

Professor Rajeev Gupta
Department of Chemistry
University of Delhi



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1. Name: Professor Rajeev Gupta

2. Designation: Professor

3. Educational Qualifications:

S. No.	Degree	University/Institute	Year	Division	Percentage
1	B.Sc.	Kanpur University	1992	1 st	72%
2	M.Sc.	Kanpur University	1994	1 st	66%
3	Ph.D.	I. I. T.– Kanpur	2000	---	---

4. Professional Experience:

(i) **Professor**, University of Delhi, Delhi – 110 007 since May 2009

(ii) **Associate Professor**, University of Delhi, Delhi – 110 007
(May 2006 – May 2009)

(iii) **Reader**, University of Delhi, Delhi – 110 007
(May 2003 – May 2006)

(iv) **Post-doctoral Associate**, University of Kansas, Lawrence, Kansas, USA
(Supervisor: Professor A. S. Borovik; June 2000 – May 2003)

(v) **Senior Research Associate**, Indian Institute of Technology – Kanpur, India
(Supervisor: Professor R. N. Mukherjee; July 1999 – May 2000)

(vi) **Ph. D. Scholar**, Indian Institute of Technology – Kanpur, India
(Supervisor: Professor R. N. Mukherjee; July 1995 – July 1999)
Ph. D. Thesis Title: *Studies on Copper Complexes Using Macrocyclic and Non-macrocyclic Nitrogen Donor Ligands*

5. Teaching Experience:

- Teaching/taught M.Sc., M.Phil., M.Tech., and Ph.D. students in the Department of Chemistry, University of Delhi since May 2003
- Courses offered and/or designed at the University of Delhi:
 - (i) Chemistry of *d* and *f* – block Elements
 - (ii) Supramolecular and Photo-inorganic Chemistry
 - (iii) Bioinorganic and Organometallic Chemistry
 - (iv) Solid State Chemistry

- (v) Nuclear and Radiation Chemistry
- (vi) Industrially Important Solids
- (vii) Chemistry of Trace Elements in Human Body
- (viii) Synthetic Chemical Modeling of Metalloproteins and Metalloenzymes
- (ix) Laboratory practical classes for M.Sc. students
- (x) Developed Laboratory Exercises for the synthesis of small molecules and their characterization
- (xi) Developed Laboratory Exercises for the instrument-based characterization of samples and mixtures
- (xii) Developed Laboratory Exercises for the analysis of complex materials; analysis of industrially important materials, etc.
- (xiii) Assisted in General Chemistry Courses at I.I.T. Kanpur during PhD as a Teaching Assistant

6. Supervisory Experience:

- Number of PhD Students Supervised: **Eight (Degree Awarded)**

(i) Dr. Anurag Mishra (**2008**) Synthesis and Characterization of Novel Heterometallic Complexes Utilizing Coordination Complexes as the Building Blocks.

Present Position: Senior Scientist, Reliance Research Center, Reliance Industries India, Navi Mumbai; Recipient of DST's Young Scientist Project.

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

Present Position: Assistant Professor (Ad-hoc) at Zakir Husain College (University of Delhi)

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

Present Position: Post-doctoral Associate at the John Hopkins University, USA

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

Present Position: Assistant Professor, NIT – Delhi; Recipient of INSPIRE Award from the Department of Science & Technology; Recipient of DST's Young Scientist Project.

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

Present Position: Assistant Professor (Ad-hoc) at Swami Shradhanand College (University of Delhi)

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

Present Position: Post-doctoral associate at the University of Johannesburg (South Africa); Recipient of Dr. DS Kothari post-doctoral Fellowship from UGC

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

Present Position: Working as a Dr. DS Kothari post-doctoral associate at the University of Hyderabad; Recipient of Dr. DS Kothari post-doctoral Fellowship from UGC

(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.

Present Position: Working as a Research Associate at the University of Delhi (CSIR); Recipient of DST's Young Scientist Project

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

- (i) Deepak Bansal, Date of Registration: **18.02.2011** (Coordination Complexes with Hydrogen-bonding Pockets: Substrate Binding & Catalysis)
- (ii) Sumit Srivastava, Date of Registration: **18.02.2011** (Metalloligands with Appended Pyridine or Arylcarboxylate Groups: Extended Networks and Designer Catalysts)
- (iii) Sunil Yadav, Date of Registration: **17.05.2012** (Studies on Coordination Complexes with Pyrrolicarboxamide and Indolecarboxamide Ligands)
- (iv) Saurabh Pandey, Date of Registration: **10.10.2012** (Metalloligands With Assorted Arylcarboxylic Acid Groups: Impact on Material Design)
- (v) Gulshan Kumar, Date of Registration: **01.02.2013** (Metalloligands with Symmetrical vs. Asymmetrical Appended Groups: Impact on Material Design)
- (vi) Vijay Kumar, Date of Registration: **29.01.2015** (Coordination Complexes with Appended Groups: Controlling Network Topology)

- 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: **Five**

- Number of M.Tech. (CSPT) Students Supervised: **One**

- Number of Project Students (including IAS Summer Fellowship Program) Supervised: ~**Fifty**

7. Research Projects:

(i) *Coordination Complexes as the Building Blocks: Supramolecular Organization and Catalysis*

Funded by the *Department of Science & Technology (DST)*

Project Duration: April 1st 2012 – December 31st 2015 (**Running**)

Reference: SR/S1/IC-43/2011

Budget: Rs. 49,62,000

Salient Features: This project has developed a variety of coordination complexes as the molecular building blocks (i.e., *metalloligands*) for their utilization in the construction of ordered materials. These metalloligands are appended with assorted functional groups which could be utilized to either coordinate a secondary metal ion or be involved in the hydrogen bonding based self-assembly. While the former approach has resulted in the synthesis of discrete trimetallic complexes and 2D as well as 3D heterometallic networks; the latter one has afforded hydrogen-bonded self-assembled architectures. Our synthetic strategy illustrates the importance of coordination complexes based building blocks for the construction of ordered architectures. Further, judicious selection of Lewis acidic and/or redox-sensitive metals in such materials has been utilized by displaying both homogeneous as well as heterogeneous catalysis including regio-selective, chemo-selective, size- and shape-selective catalysis. Furthermore, several network-based materials have shown potential as the porous materials for gas and vapor sorption and molecular sensing phenomena.

(ii) *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 (**Just Completed**)

Reference: 01(2515)/11/EMR-II

Budget: Rs. 23,92,000

Salient Features: In this project, several amide-based macrocyclic as well as analogous open-chain ligands were designed to investigate their coordination chemistry. These ligands carry electronic substituents on the ligand periphery and a systematic study illustrated how such substituents influence the structural, electrochemical, and reactivity of the resultant coordination complexes. An important outcome from this project was to demonstrate the importance of ligand architectural parameters and how metalloproteins utilize such architectural features to control the structural, redox, and therefore reactivity properties.

(iii) *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**)

Reference: DU-DST-PURSE

Budget: Rs. 2,00,00,000 (A joint project between Botany, Chemistry, Geology, Microbiology, Physics & Zoology)

Salient Features: This project has developed viable indicators to understand the factors responsible to increase pollution and thus disturbing the ecosystem. A part of the national capital region of Delhi where river Yamuna passes was covered and divided into grids. Extensive sampling was done from these grids to understand and correlate the environmental, biological, chemical, and anthropogenic parameters.

(iv) *Development of Coordination Complexes as 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

Salient Features: This project had undertaken to develop coordination complexes as the building blocks and their utilization in the construction of heterobimetallic complexes and networks. These heterobimetallic complexes and networks are of highly ordered nature and have significant implications in the area of designed materials. Some of the heterobimetallic complexes and networks have been shown to act as the homogeneous as well as heterogeneous catalysts to carry out several commercially important organic transformation reactions. In addition, heterobimetallic networks have shown potential as porous materials for gas sorption and molecular sensing phenomena.

(v) *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

Salient Features: In this project, several amide-based macrocyclic ligands were designed and their coordination chemistry was investigated. Such macrocyclic ligands were capable of creating a constrained environment around the metal ion whereas a deprotonated amide group is a strong σ - donor. A combination of these two features created ligand systems capable of stabilizing high and unprecedented oxidation state of metal ions. Utilizing such ligands, several Ni^{3+} and Cu^{3+} complexes were stabilized in a rare square-planar geometry. An important outcome from this project was to understand the ligand architectural parameters that control the redox properties of a metal ion in a coordination complex.

(vi) *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

Salient Features: This project undertook the challenge to understand the ligand architectural parameters that control the redox properties of metal ions and their consequences in the metal – mediated oxidation chemistry. A large number of amide-based nitrogen-rich ligands were synthesized and their coordination chemistry was investigated to understand the structure – function relationship. Some of the coordination complexes supported with amide-based ligands were employed in the substrate oxidation chemistry.

(vii) Regular recipient of **University Research Grant** for the financial years

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

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

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

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

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

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

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

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

8. Awards and Honors:

- Indo – US Research Fellowship awarded by the Department of Science & Technology (DST) and Indo – US Science & Technology Forum (**2009**)
- Young Scientist Project Award (**2004**) from the Department of Science & Technology (DST)
- CSIR – JRF from the Council of Scientific & Industrial Research (**1994**)
- Leelavati N. Modi Scholarship in B.Sc., Christ Church College, Kanpur University (**1992**)

9. Had the opportunity to present the research work at various national and international conferences:

- American Chemical Society (ACS) Meetings
- International Conference on Coordination Chemistry (ICCC)
- Asian Conference on Coordination Chemistry (ACCC)
- Gordon Research Conferences (GRC)
- South Asian Biological Inorganic Chemistry Conferences (SABIC)
- Asian Biological Inorganic Chemistry Conference (AsBIC)
- Modern Trends in Inorganic Chemistry (MTIC) Conferences
- Chemical Research Society of India (CRSI) Conferences
- International Union of Pure & Applied Chemistry (IUPAC) Conferences
- International Structural Chemistry Conferences

- Asian Academic Seminar and School
- Frontiers in Inorganic Chemistry Conferences
- Frontiers in Chemical Sciences Conferences

10. Academic Experiences and Assignments:

- Acting as the Coordinator and Content Writer for the Inorganic Chemistry Course(s) for the UGC's Project on *e – PG Pathshala* under the NMEICT (MHRD), Govt. of India
- Serving as the **Member** – Food Analyst Examination Board, Food Safety & Standards Authority of India (Ministry of Health & Family Welfare), New Delhi Since August 2013
- Resource Person in the CPDHE Refresher Courses at the University of Delhi
- Delivered Lectures for the Refresher Courses at several universities (such as Guru Nanak Dev University, Amritsar; Himachal Pradesh University, Shimla; Kumaun University, Nainital; Dr. B. A. Marathwada University, Augangabad; Jamia Milia Islamia University, Delhi; etc.)
- Delivered Motivational Lectures under the INSPIRE or similar academic programs at several colleges (Deshbandhu College, Hindu College, St. Stephens College, and DDU College) under the University of Delhi
- Acted as the **Mentor** for the University Innovation Project at the Dayal Singh College, University of Delhi (**DS – 103**)
- Acted as the **Jury Member** for the INSPIRE Scheme of Department of Science & Technology (DST)
- Acted as the **Judge** for “Centre for Science Education and Communication” Programs
- Acted as the **Judge** for the Inter-College Project Presentations at the St. Stephens College (University of Delhi)
- Served as the **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
- Worked as an **Executive Committee Member** for the Organization of various National and International Conferences and Symposia

11. Reviewing Assignments:

- Acting as the **Reviewer/Referee** for various International Journals published from the ACS, RSC, Wiley, Wiley-VCH, 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, etc.
- Acting as the **Reviewer/Referee** for a few Popular Science Journals such as Resonance

- Acting as the **Reviewer** for National Funding Agencies such as Department of Science & Technology (**DST**) and Council of Scientific & Industrial Research (**CSIR**)

12. Examinations and Paper Setting 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 for the M.Sc. Chemistry Entrance Examinations of our University
- Served in the Paper Setting for the Competitive Medical and Engineering Entrance Examinations of our University
- Served in the Paper Setting Committee for Entrance and other Competitive Examinations (Medical, Engineering, etc.) for other universities
- Served in the Question Bank Committee (Chemical Sciences) for the UPSC Entrance Examinations

13. Administrative Experiences and Assignments:

- Serving as the **Warden** in the *International Students House, University of Delhi* since May 2005
- Serving as the **Member** – Garden Committee, University of Delhi since November 2011
- Serving as the **Member** – Procurement Committee for the Equipment/Consumables/Chemicals, University of Delhi since April 2013
- Serving as the **Member** – Board of Research Studies (Sciences), University of Delhi with effect from February 14, 2013
- Serving as the **Member** – Faculty of Science with effect from May 7, 2014 for 3 years
- Served as the **Member** – Examination Disciplinary Committee, University of Delhi for the year 2013 – 2014
- Serving as the **Member** – Examination Disciplinary Committee, University of Delhi for the year 2014 – 2015
- Serving as the **Convener** – Single Crystal X-Ray Diffraction Facility, USIC, University of Delhi since 2008
- Served as the **Secretary** – Department Research Committee (DRC), Department of Chemistry, University of Delhi between 2009 – 2012
- Served as the **Convener** – Inorganic Section of the Department (2009 – 2010)
- Served as the **Deputy Superintendent of Examinations** for the M.Sc. Practical Examinations of Department of Chemistry, University of Delhi
- Served as the **Deputy Superintendent of Examinations** for the M.Sc. Theory Examinations of Department of Chemistry, University of Delhi

- Served as the **Superintendent of Examinations** for the PhD Course Work Examinations of Department of Chemistry, University of Delhi (2013)
- Served as the **Coordinator** for the **Centralized Evaluation Center** for the M.Sc. (Chemistry) and M. Tech. (CSPT) Examinations of Department of Chemistry, University of Delhi (2014)
- Served as the **Superintendent of Examinations** for the Rector Prize Examination of the University of Delhi (2013)
- Worked as the **Member/Convener** for various Departmental committees (Purchase, Bill, Instruments, Publications, Resource, Disciplinary, TRS Block Construction committees, etc.)

14. Publication Profile:

- Total Publications: **60**
- Total Impact Factor: **237.684**
- Average Impact Factor per Publication: $237.684/60 = 3.96$
- Total Citations (as on March 24, 2015): **1160**
- *h* Index (as on March 24, 2015): **20**

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

(60) Manganese and Cobalt Based Coordination Networks as the Promising Heterogeneous Catalysts for Olefin Epoxidation Reactions

G. Kumar, G. Kumar, Rajeev Gupta* *Inorganic Chemistry*, **2015**, 54, 2603 – 2615.

Impact Factor: 4.794

(59) Pd(II) Complexes with Amide-based Macrocycles: Syntheses, Properties and Applications in Cross-coupling Reactions

S. Kumar, R. R. Jha, S. Yadav, Rajeev Gupta* *New Journal of Chemistry*, **2015**, 39, 2042 – 2051.

Impact Factor: 3.159

(58) A Metalloligand Appended with Thiazole Rings: $\{Co^{3+}-Zn^{2+}\}$ and $\{Co^{3+}-Cd^{2+}\}$ Heterometallic Complexes and Their Heterogeneous Catalytic Applications

D. Bansal, G. Hundal, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2015**, 1022 – 1032.

Impact Factor: 2.965

(57) Asymmetrical Metalloligands Based $\{Co^{3+}-Cd^{2+}\}$ and $\{Co^{3+}-Ag^+\}$ Coordination Polymers: Syntheses and Characterization

G. Kumar, G. Kumar, Rajeev Gupta* *Inorganica Chimica Acta*, **2015**, 425, 260 – 268.

Impact Factor: 2.041

(56) Endogenous and Exogenous Ligand Dependent Formation of a Superoxide-bridged Dicobalt(III) Complex and Few Mononuclear Co(III) Complexes with Amide-Based Macrocyclic Ligands

S. Kumar, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2014**, 5567–5576.

Impact Factor: 2.965

(55) Nickel and Copper Complexes of Pyrrolicarboxamide Ligands: Stabilization of M^{3+} Species and Isolation of Ni^{3+} Complexes

S. Kumar, M. Munjal, J. Singh, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2014**, 4957 – 4965.

Impact Factor: 2.965

(54) Two-dimensional $\{Co^{3+}-Co^{2+}\}$ and $\{Fe^{3+}-Co^{2+}\}$ Networks and their Heterogeneous Catalytic Activities

S. Srivastava, M. S. Dagur, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2014**, 4966 – 4974.

Impact Factor: 2.965

(53) Mononuclear Complexes of Amide-based Ligands Containing Appended Functional Groups: Role of Secondary Coordination Sphere on Catalysis

D. Bansal, G. Kumar, G. Hundal, Rajeev Gupta* *Dalton Transactions*, **2014**, 43, 14865 – 14875.

Impact Factor: 4.097

(52) Synthesis, Characterization and Self-Assembly of Co^{3+} Complexes Appended with Phenol and Catechol Groups

A. Ali, D. Bansal, Rajeev Gupta* *Journal of Chemical Sciences*, **2014**, 126, 1535 – 1546.

(Invited Article: For the Special Issue on “Chemical Crystallography” on the occasion of International Year of Crystallography)

Impact Factor: 1.224

(51) Supramolecular Architectures with Pyridine-amide Based Ligands: Discrete Molecular Assemblies and Their Applications

A. Mishra, Rajeev Gupta* *Dalton Transactions*, **2014**, 43, 7668 – 7682.

Impact Factor: 4.097

(50) $\{Cu^{2+}-Co^{3+}-Cu^{2+}\}$ and $\{Cu^{2+}-Fe^{3+}-Cu^{2+}\}$ Heterobimetallic Complexes and Their Catalytic Properties

S. Srivastava, A. Ali, A. Tyagi, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2014**, 2113 – 2123.

Impact Factor: 2.965

(49) Syntheses, characterization, and anticancer activities of pyridine-amide based compounds containing appended phenol or catechol groups

A. Ali, D. Bansal, N. K. Kaushik, N. Kaushik, E. H. Choi, Rajeev Gupta* *Journal of Chemical Sciences*, **2014**, *126*, 1091 – 1105.

Impact Factor: 1.224

(48) Molecularly Designed Architectures – The Metalloligand Way

G. Kumar, Rajeev Gupta* *Chemical Society Reviews*, **2013**, *42*, 9403 – 9453.

Impact Factor: 30.425

(47) Three-Dimensional $\{\text{Co}^{3+}\text{-Zn}^{2+}\}$ and $\{\text{Co}^{3+}\text{-Cd}^{2+}\}$ Networks Originated from Carboxylate-rich Building Blocks: Syntheses, Structures, and Heterogeneous Catalysis

G. Kumar, Rajeev Gupta* *Inorganic Chemistry*, **2013**, *52*, 10773 – 10787.

Impact Factor: 4.794

(46) Electron transfer from CdSe–ZnS core–shell quantum dots to cobalt(III) complexes

A. Pal, S. Srivastava, Rajeev Gupta, S. Sapra, *Physical Chemistry Chemical Physics*, **2013**, *15*, 15888 – 15895.

Impact Factor: 4.198

(45) Cobalt Complexes Appended with *para*- and *meta*-Arylcarboxylic Acids: Influence of Cation, Solvent, and Symmetry on Hydrogen-Bonded Assemblies

G. Kumar, H. Aggarwal, Rajeev Gupta* *Crystal Growth & Design*, **2013**, *13*, 74 – 90.

Impact Factor: 4.558

(44) Synthesis and Properties of Dinuclear μ -Oxodiiron(III) Complexes of Amide-based Macrocyclic Ligands

S. Kumar, S. Vaidya, M. Pissas, Y. Sanakis, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2012**, 5525 – 5533.

Impact Factor: 2.965

(43) Synthesis, Characterization, Antibacterial and Anticancer Screening of $\{\text{M}^{2+}\text{-Co}^{3+}\text{-M}^{2+}\}$ and $\{\text{Co}^{3+}\text{-M}^{2+}\}$ (M = Zn, Cd, Hg) Heterometallic Complexes

A. Mishra, N.K. Kaushik, A. Ali, A.K. Verma, J.S. Adhikari, Rajeev Gupta* *Journal of Biological Inorganic Chemistry*, **2012**, *17*, 1217 – 1230.

Impact Factor: 3.164

(42) Cobalt Complexes Appended with *p*- and *m*-Carboxylates: Two Unique $\{\text{Co}^{3+}\text{-Cd}^{2+}\}$ Networks and Their Regioselective and Size-Selective Heterogeneous Catalysis

G. Kumar, Rajeev Gupta* *Inorganic Chemistry*, **2012**, *51*, 5497 – 5499. (Communication). [Most – read article for June 2012]

Impact Factor: 4.794

(41) A Novel Co^{3+} -based Asymmetrical Building Block: Heterobimetallic Metallacycles versus Coordination Networks

G. Kumar, Rajeev Gupta* *Inorganic Chemistry Communications*, **2012**, *23*, 103 – 108.

Impact Factor: 2.062

(40) Co^{3+} -based Building Blocks with Appended Phenol and Catechol Groups: Examples of Placing Hydrogen-Bond Donors and Acceptors in a Single Molecule

A. Ali, G. Hundal, Rajeev Gupta* *Crystal Growth & Design*, **2012**, *12*, 1308 – 1319.

Impact Factor: 4.558

(39) Two-dimensional $\{\text{Co}^{3+} - \text{Zn}^{2+}\}$ and $\{\text{Co}^{3+} - \text{Cd}^{2+}\}$ Networks and their Applications in Heterogeneous and Solvent-free Ring Opening Reactions

A. P. Singh, G. Kumar, Rajeev Gupta* *Dalton Transactions*, **2011**, *40*, 12454 – 12461.

Impact Factor: 4.097

(38) Nickel and Copper Complexes with Few Amide – based Macrocyclic and Open – chain Ligands

M. Munjal, S. Kumar, S. K. Sharma, Rajeev Gupta* *Inorganica Chimica Acta*, **2011**, *377*, 144 – 154.

Impact Factor: 2.041

(37) Copper(II) Complexes of 13 – Membered Amide – based Macrocyclic Ligands: Effect of Electronic Substituents on Redox Properties

S. Kumar, Rajeev Gupta* *Indian Journal of Chemistry, Section A*. **2011**, *50A*, 1369 – 1379. (**Invited Article** for the Special Issue Dedicated to Acharya PC Ray on his 150th Birth Anniversary).

Impact Factor: 0.628

(36) Studies on the Structure and Properties of Nickel Complexes in a Set of Amide-based 13-membered Macrocyclic Ligands

S. K. Sharma, Rajeev Gupta* *Inorganica Chimica Acta*, **2011**, *376*, 95 – 104.

Impact Factor: 2.041

(35) Mononuclear Nickel and Copper Complexes with Indolecarboxamide Ligands: Synthesis, Properties and Electrochemistry

M. Munjal, Rajeev Gupta* *Inorganica Chimica Acta*, **2011**, *372*, 266 – 274. (**Invited Article**: Dedicated to the 70th Birthday of Professor SS Krishnamurthy).

Impact Factor: 2.041

(34) Synthesis, Structure and Anticancer Activity of Copper(II) Complexes of *N*-Benzyl-2-(diethylamino)acetamide and 2-(Diethylamino)-*N*-phenylethylacetamide

A. P. Singh, K. K. Kaushik, A. K. Verma, Rajeev Gupta* *Indian Journal of Chemistry Section A*. **2011**, *50A*, 474 – 483. (**Invited Article** for the Special Issue on Bioinorganic Chemistry / International Year of Chemistry 2011).

Impact Factor: 0.628

(33) Cobalt Complexes as the Building Blocks: $\{\text{Co}^{3+}\text{-Zn}^{2+}\}$ Heterobimetallic Networks and their Properties

A. P. Singh, A. Ali, Rajeev Gupta* *Dalton Transactions*, **2010**, 39, 8135 – 8138 (Communication). [**Top ten most – read article for August 2010**]

Impact Factor: 4.097

(32) Synthesis, Structures, and Heterogeneous Catalytic Applications of $\{\text{Co}^{3+}\text{-Eu}^{3+}\}$ and $\{\text{Co}^{3+}\text{-Tb}^{3+}\}$ Heterodimetallic Coordination Polymers

G. Kumar, A. P. Singh, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2010**, 5103 – 5112.

Impact Factor: 2.965

(31) Copper(I) in the Cleft: Synthesis, Structures and Catalytic Properties of $\{\text{Cu}^+\text{-Co}^{3+}\text{-Cu}^+\}$ and $\{\text{Cu}^+\text{-Fe}^{3+}\text{-Cu}^+\}$ Heterobimetallic Complexes

A. P. Singh, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2010**, 4546 – 4554.

Impact Factor: 2.965

(30) Dinuclear Ni(II) and Cu(II) Complexes with Indolecarboxamide Ligands: Synthesis, Structure and Properties

M. Munjal, Rajeev Gupta* *Inorganica Chimica Acta*, **2010**, 363, 2734 – 2742. (**Invited Article**: Dedicated to the 75th Birthday of Professor Animesh Chakravorty).

Impact Factor: 2.041

(29) Lewis Acidic Metal Catalyzed Organic Transformations by Designed Multi-component Structures and Assemblies

A. Ali, A.P. Singh, Rajeev Gupta* *Journal of Chemical Sciences*, **2010**, 122, 311 – 320. (**Invited Article** for the Special Issue on **MTIC – XIII**).

Impact Factor: 1.224

(28) The Effect of Ligand Architecture on the Structure and Properties of Nickel and Copper Complexes of Amide-based Macrocycles. *Part 2: Electronic Effects*

S.K. Sharma, G. Hundal, Rajeev Gupta* *European Journal of Inorganic Chemistry*, **2010**, 621 – 636.

Impact Factor: 2.965

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(26) Mononuclear and Dinuclear Ni^{II} and Cu^{II} Complexes with a Pyrrolecarboxamide Ligand: Core Conversions and Unusual Presence of a Dimer and Two Monomers in the Same Unit Cell

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(24) Studies on Nickel(II) Complexes with Amide-based Ligands: Syntheses, Structures, Electrochemistry and Oxidation Chemistry

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(23) Cobalt Coordination Induced Functionalized Molecular Clefts: Isolation of $\{Co^{III}-Zn^{II}\}$ Heterometallic Complexes and their Applications in Beckmann Rearrangement Reactions

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(21) Effect of Ligand Architecture on the Structure and Properties of Square-Planer Nickel(II) Complexes of Amide-based Macrocycles

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(20) Synthesis, Characterization and Structures of Copper(II) Complexes with Amide-based Ligands: Unusual Formation of a Linear Trimer and a Zig-zag Chain and their Contrast Magnetic Behaviour

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(19) Chalcogens as Terminal Ligands to Iron: Synthesis and Structure of Complexes with $Fe^{III}-S$ and $Fe^{III}-Se$ Motifs

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(B) Publications (From the Post-doctoral Work):

(18) Characterization of the Particulate Methane Monooxygenase Metal Centers in Multiple Redox States by X-ray Absorption Spectroscopy

R.L. Lieberman, K.C. Kondapalli, D.B. Shrestha, A.S. Hakemian, S.M. Smith, J. Telser, J. Kuzelka, Rajeev Gupta, A.S. Borovik, S.J. Lippard, B.M. Hoffman, A.C. Rosenzweig, T.L. Stemmler, *Inorganic Chemistry*, **2006**, *45*, 8372-8381.

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(17) Utilization of Hydrogen Bonds To Stabilize M-O(H) Units: Synthesis and Properties of Monomeric Iron and Manganese Complexes with Terminal Oxo and Hydroxo Ligands
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(C) Publications (From the Ph.D. Work):

(13) Syntheses, Characterization, and Reactivity of Copper Complexes with Tridentate N-donor Ligands

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Impact Factor: 2.041

(11) Synthesis and Properties of Fe^{III} and Co^{III} Complexes: Structures of [(L²)Fe(N₃)₃], [(L²)₂Fe₂(μ-O)(μ-O₂CMe)₂][ClO₄]₂·2H₂O and [(L₂)₂Co₂(μ-OH)₂(μ-O₂CMe)][ClO₄]₃·MeCN [L₂ = methyl[2-(2-pyridyl)ethyl](2-pyridylmethyl)amine] J. Mukherjee, V. Balamurugan, Rajeev Gupta, R. Mukherjee, *Journal of Chemical Society Dalton Transactions*, **2003**, 3686-3692.

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(10) Synthesis and Properties of [Cu(L⁵)₂][ClO₄]₂·H₂O having Square Planar and Pseudo-octahedral Geometries in the Same Unit Cell, and Anion-bound Complexes [Cu(L⁵)₂X][ClO₄] (X = Cl⁻, NCS⁻, N₃⁻) [L⁵ = 2-(3,5-dimethyl-pyrazol-1-ylmethyl)pyridine] Rajeev Gupta, T.K. Lal, R. Mukherjee, *Polyhedron* **2002**, 21, 1245-1253.

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(7) Magnetic Interactions in Dicopper(II) Complexes of a New Endogenous Alkoxo Bridging Ligand with Exogenous Pyrazolate, Azide and Acetate Bridges. X-ray Structure of [Cu₂L(μ-C₃H₃N₂)(OCIO₃)(H₂O))(ClO₄)·H₂O (HL = 1,3-bis[N-methyl-N-(2-pyridylethyl)amino]-propan-2-ol) Rajeev Gupta, R. Hotchandani, R. Mukherjee, *Polyhedron* **2000**, 19, 1429-1435.

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(6) Synthesis and Properties of [CuLCl₂] and [CuL(N₃)(OCIO₃)]·H₂O (L = α,α'-bis(pyrazolyl)-m-xylene): X-ray Structure of [CuLCl₂]₂ Rajeev Gupta, R. Mukherjee, *Polyhedron* **2000**, 19, 719-724.

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(5) Modelling Tyrosinase Monooxygenase Activity. Activation of Dioxygen by Dicopper(I) Complexes and Characterisation of Dicopper(II) Complexes Rajeev Gupta, D. Ghosh, R. Mukherjee, *Proceedings of Indian Academy of Sciences (Chemical Sciences)*, **2000**, 112, 179-186.

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(4) Synthesis, Magnetism, ¹H NMR and Redox Activity of Dicopper(II) Complexes having a Discrete {Cu₂(μ-phenoxide)₂}²⁺ Unit Supported by a Non-macrocyclic Ligand Environment. Crystal Structure of [Cu₂(L)₂(OCIO₃)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.

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(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.

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(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).

Impact Factor: 2.041

(D) Books:

1. 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 / Lectures:

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

2. 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.

3. 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.

4. 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.

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

6. 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.

7. 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.

8. 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.

9. 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.

10. 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.

11. 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.

12. 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.

13. 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.

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

15. 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.
16. 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.
17. 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.
19. 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.
20. 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.
21. 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.
22. 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.
23. 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.
24. 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.
25. 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.

26. Coordination Complexes as Building-Blocks: Discrete Complexes *versus* Heterobimetallic Networks

Rajeev Gupta, National Seminar on “*Confluence of Supramolecular Chemistry and Nanoscience*”, Department of Chemistry, Gujarat University, Ahemadabad, January 22 – 23, 2010.

27. 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.

28. 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.

29. 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.

30. 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.

31. 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.

32. Cobalt Coordination Induced Functionalized Molecular Clefs: 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.

33. 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.

34. 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.

35. 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. Presentations in Symposia / Seminars / Conferences:

(1) Metalloligands with Assorted Arylcarboxylic Acid Groups: Impact on Material Design, S. Pandey, S. Srivastava, G. Kumar, Rajeev Gupta, *JSPS-DST Asian Academic Seminar and School 2015*, Jointly organized by the IACS – Kolkata and IISER – Kolkata, March 6 – 10, 2015.

(2) Role of Preorganized Rigid and Post-functionalized Flexible Metalloligands Appended with Carboxylic Acid Groups in Material Design, S. Pandey, S. Srivastava, G. Kumar, 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.

(3) Coordination Complexes as the Building Blocks: Discrete Complexes Versus Networks and Their Catalytic Applications, S. Srivastava, 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.

(4) Hydrogen-Bonded and Coordination-Driven Frameworks Using Molecular Building Blocks, G. Kumar, S. Pandey, S. Srivastava, G. Kumar, Rajeev Gupta, IVth National Symposium on “Advances in Chemical Sciences”, Department of Chemistry, Guru Nanak Dev University, Amritsar, February 27 – 28, 2014.

(5) Coordination Chemistry With Pyrrole-Amide and Indole-Amide Ligands, S. Yadav, S. Kumar, Rajeev Gupta, IVth National Symposium on “Advances in Chemical Sciences”, Department of Chemistry, Guru Nanak Dev University, Amritsar, February 27 – 28, 2014.

(6) Metalloligands Appended with Carboxylic Acid Groups: Extended Networks and Functional Materials, Sumit Srivastava, Saurabh Pandey, Gulshan Kumar, Girijesh Kumar and Rajeev Gupta, Symposium on “*Modern Trends in Inorganic Chemistry*” (MTIC-XV), Department of Chemistry, Indian Institute of Technology – Roorkee, December 13 – 16, 2013.

- (7) Hydroxide-bridged Dinuclear Metal Complexes in Hydrogen Bond Surroundings: Structural Analysis and Catalysis, Deepak Bansal, Rajeev Gupta, Symposium on “*Modern Trends in Inorganic Chemistry*” (MTIC-XV), Department of Chemistry, Indian Institute of Technology – Roorkee, December 13 – 16, 2013.
- (8) Metalloligands Appended with Carboxylic Acid Groups: Extended Ensembles and Functional Materials, G. Kumar, S. Srivastava, Rajeev Gupta, National Seminar on “*Chemistry in Interdisciplinary Applications*”, Hansraj College, University of Delhi, Delhi, India, March 19, 2013.
- (9) Chalcone as Antihyperglycemic and Antidyslipidemic Agents, Poonam Shukla, Ram Pratap, Rajeev Gupta, National Seminar on “*Chemistry in Interdisciplinary Applications*”, Hansraj College, University of Delhi, Delhi, India, March 19, 2013.
- (10) Developing Heterogeneous Catalysts for Important Organic Transformations, G. Kumar, Rajeev Gupta, Conference on “*Emerging Trends in Development of Drugs and Devices*”, Department of Chemistry, University of Delhi, Delhi, India, January 21 – 23, 2013.
- (11) Molecules to Materials via Coordination Complexes as the Building-Blocks, Rajeev Gupta, 40th International Conference on Coordination Chemistry (ICCC), Valencia, Spain, September 9 – 13, 2012.
- (12) Cobalt Complexes based Building Blocks Appended with Phenol and Carboxylate Groups: H-bonded Assemblies and Extended Networks, G. Kumar, A. Ali, A. P. Singh, H. Aggarwal, Rajeev Gupta, Symposium on “*Modern Trends in Inorganic Chemistry*” (MTIC-XIV), School of Chemistry, University of Hyderabad, December 10 – 13, 2011.
- (13) Coordination Complexes as Building Blocks: An Approach to Control Dimensionality and Topology, S. Srivastava, G. Kumar, A. P. Singh, Rajeev Gupta, Symposium on “*Modern Trends in Inorganic Chemistry*” (MTIC-XIV), School of Chemistry, University of Hyderabad, December 10 – 13, 2011.
- (14) Coordination Complexes as the Building Blocks: Discrete Heterobimetallic Complexes, D. Bansal, A. Ali, A. P. Singh, 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.
- (15) Coordination Complexes as the Building Blocks: Extended Networks and Hydrogen – bonded Assemblies, A. Ali, G. Kumar, H. Aggarwal, 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) Molecules, Supramolecules and Materials: The Building Block Approach
A. Ali, A. P. Singh, G. Kumar, Rajeev Gupta, International Symposium on “*Frontiers in Inorganic Chemistry*”, Department of Inorganic Chemistry, Indian Association for the

Cultivation of Science, Kolkata, December 11 – 13, 2010.

(17) Coordination Chemistry with Amide – based Macrocyclic and Open – chain Ligands

S. Kumar, Rajeev Gupta, National Conference on “*Frontiers in Chemical Sciences*”, Department of Chemistry, Indian Institute of Technology – Guwahati, December 3 – 4, 2010.

(18) Molecules, Supramolecules and Materials: The Building Block Approach

Rajeev Gupta, Golden Jubilee Chemistry Conference on “*Molecules, Supramolecules and Materials*”, Department of Chemistry, Indian Institute of Technology – Kanpur, October 1 – 3, 2010.

(19) Heterobimetallic Networks through Coordination Complexes as Building Blocks

A. P. Singh, Rajeev Gupta, Symposium on “*Modern Trends in Inorganic Chemistry*” (MTIC-XIII); Indian Institute of Science – Bangalore, India, December 7 - 10, 2009.

(20) Coordination Complexes as Building Blocks to Generate Discrete *versus* 2D and 3D Heterobimetallic Structures, A. Ali, A. P. Singh, A. Mishra, Rajeev Gupta, School and Symposium on Advanced Biological Inorganic Chemistry (SaBIC-2009), Tata Institute of Fundamental Research – Bombay (TIFR), Mumbai, India, November 4 – 7, 2009.

(21) Structural Diversity and Topological Control Utilizing Coordination Complexes as Building Blocks

A. P. Singh, A. Ali, A. Mishra, G. Hundal, Rajeev Gupta, “*National Symposium in Chemistry (NSC – 11)*” Chemical Research Society of India (CRSI), NCL –Pune, India, February 6 – 8, 2009.

(22) Coordination Chemistry with Amide – based Macrocyclic and Open – chain Ligands

M. Munjal, S. Sharma, J. Singh and 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.

(23) Developing Coordination Complexes as Building Blocks to Generate Heterobimetallic Complexes

Rajeev Gupta, National Seminar on “*Modern Trends in Chemistry: Molecules to Materials*” School of Physical Sciences, Jawaharlal Nehru University, Delhi, India, March 14 – 15, 2008.

(24) Coordination Chemistry with Amide – based Macrocyclic and Open – chain Ligands

M. Munjal, S. Sharma, J. Singh and Rajeev Gupta, “*National Symposium in Chemistry (NSC-10)*” Chemical Research Society of India (CRSI), Department of Chemistry, Indian Institute of Science, Bangalore, India, February 1 – 3, 2008.

(25) Coordination Complexes as Building Blocks to Generate Novel Heterometallic Complexes and Their Applications in Organic Transformations

A. Mishra, A. Ali, A. P. Singh, S. Upreti, and Rajeev Gupta, Symposium on "*Modern Trends in Inorganic Chemistry*" (MTIC-XII); Indian Institute of Technology – Madras, Chennai, India, December 6 - 8, 2007.

(26) Effect of Ligand Architecture on the Structure and Properties of Nickel Complexes of Amide – Based Macrocycles

S. K. Sharma, M. Munjal, S. Upreti, G. Hundal, and Rajeev Gupta, Symposium on "*Modern Trends in Inorganic Chemistry*" (MTIC-XII); Indian Institute of Technology – Madras, Chennai, India, December 6 - 8, 2007.

(27) Structure and Properties of Nickel and Copper Complexes with Amide – Based Ligands

J. Singh, M. Munjal, G. Hundal, and Rajeev Gupta, Symposium on "*Modern Trends in Inorganic Chemistry*" (MTIC-XII); Indian Institute of Technology – Madras, Chennai, India, December 6 - 8, 2007.

(28) Anti-bacterial and Anti-cancer Activity of Cobalt(III) Complexes with Pyridine-amide Ligands

A. Mishra, N. K. Kaushik, A. K. Verma, and Rajeev Gupta, 3rd Indo – Italian Workshop on "*Chemistry and Biology of Antioxidants*", Department of Chemistry, University of Delhi, Delhi, India, November 28 – 30, 2007.

(29) Snapshots of Amide Chemistry: From Bio-inorganic Models to Heterometallic Complexes to Supramolecular Assemblies

S. K. Sharma, A. Mishra, J. Singh, A.P. Singh, M. Munjal, Rajeev Gupta, "*National Symposium in Chemistry (NSC – 9)*" Chemical Research Society of India (CRSI), Department of Chemistry, University of Delhi, Delhi, India, February 1 – 4, 2007.

(30) Variable Coordination Modes of Tetradentate Amide–Amine Based Hybrid Ligands: Syntheses, Structures and Properties of Nickel and Copper Complexes

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