Sardar Patel University, Gujarat, October 16, 2021 via Online Platform.

81. Project Submission and Evaluation Process: The Expectations of the Funding Agencies and the Reviewers, Rajeev Gupta, Department of Chemistry & HRDC, Mizoram University, October 11, 2021 via Online Platform.

80. Luminaries of Indian Science, Inaugural Lecture, *The Chemical Society **(Chemphoria)*** – Daulat Ram College, University of Delhi, October 4, 2021 via Online Platform.

79. Supramolecular Chemistry: Fundamentals and Intriguing Examples, Rajeev Gupta, Faculty Development Programme on 'Chemistry-The Catalyst for Change', Jointly Organized by Miranda House (University of Delhi) and Ramanujan College ((University of Delhi), July 14-28, 2021 via Online Platform.

78. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities: Applications in Sensing and Catalysis, Rajeev Gupta, 'Recent Advances in Inorganic Chemistry, Department of Chemistry, Central University of Kerala, March 5 – 9, 2021 via Online Platform.

77. Ancient Indian Contributions to Chemistry, Rajeev Gupta, National Workshop on 'Indian Knowledge Systems and Higher Education' Jointly Organized by Department of Sanskrit (University of Delhi) and Gandhi Bhawan (University of Delhi), March, 11 – 13, 2021.

76. The Remembrance of Indian Legendary Chemist, Rajeev Gupta, Department of Chemistry, Deshbandhu College, University of Delhi, January 28, 2021.

75. Project Submission and Evaluation Process: The Expectations of the Funding Agencies and the Reviewers, Rajeev Gupta, ARSD College, University of Delhi, June 11, 2020 via Online Platform.

74. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities: Applications in Sensing and Catalysis, Rajeev Gupta, 1st International Conference on the Frontier Areas of Chemistry, Department of Chemistry, Mahatma Gandhi Central University – Bihar, Motihari, February, 28 – 29, 2020.

73. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities: Applications in Sensing and Catalysis, Rajeev Gupta, Professor Ram Chand Paul National Symposium on "Emerging Chemical Innovations for Swachh, Swasth & Sarvatra Bharat", Department of Chemistry, Punjab University – Chandigarh, February 27 – 28, 2020.

72. Molecular Assemblies and Coordination Polymers Offering Hydrogen Bonding Cavities: Applications in Sensing and Catalysis, Rajeev Gupta, National Conference on "Frontiers Symposium in Chemistry" FS-CHM 2020, Department of Chemistry, IISER – Thiruvananthapuram, January 17 – 18, 2020.

71. Designer Molecular Architectures: Applications in Catalysis, Sensing and Energy Transfer, Rajeev Gupta, National Conference on "Relationship Between Chemical Sciences and Society", Department of Chemistry, Shivaji College, University of Delhi, January 16 – 17, 2020.

70. Designer Molecular Architectures: Applications in Catalysis, Solid-state Sensing and Energy Transfer, Rajeev Gupta, National Conference on "Recent Advancement in Physical Sciences", Organized by NIT – Uttarakhand at the Satellite Campus, MNIT – Jaipur, December 19 – 20, 2019.

69. Hydroxo- and Oxo-bridged Multinuclear Cores of Biological Relevance, Rajeev Gupta, International Conference on "Spins in Molecular Systems: Experiments, Theory and Applications", SSCU, Indian Institute of Science – Bangalore, December 2 – 4, 2019.

68. Designer Architectures: Applications in Catalysis and Sensing, Rajeev Gupta, 2nd National Conference on "Clean and Green Energy: The Chemical & Environmental Aspects", Department of Chemistry, Bhaskaracharya College of Applied Sciences, September 26 – 27, 2019.

67. Important Organic Transformation Mediated by Metal–Organic Architectures, Rajeev Gupta, Indo–German Workshop on 'Multivalent Macromolecular Architectures for Biomedical Applications', Department of Chemistry, University of Delhi, Delhi – 110 007, April 5 – 6, 2019.

66. Luminaries of Indian Science: Life and Work of a Few Indian Scientists, Rajeev Gupta, 1st Basic Science Conference, School of Sciences, Cluster University of Jammu, Jammu, March 13 – 14, 2019.

65. Molecularly Designed Architectures: Applications in Catalysis, Sensing and Energy-Transfer, Rajeev Gupta, National Conference on Novel Chemical Systems for

Therapeutic and Energy Applications (NCSTEA-2019), Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, Gujarat, March 1 – 2, 2019.

64. Many Facets of Supramolecular Chemistry, Rajeev Gupta, National Seminar on *Current Trends in Chemical Sciences*, Department of Chemistry, Maharshi Dayanand University, Rohtak, October 8, 2018.

63. Coordination Complexes and Molecular Assemblies Decorated with Hydrogen Bonds, Rajeev Gupta, Department of Chemistry, IISER – Pune, India, September 24, 2018.

62. Many facets of Coordination Chemistry: History and Journey to Future, Rajeev Gupta, Teachers' Training Workshop, Delhi Public School – Ghaziabad, May 21, 2018.

61. Coordination Polymers and Molecular Assemblies Decorated with Hydrogen Bonds, Rajeev Gupta, *255th* ***ACS*** *National Meeting*, New Orleans, LA, United States, Abstracts of Papers, **INOR 1036**, American Chemical Society, March 18 – 22, 2018.

60. Coordination Polymers and Molecular Assemblies Decorated with Hydrogen Bonds, Rajeev Gupta, Symposium on *"Modern Trends in Inorganic Chemistry"* (**MTIC-XVII**); NCL – Pune & IISER – Pune, India, December 11 - 14, 2018.

59. Molecularly Designed Architectures: Design Aspects and Applications, Rajeev Gupta, Department of Chemistry, University of Hyderabad, October 31, 2017.

58. Designer Functional Materials: A Chemist's View, 21st International Conference of Indian Academy of Physical Sciences (CONIAPS – XXI), Guru Jambheshwar University of Science and Technology, Hisar, Haryana, October 28 – 30, 2017.

57. Coordination Chemistry: History and Journey to Future, Rajeev Gupta, Science Academies Lecture Workshop, Department of Chemistry, University of Kashmir, Srinagar, July 19 – 20, 2017.

56. Supramolecular Chemistry: Intriguing Examples, Rajeev Gupta, Science Academies Lecture Workshop, Department of Chemistry, University of Kashmir, Srinagar, July 19 – 20, 2017.

55. Designer Materials: A Chemist's View, Rajeev Gupta, 10th National Conference on 'Solid State Chemistry and Allied Areas (ISCAS – 2017), Delhi Technological University, July 1 – 3, 2017.

54. Molecularly Designed Architectures: Design Aspects and Applications, Rajeev Gupta, National Seminar on "*Recent Advances in Chemistry 2017*", Department of Chemistry, Jamia Millia Islamia University, March 28, 2017.

53. Metal Complexes with Secondary Coordination Sphere: Influence on Recognition and Activation of Substrates, Rajeev Gupta, National Conference on "*Recent Advances in Chemical Sciences*", Department of Chemistry, Aligarh Muslim University, March 25 – 26, 2017.

52. Molecularly Designed Architectures: Applications in Catalysis, Sensing, and Energy-Transfer, Rajeev Gupta, National Conference on "*Latest Advancements in Physical Sciences and Life Sciences*", Department of Chemistry, Meerut College, Meerut, March 18, 2017.

51. Designer Architectures: Design Aspects & Sustainable Catalysis, Rajeev Gupta, School of Chemistry & Biochemistry, Thapar University, Patiala, Punjab, February 21, 2017.

50. Green & Sustainable Catalysis via Designer Architectures, Rajeev Gupta, National Conference on "*Clean & Green Energy: The Chemical & Environmental Aspects"*, Department of Chemistry, Bhaskaracharya College of Applied Sciences, February 16 – 17, 2017.

49. Metal Complexes with Secondary Coordination Sphere: Recognition, Binding, and Activation of Substrates, Rajeev Gupta, *5th International Symposium on Advanced Biological Inorganic Chemistry*, The Stadel, Salt Lake Stadium, Kolkata, January 7 – 11, 2017 jointly organized by the TIFR – Mumbai and IACS – Kolkata.

48. Molecularly Designed Architectures: Selective Binding of Anions, Rajeev Gupta, 19th CRSI National Symposium in Chemistry, Department of Chemistry, North Bengal University, Darjeeling, July 14 – 16, 2016.

47. Designer Architectures: Applications in Catalysis, Anion Recognition, and Energy-Transfer, Rajeev Gupta, 44th National Seminar on Crystallography, Jointly Organized by NCCS, CSIR-NCL, IISER, SP Pune University, Department of Chemistry, IISER – Pune, July 10 – 13, 2016.

46. Molecularly Designed Architectures: Selective Binding of Cations and Anions, Rajeev Gupta, *42nd International Conference on Coordination Chemistry* (**ICCC**), Brest, France, July 3 – 8, 2016.

45. Molecularly Designed Architectures, Rajeev Gupta, Symposium on "*Frontiers in Inorganics and Organometallics*", Department of Chemistry, I.I.T. Indore, Simrol, Indore, April 14 – 15, 2016.

44. Molecularly Designed Supramolecular Architectures: A Chemist's Journey, Rajeev Gupta, 2nd National Seminar on "*Recent Advances in Chemical Sciences - Supramolecular Developments*", Department of Chemistry, Khalsa College, Guru Nanak Dev University, Amritsar, April 2, 2016.

43. Molecularly Designed Architectures: Design Aspects, Recognition Studies and Catalysis, Rajeev Gupta, Symposium on "*Recent Advances in Chemical Sciences*", Department of Chemistry, Aligarh Muslim University, March 29 – 30, 2016.

42. Metal Complexes with Substrate–Specific Cavities: Recognition and Binding of Biologically Relevant Substrates, Rajeev Gupta, *Departmental Seminar*; Department of Inorganic Chemistry, Indian Association for the Cultivation of Science – Kolkata, March 21, 2016.

41. Inaugural Lecture, The Indian Scientists, *KHRUSOS – The Chemical Society*, Department of Chemistry, Kirori Mal College, University of Delhi, March 16, 2016.

40. Supramolecular Chemistry: Fundamentals and Intriguing Examples, Rajeev Gupta, *Science Academies' Workshop on Modern Chemistry and Its Applications*, Department of Chemistry, Guru Nanak Dev University, Amritsar, March 3 – 5, 2016.

39. Molecularly Designed Architectures: Lessons Learnt from Supramolecular Chemistry, Rajeev Gupta, *Science Academies' Workshop on Modern Chemistry and Its Applications*, Department of Chemistry, Guru Nanak Dev University, Amritsar, March 3 – 5, 2016.

38. Coordination Complexes with Substrate–Specific Cavities: Recognition and Binding of Biologically Relevant Substrates, Rajeev Gupta, *Emerging Trends in Chemical Sciences*, Department of Chemistry, Gauhati University, November 5 – 6, 2015.

37. Designed Architectures: Supramolecular Chemistry & Catalysis, *Indian National Conference On Development In Inorganic Applications*, Rajeev Gupta, Department of Chemistry, Periyar University, Salem, October 15 – 16, 2015.

36. Molecularly Designed Architectures: Supramolecular Chemistry & Catalysis, *5th International Science Conference*, Rajeev Gupta, PGMIR – Dr. Ram Manohar Lohia Hospital, New Delhi, October 10 – 12, 2015.

35. Designer Materials: Supramolecular Chemistry and Catalysis, Rajeev Gupta, *Departmental Seminar*; Department of Chemistry, Himachal Pradesh University, Summer Hills, Shimla, March 21, 2015.

34. Metal Complexes with Substrate–Specific Cavities: Recognition and Binding of Biologically Relevant Substrates, Rajeev Gupta, *Departmental Seminar*; Department of Chemistry, Himachal Pradesh University, Summer Hills, Shimla, March 21, 2015.

33. Molecularly Designed Architectures: Supramolecular Chemistry and Catalysis, Rajeev Gupta, 4th National Conference on "*Recent Advances in Chemical & Environmental Sciences*", Arya PG Science College, Panipat (Kurukshetra University), February 27 – 28, 2015.

32. Designed Architectures: Supramolecular Ensembles and Functional Materials, Rajeev Gupta, *National Conference on Sustainable Chemistry: Frontiers and Challenges*, Brijlal Biyani Science College, Department of Chemistry, SGB Amravati University, Amravati, January 30 – 31, 2015.

31. Molecularly Designed Architectures, Rajeev Gupta, *Workshop on Emerging Advanced Materials and Applications*, National Physical Laboratory, CSIR, January 29th 2015.

30. Coordination Complexes with Substrate–Specific Cavities: Binding and Catalysis of Biologically Relevant Substrates, Rajeev Gupta, *51st Annual Convention of Chemists*, Indian Chemical Society, Department of Chemistry, Kurukshetra University, December 9 – 12, 2014.

29. Molecular Building Blocks: Designed Architectures and Functional Materials, Rajeev Gupta, *International Conference on Chemistry of Molecules and Materials* (**SCOMM-2014**), Center for Research in Nanoscience and Nanotechnology, University of Calcutta, November 30 – December 2, 2014.

28. Hydroxide-Bridged Metal Complexes in Hydrogen Bond Surroundings: Substrate Binding and Catalysis, Rajeev Gupta, *41st International Conference on Coordination Chemistry* (**ICCC**), Suntec Singapore Convention & Exhibition Center, Singapore, July 21 – 25, 2014.

27. Designed Architectures: Supramolecular Ensembles and Functional Materials, Rajeev Gupta, National Conference on "*Advanced Scientific Development in Chemical Sciences* – (ASDCS-14)", Department of Chemistry, Deenbandhu Chhotu Ram University of Science and Technology, Murthal (Sonipat), March 14, 2014.

26. Organic Transformations by Designed Inorganic Catalysts, Rajeev Gupta, *20th ISCB International Conference (ISCBC-2014) on Chemistry and Medicinal Plants in Translational Medicine for Healthcare*, Department of Chemistry, University of Delhi, Delhi, India, March 1 – 4, 2014.

25. Hydroxide-bridged Metal Complexes in Hydrogen Bond Surroundings, *IVth National Symposium on "Advances in Chemical Sciences"*, Department of Chemistry, Guru Nanak Dev University, Amritsar, February 27 – 28, 2014.

24. Metallosupramolecular Chemistry: Designed Architectures and Functional Materials, Rajeev Gupta, "*Department Day of Department of Chemical Sciences*", Indian Institute of Science Education and Research – Kolkata, December 11, 2013.

23. Supramolecular and Metallo-supramolecular Chemistry: Intriguing Examples, Rajeev Gupta, "*National Symposium on Chemistry and Environment*", Deen Dayal Upadhyaya College, University of Delhi, Delhi, March 22 – 23, 2013.

22. Supramolecular Chemistry: Intriguing Examples, Rajeev Gupta, "*Chemistry Meet*", St. Stephens College, University of Delhi, Delhi, February 15 – 16, 2013.

21. Playing with Coordination Complexes: Ordered Structures and Functional Materials, Rajeev Gupta, *15th Chemical Research Society of India* (**CRSI**) *National Symposium in Chemistry*, Banaras Hindu University, Varanasi, February 1 – 3, 2013.

20. Metalloligands with Appended Groups: Extended Ensembles and Functional Materials, Rajeev Gupta, *49th Annual Convention of Chemists*, Indian Chemical Society, NITTTR – Bhopal, December 12 – 15, 2012.

19. Inaugural Lecture, *The Chemical Society* – Hindu College, University of Delhi, August 30, 2012.

18. Coordination Complexes as the Building Blocks: Ordered Structures & Catalysis, Rajeev Gupta, National Symposium on "*Chemistry in 21st Century*", Department of Chemistry, Guru Nanak Dev University, Amritsar, December 23 – 24, 2011.

17. Coordination Complexes as the Building Blocks: Ordered Structures, Crystal Engineering and Catalysis, Rajeev Gupta, *3rd Asian Conference on Coordination Chemistry* (**ACCC-3**), Department of Chemistry, Indian Institute of Technology – Kanpur, IHC, New Delhi, October 17 – 20, 2011.

16. Old Coordination Chemistry Some New Facets: Ordered Structures, Crystal Engineering & Catalysis, Rajeev Gupta, National Seminar on "*Inorganic Chemistry and the Celebration of 150th Birth Anniversary of Acharya Prafulla Chandra Ray*", Department of Chemistry, Jadavpur University, Kolkata, July 8 – 9, 2011.

15. Coordination Complexes as the Building Blocks: Ordered Structures, Crystal Engineering & Catalysis, Rajeev Gupta, International Conference on "*Advances in Applied Chemical Sciences and Innovative Materials*", Department of Chemistry, Indian Institute of Technology – Delhi, New Delhi, August 10 – 12, 2011.

14. Molecules – to – Materials *via* Coordination Complexes as the Building-Blocks. Rajeev Gupta, National Symposium on "*Emerging Trends in Chemical Sciences"*, Department of Chemistry, Faculty of Science, Banaras Hindu University, Varanasi, February 19 – 20, 2011.

13. Material Design *via* Coordination Complexes as the Building-Blocks, Rajeev Gupta, National Conference on "*Frontiers in Chemical Sciences*", Department of Chemistry, Indian Institute of Technology – Guwahati, December 3 – 4, 2010.

12. Molecules – to – Materials *via* Coordination Complexes as Building-Blocks, Rajeev Gupta, *Departmental Seminar*, School of Physical Sciences, Jawahar Lal Nehru University, New Delhi, September 22, 2010.

11. Heterobimetallic Complexes and Networks *via* Coordination Complexes as the Building Blocks, Rajeev Gupta, National Seminar on "*Recent Trends in Chemical Sciences*", Department of Chemistry, APS University, Rewa, MP, May 12 – 13, 2010.

10. Coordination Complexes as the Building Blocks: Discrete Complexes *versus* Heterobimetallic Networks, Rajeev Gupta, National Seminar on "*Confluence of Supramolecular Chemistry and Nanoscience*", Department of Chemistry, Gujarat University, Ahmadabad, January 22 – 23, 2010.

9. Coordination Complexes as Building Blocks to Generate Discrete *versus* 2D and 3D Heterobimetallic Structures, Rajeev Gupta, Symposium on *"Modern Trends in Inorganic Chemistry"* (**MTIC-XIII**); Indian Institute of Science – Bangalore, India, December 7 - 10, 2009.

8. Coordination Complexes as Building Blocks to Generate Heterobimetallic Complexes of Supramolecular and Catalytic Importance, Rajeev Gupta, Indo – German Seminar on "*Supramolecular Chemistry*" Department of Chemistry, University of Delhi, Delhi, India, March 3rd 2009.

7. Developing Coordination Complexes as Building Blocks to Generate Heterobimetallic Complexes of Catalytic and Supramolecular Importance, Rajeev Gupta, 1st Scientific Meeting of "*Friends of Inorganic Chemistry*" Department of Chemistry, Jadavpur University, Kolkata, India, December 21, 2008.

6. Developing Novel Catalysts Utilizing Coordination Complexes as Building Blocks, Rajeev Gupta, Indo – Italian Seminar on "*Green Chemistry and Natural Products*" Department of Chemistry, University of Delhi, Delhi, India, December 5 – 6, 2008.

5. Coordination Complexes as Building Blocks to Generate Heterobimetallic Complexes of Catalytic Importance, Rajeev Gupta, 1st DU – SDU Seminar on "*Emerging Trends in Interfacial Areas of Chemical, Biological and Environmental Sciences*" Department of Chemistry, University of Delhi, Delhi, India, March 17 – 18 2008.

4. Cobalt Coordination Induced Functionalized Molecular Clefts: Syntheses, Structures, and Properties of $\{Co^{III} – Zn^{II}\}$ Heteronuclear Complexes, A. Mishra, Rajeev Gupta, National Symposium on "*New Challenges in Chemistry*", Department of Chemistry, Guru Nanak Dev University, Amritsar, March 20-21, 2006.

3. Estimation of MO–H Bond Strength in Monomeric Manganese and Iron Complexes: A Comparative Study, Rajeev Gupta, A. S. Borovik, Abstracts of Papers, *37th Midwest Regional **ACS** Meeting*, University of Kansas, Lawrence, KS United States, **Paper No. 123**. Publisher: American Chemical Society, Washington DC, October 23-25, 2002.

2. Monomeric Manganese and Iron Complexes with Terminal Hydroxide and Oxo Ligands: Syntheses, Properties, Oxidation Chemistry and Thermodynamic Analyses, Rajeev Gupta, C. E. MacBeth, A. S. Borovik, Abstracts of Papers, *224th **ACS** National*

Meeting, Boston, MA, United States, **INOR-50**. Publisher: American Chemical Society, Washington DC, August 18-22, 2002.

1. Synthesis and Properties of Monomeric Manganese Hydroxide and Oxo Complexes Derived from Water, Rajeev Gupta, C. E. MacBeth, A. S. Borovik, V. G. Young, Abstracts of Papers, *222nd* ***ACS*** *National Meeting*, Chicago, IL, United States, **INOR-589**. Publisher: American Chemical Society, Washington DC, August 26-30, 2001.

16. Session Chair:

(1) Chaired a session in the International Conference on Aggregation Induced Emission – From Fundamental to Applications, Department of Chemistry, BITS Pilani – Goa Campus, December 16 – 18, 2022.

(2) Chaired a session in the International Conference on Recent Advances in Chemical Sciences (RACS-2022), Department of Chemistry and Chemical Sciences, Central University of Jammu, November 10 – 11, 2022.

(3) Chaired a session in the International Conference on Contributions of Acharya Prafulla Chandra Ray as a Chemist and Freedom Fighter, Department of Chemistry, University of Delhi, August 2 – 3, 2022.

(4) Chaired a session in the 58th Annual Convention of Chemists 2021, Indian Chemical Society, Inorganic Chemistry Division, December 21–24, 2021.

(5) Chaired a session in the 1st International Conference on the Frontier Areas of Chemistry, Department of Chemistry, Mahatma Gandhi Central University – Bihar, Motihari, February, 28 – 29, 2020.

(6) Chaired a session in the National Conference on "Recent Advancement in Physical Sciences", Organized by NIT – Uttarakhand at the Satellite Campus, MNIT – Jaipur, December 19 – 20, 2019.

(7) Chaired a session in the Symposium on "*Modern Trends in Inorganic Chemistry*" (**MTIC-XVIII**), Department of Chemistry, IIT – Guwahati, December 11 – 14, 2019.

(8) Chaired a session in the Indo–German Workshop on 'Multivalent Macromolecular Architectures for Biomedical Applications', Department of Chemistry, University of Delhi, Delhi – 110 007, April 5 – 6, 2019.

(9) Chaired a session in the National Conference on Novel Chemical Systems for Therapeutic and Energy Applications (NCSTEA-2019), Department of Chemistry, Sardar Patel University, Vallabh Vidyanagar, Gujarat, March 1st – 2nd 2019.

(10) Chaired the session in 'F. A. Cotton Award in Synthetic Inorganic Chemistry: Symposium in Honor of Prof. Andrew S. Borovik' during the *255th* ***ACS*** *National Meeting*, New Orleans, LA, United States, American Chemical Society, March 18 – 22, 2018.

(11) Chaired a session in the 21st International Conference of Indian Academy of Physical Sciences (CONIAPS – XXI), Guru Jambheshwar University of Science and Technology, Hisar, Haryana, October 28 – 30, 2017.

(12) Chaired a session in the National Conference on "*Latest Advancements in Physical Sciences and Life Sciences*", Department of Chemistry, Meerut College, Meerut, March 18, 2017.

(13) Chaired a session in the Symposium on "*Recent Advances in Chemical Sciences*", Department of Chemistry, Aligarh Muslim University, March 29 – 30, 2016.

(14) Chaired a session in the Symposium on "*Modern Trends in Inorganic Chemistry*" (**MTIC-XVI**), Department of Chemistry, Jadavpur University, December 3 – 5, 2015.

(15) Chaired a session in the 4th National Conference on "*Recent Advances in Chemical & Environmental Sciences*", Arya PG Science College, Panipat (Kurukshetra University), February 27 – 28, 2015.

(16) Chaired a session in the Symposium on "*Modern Trends in Inorganic Chemistry*" (**MTIC-XV**), Department of Chemistry, Indian Institute of Technology – Roorkee, December 13 – 16, 2013.

(17) Chaired a session in the National Seminar on "*Confluence of Supramolecular Chemistry and Nanoscience*", Department of Chemistry, Gujarat University, Ahemadabad, January 22 – 23, 2010.

(18) Chaired a session in the Indo – German Seminar on "*Supramolecular Chemistry*" Department of Chemistry, University of Delhi, Delhi, India, March 3rd 2009.

(19) Chaired a session in the Indo – Italian Seminar on "*Green Chemistry and Natural Products*" Department of Chemistry, University of Delhi, Delhi, India, December 5 – 6, 2008.

(20) Chaired a session in the 1st DU – SDU Seminar on "*Emerging Trends in Interfacial Areas of Chemical, Biological and Environmental Sciences*" Department of Chemistry, University of Delhi, Delhi, India, March 17 – 18 2008.

(21) Chaired a session in the 3rd Indo – Italian Workshop on "*Chemistry and Biology of Antioxidants*", Department of Chemistry, University of Delhi, Delhi, India, November 28 – 30, 2007.