

## Curriculum Vitae

**Name:** R. N. Mukherjee

**Address:**

Office:

Director, Indian Institute of Science Education and Research (IISER) Kolkata  
Mohanpur Campus

Mohanpur – 741 252

Phone: +91 33 2587 3017

Fax: +91 33 2587 3028

E-mail: [director@iiserkol.ac.in](mailto:director@iiserkol.ac.in); [rnm@iiserkol.ac.in](mailto:rnm@iiserkol.ac.in)

Residence:

Guest House – I

IISER Kolkata Mohanpur Campus

Mohanpur – 741 252

Phone: +91 33 6451 0542

Residence (Permanent):

C-6/6, Animikha Housing Complex, Rajarhat, New Town, Kolkata – 700 156

**Date of Birth:** April 19, 1953

**Academic Qualifications:**

BSc (Honors in Chemistry)

University of Burdwan, Burdwan, West Bengal (1973)

MSc (Specialization: Inorganic Chemistry)

University of Burdwan, Burdwan, West Bengal (1976)

PhD (Supervisor: Professor Animesh Chakravorty; 1978 – 1982)

Department of Inorganic Chemistry

Indian Association for the Cultivation of Science (IACS), Calcutta (now Kolkata)

University of Calcutta, Kolkata (1983)

**Positions Held:**

Post-doctoral Research Associate

(in the laboratory of Professor Animesh Chakravorty)

IACS, Kolkata (1983 – 1985)

Post-doctoral Research Associate (in the laboratory of Professor Richard H. Holm)

Harvard University, USA (1985 – 1987)

Assistant Professor, Department of Chemistry, IIT Kanpur (1987 – 1993)

Associate Professor, Department of Chemistry, IIT Kanpur (1993 – 1995)

Professor, Department of Chemistry, IIT Kanpur (1995–; on deputation from  
01/02/2012 to 31/01/2017)

Head, Department of Chemistry, IIT Kanpur (August 2010 – January 2012)  
Chair Professor, IIT Kanpur (Poonam and Prabhu Goel Chair) (2011 – 2012)

**Awards & Honors:**

Fellow, Indian Academy of Sciences, Bangalore (1999)  
Bronze Medal, Chemical Research Society of India, Bangalore (2001)  
*The Royal Society of Chemistry Journals Grants for International Authors Award*,  
UK (Visit: May 02 – June 02, 2001)  
Fellow, Royal Society of Chemistry, UK (2003)  
J. C. Bose National Fellowship, Department of Science & Technology, New Delhi  
(2008 – 2018)  
Fellow, Indian National Science Academy, New Delhi (2008)  
Vice President, Chemical Research Society of India, Bangalore (2008 –)  
Short-Term Research Scholarship, Georg-August-Universität, Göttingen, Germany  
(Visit: May 31 – June 30, 2011)  
Silver Medal, Chemical Research Society of India, Bangalore (2011)  
Professor Priyadarajan Ray Memorial Award for the Year 2010, Indian Chemical  
Society, Kolkata (2011)

**Editorial Board:**

Member, Advisory Board, *Dalton Transactions* (RSC) (2008 – 2013)  
Member, International Editorial Board, International Journal of Inorganic  
Chemistry (Web-based journal; Hindawi Publishing Corporation) (2008 –)  
Member, Editorial Board of *Inorganica Chimica Acta* (Elsevier) (2011 – 2013)

**Visiting Appointments:**

Visiting Professor, Departament de Química, Universitat de Girona, Spain  
(September – October, 2004)  
Visiting Professor, Department of Chemistry, Stanford University, USA  
(May 2005 – May 2006)  
Visiting Professor, Institut für Anorganische Chemie, Georg-August-Universität,  
Göttingen, Germany (July 01–14, 2007)

**National/International Committee Work:**

Member, National Scientific Committee, 33rd International Chemistry Olympiad,  
Mumbai, India (July 06–15, 2001)  
Member, Sectional Committee in Chemistry, Indian Academy of Sciences,  
Bangalore (2004 – 2006)  
Planning Committee Member, International Conference on Coordination Chemistry  
(2004 –)  
International Committee Member, Asian Coordination Chemistry Conference  
(2007 –)  
Member, Research Advisory Committee, IISER Mohali (2008 – 2011)  
Member, S. P. Mukherjee Fellowship Committee, Council of Scientific &  
Industrial Research, New Delhi (2008 and 2011)  
Member, Selection Committee for Nobel Laureates Meeting, Department of

Science & Technology, New Delhi (2009)  
Member, School Board, School of Chemistry, University of Hyderabad,  
Hyderabad (2009 –2011)  
Member, SwarnaJayanti Fellowship Committee, DST (2010 and 2011)  
Member, Sectional Committee in Chemistry, Indian National Science Academy,  
New Delhi (2009 – 2011)  
Member, Chemical Sciences Research Committee, Council of Scientific &  
Industrial Research, New Delhi (2009 – 2011)  
Member, Inorganic & Physical Chemistry Research Committee, Council of  
Scientific & Industrial Research, New Delhi (2011 – 2014)  
Member, Programme Advisory Committee on Inorganic Chemistry, under Science  
& Engineering Research Board (SERB) (2012 – 2015)  
Member, DST-INSA INSPIRE Program, INSA (2012 – )  
Member, National Advisory Committee, KVPY, IISc Bangalore (2012 – )

### **Research Interest:**

Synthetic coordination chemistry of transition metal ions with designed organic ligands is central to his research work. His research covers extensive synthesis, redox), and understanding of metal-ligand bonding characteristics in which the main focus is the correct description of the electronic structure (based on Density Functional Theory calculations) of compounds containing open-shell organic ligands and paramagnetic metal ions.

### **Research Area:**

Notably, his group focuses on diversified problems. The research themes include:

(i) Bioinorganic synthetic model work: chemical modeling of tyrosinase and catechol oxidase [dioxygen activation and aromatic ring hydroxylation, phenoxo-/hydroxo-bridged dicopper(II) systems]; bio-inspired synthesis of binuclear oxo-/acetate-bridged dimanganese(III,III; III,IV; IV,IV) systems and reactivity studies of dimanganese(IV) complex with phenols of relevance to photosystem II; demonstration of hydrolysis of biologically-relevant substrates by phenoxo-bridged  $Mn^{II}_2$ ,  $Co^{II}_2$ ,  $Ni^{II}_2$ ,  $Cu^{II}_2$ , and  $Zn^{II}_2$  complexes (detailed kinetic investigations to throw light on the mechanistic aspects); stability and properties of metal-coordinated phenoxyl radical of relevance to galactose oxidase.

(ii) Stabilization of nickel(III) and nickel(IV) states; Cobalt-coordinated C-S(thioether) bond cleavage and Co-C bond formation; Stabilization of iron(III)/ruthenium(III)-coordinated *o*-benzosemiquinonato radical by deprotonated pyridine amide ligands; Synthesis and properties of ligand-bridged six-coordinate cobalt(III) and four-coordinate cobalt(II) complexes and also a series of hetero-bimetallic complexes; Anion (bisulfate) recognition using ferrocene-appended

amide groups; Assembly and properties of a discrete tetrairon(III) cluster and coordination polymers by pyridine amide ligands in their neutral form.

(iii) Metal-coordinated ligand radicals: molecular and electronic structural investigation of metal-coordinated *o*-iminobenzosemiquinonato anion radical using non-innocent (redox active) ligands and formation of radical-based benzo-triazole ring formation.

(iv) Discovery of a new class of  $\text{Fe}^{\text{II}}\text{N}_6$  spin-equilibria systems, exhibiting interesting cooperativity phenomena.

(v) Co-C bond formation [cobalt(III)-alkyl and cobalt(III)-dialkyl complexes] and investigation of their properties and stabilization of ligand-bridged dinickel(II), dicopper(II), nickel(II)-nickel(I) systems, supported by pyrazole-based chelating ligands.

(vi) Magneto-structural studies of discrete binuclear, trinuclear, and oligonuclear transition metal complexes and coordination polymers.

(vii) Synthesis of half-sandwich organometallic molecules and nucleophilic addition reactions onto the ruthenium(II)-coordinated benzene.

(viii) Identification of non-covalent interactions with emphasis on C–H $\cdots$ Cl hydrogen-bonding.

### Teaching:

Has taught a variety of undergraduate and postgraduate core/elective courses at the Department of Chemistry, Indian Institute of Technology Kanpur.

Core Courses: CHM101 (General Chemistry: Theory and Laboratory), CHM 201 (General Chemistry), CHM 341 (Introduction to Inorganic Chemistry), CHM 343 (Inorganic Laboratory), CHM 441 (Inorganic Chemistry – I), CHM 442 (Inorganic Chemistry –II), CHM 443 (Inorganic Laboratory)

Elective Courses: CHM 641 (Advanced Inorganic Chemistry –I), CHM 642 (Advanced Inorganic Chemistry – II), CHM 645 (Principles of Inorganic Chemistry), CHM 646 (Bioinorganic Chemistry), CHM 691/SE 343 (introduced this course, now a Science Elective, “Frontiers in Inorganic Chemistry”)

Received Commendation from the Director, IIT Kanpur for teaching excellence several times

Has taught undergraduate and postgraduate core/elective courses at Indian Institute of Science Education and Research (IISER) Kolkata

Core course: CH1101 – Elements of Chemistry

Elective Course: CH4201 – Bioinorganic Chemistry

## **Students Trained:**

### PhD

1. K. Ramesh (1987 – 1991); 2. Manabendra Ray (1988 – 1992);
3. Samiran Mahapatra (1989 – 1992); 4. Tapan K. Lal (1991 – 1996);
5. Debalina Ghosh (1993 – 1997); 6. Apurba K. Patra (1993 – 1999);
7. Rajeev Gupta (1995 – 2000); 8. V. Balamurugan (1999 – 2004);
9. Jhumpa Mukherjee (1999 – 2004); 10. Akhilesh K. Singh (2002 – 2007);
11. Vibha Mishra (2002 – 2007); 12. Wilson Jacob (2003 – 2007)
13. Haritosh Mishra (2003 – 2008); 14. Sukanta Mandal (2003 – 2009);
15. Himanshu Arora (2004 – 2009); 16. Atasi Mukherjee (2004 – 2009);
17. Anuj K. Sharma (2005 – 2009); 18. Anindita De (2005 – 2009);
19. Sharmila Pandey (2006 – 2010)

### Currently working for PhD

1. Saleem Javed (2007 –); 2. Ravindra Singh (2007 –);
3. Suman Kumar Barman (2008 –); 4. Amit Rajput (2009 –);
5. Partha Pratim Das (2009 –); 6. Akram Ali (2010 –);
7. Arunava Sengupta (2011 –); 8. Akhilesh Kumar (2011 –);
9. Dinesh Sah (2011 –); 10. Shashi Kant (2011 –)

### PhD Thesis Submitted

1. Saleem Javed (2013)

### Post-doctoral Research Associate

1. Dr. Nishi Gupta (1990 – 1992); 2. Dr. Zahida Shirin (1992 – 1995);
3. Dr. Shubha Singh (2001 – 2003)

Master of Science) Projects: ~40

## **Sponsored Research (National and International):**

Received funding from the following agencies:

Department of Science & Technology (DST)  
Council of Scientific & Industrial Research (CSIR)  
Volkswagen Foundation, Germany  
Indo-French Centre  
Swedish Research Links  
DST-Ukraine  
DST-DFG

During 2005 – 2011: funding of about Rs. 1.5 Crore

- a) DST Project (No. SR/S1/IC-30/2009) (2009 – 2012)  
Metal-Coordinated Radicals. Bioinorganic and Inorganic Perspectives  
Rs. 28,46,000/-

b) DST J. C. Bose (No. SR/S2/JCB-79/2007) (2008 – 2013)  
Rs. 56,90,000/-

c) DST Project (No. SR/S1/IC-29/2004) (2005 – 2008)  
Hydrolysis of Esters by Metal Complexes of Designed Ligands: Inorganic and Bioinorganic Perspectives  
Rs. 23,05,200/-

d) DFG-DST (INT/FRG/DFG/P-33/2010) with Prof. F. Meyer (Institut für Anorganische Chemie, Georg-August-Universität, Göttingen, Germany) (2010 – 2012)  
Combining Bimetallic Scaffolds and Metal-Coordinated Phenoxy-Radicals for Multi-Electron Transformations: A Step Beyond Nature  
Rs. 14,39,600

e) India and Ukraine Joint Science & Technology Project (DST: INT/UKRAINE/UKR-16/2006) with Prof. I. Fritsky (University of Kiev, Ukraine) (2008 – 2011)  
Novel Biomimetic Catalysts Based on Copper(III) Complexes  
Rs. 4,11,000 (travel and per-diem)

f) Swedish Research Links Project with Prof. Ebbe Nordlander (University of Lund, Sweden) (2008 – 2011)  
Modeling of Dinuclear Active Sites in Metalloproteins (Planning Grants) and Synthesis and Reactivity Studies of Model Complexes for Dinuclear Active Sites in Metalloenzymes  
Rs. 15,39,104 (excluding expenditures on travel to Lund two times and living expenses)

g) Indo-French Centre for the Promotion of Advanced Research (IFCPAR), New Delhi sponsored Project with Prof. Francois Varret (Laboratoire de Magnétisme et d'Optique CNRS-Université de Versailles, France) (2006 – 2009)  
Spin Transition in Fe(II) & Cyano-Bridged Molecular Magnets  
Rs. 6,56,390 (excluding expenditures on travel to France two times and living expenses)

h) DST Project (2001 – 2004)  
Activation of Molecular Oxygen by Manganese(II), Iron(II), and Copper(I) Complexes of Designed Dinucleating Ligands. Inorganic and Bioinorganic Perspectives

i) DST Project (1996 – 2000)  
Magnetostructural Correlations in Novel Ligand-Bridged Dimetal Systems. Dicopper(II) Complexes of Biological Relevance

j) DST Project (1992 – 1996)  
Synthesis and Characterization of Novel Transition Metal Complexes. Relevance to Metallobiomolecules with Intrinsic Active Sites

k) DST Project (1989 – 1992)  
Binuclear Iron Centers in Biology: Model Compound Studies

l) DST Project (1989 – 1991)  
Probe into the Structure of the Active Site of Binuclear Iron Centers in Hemerythrin: A Synthetic Analogue Approach

m) Council of Scientific & Industrial Research (CSIR), India Project (2004 – 2007)  
Recognition and Sensing of Anionic Guest Species by Transition Metal Receptors

n) CSIR Project (1999 – 2002)  
Dicopper(II) Complexes: Synthesis, Characterization and Catecholase Activity

o) CSIR Project (1993 – 1997)  
Synthesis and Characterization of Half-Sandwich Complexes having  $\text{Ru}(\eta^6\text{-C}_6\text{H}_6)^{2+}$  Moiety: A Conceptual Link between Classical Werner Complexes and Organometallic Molecules

p) CSIR Project (1988 – 1992)  
Stabilization of the  $\text{Fe}^{\text{IV}}=\text{O}$  Moiety Present in Horseradish Peroxidase: A Synthetic Analogue Approach

**Organization of Course/Conference:**

Indian Academy of Sciences, Bangalore – Sponsored Refresher Course on *Frontiers in Inorganic Chemistry*, Department of Chemistry, Indian Institute of Technology Kanpur, Kanpur (December 18-31, 2003)

Institute of Research Development & Training (Technical Education Department) U.P. Kanpur – Sponsored Short Term Training Course on *Latest Developments in Chemistry* for Diploma in Engineering Courses: Applied Chemistry (February 25-28, 2004)

Organized ‘Department Day’ on October 25, 2010, as a part of Golden Jubilee Celebration of Indian Institute of Technology Kanpur (organized along with students, staff, and faculty members of Chemistry Department)

Celebration of Chemistry@IITK: International Year of Chemistry-2011, Department of Chemistry, Indian Institute of Technology Kanpur (December 03-05, 2011) (Organized along with Drs. Pratik Sen, J. K. Bera, and M. L. N. Rao)

### **Editorial Work:**

Guest Editor along with Prof. C. P. Rao, Department of Chemistry, Indian Institute of Technology Bombay, Powai and Prof. S. Mazumdar, Department of Chemical Sciences, Tata Institute of Fundamental Research, Mumbai: Special Issue on Bioinorganic Chemistry Dedicated to Professor Samaresh Mitra on the occasion of his 70th birthday, *Indian J. Chem.* **2011**, 50A, 339-547.

Guest Editor along with Prof. Akhil R. Chakravarty, Department of Inorganic & Physical Chemistry, Indian Institute of Science, Bangalore: Special Issue Dedicated to Professor Animesh Chakravorty on the occasion of his 75th birthday, *Inorg. Chim. Acta* **2010**, 363, 2693-3138.

Guest Editor, Special Thematic Issue on Bioinorganic Chemistry, *Proc. Indian Natl. Sci. Acad., Part A, Physical Sciences* **2004**, 70, 267-398.

### **Reviewing/Refereeing Work for the Journals:**

Inorganic Chemistry, Chemical Communications, Dalton Transactions, RSC Advances, New Journal of Chemistry, Physical Chemistry Chemical Physics, CrystEngComm, Catalysis Letters, Energy & Environmental Science, Angewandte Chemie International Edition, Chemistry – A European Journal, European Journal of Inorganic Chemistry, Inorganica Chimica Acta, Inorganic Chemistry Communications, Journal of Molecular Structure, Journal of Hazardous Materials, Catalysis Communications, Solid State Sciences, Journal of Coordination Chemistry, Australian Journal of Chemistry, Indian Journal of Chemistry–Section A, Indian Journal of Chemical Technology, Journal of Chemical Sciences, Current Science, Journal of Indian Chemical Society

### **Membership in Professional Society:**

Member, American Chemical Society (1999 –)  
Member, Royal Society of Chemistry (2003 –)  
Life Member, Chemical Research Society of India (1999 –)  
Life Member, Indian Association of Chemistry Teachers (2007 –)

### **Invited Lecture:**

#### **In India**

#### **(i) College/University/Institute:**

Department of Chemistry, Indian Institute of Technology Kharagpur, Kharagpur (December 15, 2010)

“University Golden Jubilee National Seminar on Chemistry Today (UGJ- NSCT)”  
March 18-20, 2010, Department of Chemistry, University of Burdwan,  
Burdwan (March 19, 2010)



School of Chemistry, University of Hyderabad, Hyderabad (July 24, 2009)

Department of Chemistry, Jadavpur University, Kolkata (June 11, 2009)

Department of Chemistry, Indian Institute of Technology Guwahati, Guwahati (November 28, 2008)

Department of Chemistry, Indian Institute of Technology Bombay, Mumbai (October 23, 2008)

Department of Chemistry, Guru Nanak Dev University, Amritsar (September 05, 2008)

National Institute of Technology, Durgapur, West Bengal (February 28, 2008)

Regional Research Laboratory, Trivandrum (September 06, 2002)

Offered a Series of Lectures on Bioinorganic Chemistry, Guru Nanak Dev University, Amritsar (April 02 – 07, 2001)

Department of Chemistry, Pondicherry University, Pondicherry (February 2000)

School of Chemistry, University of Hyderabad, Hyderabad (January 17, 2000)

Department of Chemistry, University of Pune, Pune (June 22, 1999)

Department of Chemistry, Banaras Hindu University, Varanasi (March 19, 1996)

Regional Research Laboratory, Trivandrum (December 05, 1994)

Department of Chemistry, Presidency College, Calcutta now Kolkata (December 21, 1990)

School of Chemistry, University of Hyderabad (September 3, 1988)

**(ii) Special Lectures:**

National Seminar on “Chemistry in Interdisciplinary Applications”, Hans Raj College, University of Delhi (March 19, 2013)

Science Day Celebration – Indian Institute of Technology Roorkee, Roorkee (February 28, 2013)

State Level “Chemistry Olympiad” Prof. P. K. Sarma Memorial Lecture, The Society for Chemical Education Assam (SCEA), Department of Chemistry, Gauhati University (February 09, 2013)

Annual Convention of Chemists of the Indian Chemical Society: Professor Priyadarajan Ray Memorial Award 2010, Department of Chemistry, University of Allahabad (December 03-07, 2011) (December 06, 2011)

Bimala Churn Law Memorial Lecture, Indian Association for the Cultivation of Science, Kolkata (February 29, 2008)

A. V. Rama Rao Foundation Prize Lecture in Chemistry, Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore (March 23, 2005)

Ajit Memorial Lecture at the Indian Association for the Cultivation of Science, Kolkata (December 06, 1999)

**(iii) University Grants Commission-Sponsored Seminars/Refresher Courses:**

Two-day Seminar on “Frontier Areas of Chemistry – A Modern Perspective”, Department of Chemistry, Ramakrishna Mission Vidyamandir, Belur Math, Howrah (February 25, 2010)

Refresher Course in Chemistry, UGC-Academic Staff College, School of Chemistry, University of Hyderabad, Hyderabad (July 25, 2009)

“8th Refresher Course in Chemistry”, UGC-Academic Staff College, Banaras Hindu University, Varanasi (January 22, 2008)

Refresher Courses on “Instrumental and Analytical Techniques in Chemistry”, Department of Chemistry, University of Allahabad, Allahabad (December 17, 2004)

Refresher Courses on “Organometallic Chemistry” for University and College Teachers, Department of Chemistry and the Academic Staff College, Lucknow University, Lucknow (July 23-24, 1996)

Refresher Courses on “Advances in Inorganic Chemistry” for University and College Teachers, Department of Chemistry and the Academic Staff College, Bharathidasan University, Tiruchirapalli (December 01-02, 1994)

**(iv) University Grants Commission-Sponsored DSA/DRS (SAP) Program:**

Department of Chemistry, Burdwan University, Burdwan (February 16, 2000)

National Seminar on Coordination Chemistry, Department of Chemistry,  
Utkal University, Bhubaneswar (March 30-31, 1998)

**(v) Indian Academy of Sciences, Bangalore/Indian National Science Academy,  
New Delhi/National Academy of Sciences, Allahabad/Jawaharlal Nehru for  
Advanced Scientific Research, Bangalore-Sponsored:**

Science Academies' Lecture Workshop on "Recent Advances in Chemistry",  
AS College, Deoghar, Jharkhand (March 16-17, 2013) (March 17, 2013)

Guru Nanak Dev University, Amritsar (October 24-26, 2007)

Government Model Science College, Jabalpur (September 15-16, 2006)

Guru Nanak Dev University, Amritsar (October 29-30, 2001)

Miranda House, University of Delhi (November 03, 2000)

St. Stephens College, University of Delhi (February 03-05, 2000)

**(vi) INSPIRE Internship Program-Sponsored by DST:**

INSPIRE (Innovation in Science Pursuit for Inspired Research) Science Camp  
(July 06-11, 2012), UGC-Academic Staff College, Burdwan University (July 10,  
2012)

Valedictory Lecture: INSPIRE (Innovation in Science Pursuit for Inspired  
Research) Science Camp (June 26-30, 2012), National Institute of Technology –  
Durgapur (June 30, 2012)

Internship Science Camp under the INSPIRE Scheme (June 11-16, 2012), Tezpur  
University, Assam (June 13, 2012)

Pandit Ravishankar Shukla University, Raipur (December 04, 2010)

## **Abroad**

### **(i) University/Institute**

Institut für Anorganische Chemie, Universität zu Köln, Köln, Germany  
(June 29, 2011)

Institute of Inorganic and Analytical Chemistry, Johann Wolfgang Goethe  
Universität, Frankfurt am Main, Germany (June 28, 2011)

Lehrstuhl für Anorganische Chemie I, Fakultät für Chemie, Universität  
Bielefeld, Bielefeld, Germany (June 21, 2011)

Technische Universität Kaiserslautern, Institut für Chemi, Kaiserslautern,  
Germany (June 14, 2011)

Institut für Anorganische Chemie, Georg-August-Universität, Göttingen  
(June 09, 2011)

Institut für Anorganische Chemie Universität Stuttgart, Stuttgart, Germany  
(June 06, 2011)

Institute of Inorganic and Analytical Chemistry, Johann Wolfgang Goethe  
Universität, Frankfurt am Main, Germany (July 08, 2010)

Chemical Center, Lund University, Sweden (July 01 and 02, 2010)

Université J. Fourier Grenoble, France (May 27, 2008)

Technische Universität-Kaiserslautern, Fachbereich Chemie, Germany  
(July 13, 2007)

Technische Universität-Berlin, Institut für Chemie, Germany (July 12, 2007)

Technische Universität-Braunschweig, Institut für Anorganische und  
Analytische Chemie, Germany (July 11, 2007)

Georg-August-Universität Göttingen, Institut für Anorganische Chemie,  
Germany (July 10, 2007)

Universität Paderborn, Department Chemie, Anorganische und Analytische  
Chemie, Germany (July 09, 2007)

Freie Universität-Berlin, Institut für Chemie und Biochemie, (July 05, 2007)

Philipps-Universität Marburg, Anorganische Chemie, Germany (July 04, 2007)

Justus-Liebig-Universität Gießen, Institut für Anorganische und Analytische Chemie, Germany (July 03, 2007)

Max-Planck Institute für Bioanorganische Chemie, Mülheim an der Ruhr, Germany (July 02, 2007)

Chemical Center, Lund University, Sweden (April 16, 2007)

Department of Chemistry, Stanford University, USA (April 18, 2006)

Departament de Química, Universitat de Barcelona, Spain (September 27, 2004)

Departament de Química, Universitat de Girona, Spain (September 17, 2004)  
Anorganisch-chemisches Institut der Universität Heidelberg, Germany  
(June 14, 2002)

Anorganische und Analytische Chemie der Johannes Gutenberg – Universität Mainz, Germany (May 27, 2002)

Organisch-Chemischen Institut der Westfälischen Wilhelms-Universität Münster, Germany (May 16, 2002)

Institut für Anorganische Chemie, Universität Erlangen Nürnberg, Germany (May 07, 2002)

Laboratoire de Chimie Inorganique, Institut de Chimie Moléculaire d'Orsay, Université Paris-Sud, Orsay, France (June 29, 2001)

Laboratoire de Magnétisme et d'Optique, Université de Versailles Saint-Quentin-en-Yvelines, Versailles Cedex, France (June 27, 2001)

Unilever Research Center, Vlaardingen, The Netherlands (June 26, 2001)  
Gorlaeus Laboratories, Leiden University, Leiden, The Netherlands  
(June 25, 2001)

Institut für Anorganische Chemie, Universität Erlangen Nürnberg, Germany (June 18, 2001)

Max-Planck Institut für Strahlenchemie, Mülheim, Germany (June 15, 2001)

Department of Chemistry, University of Manchester, UK (May 31, 2001)

Department of Chemistry, University College London, UK (May 25, 2001)

Department of Chemistry, Heriot-Watt University, Scotland (UK)  
(May 23, 2001)

Department of Chemistry, University of Bristol, UK (May 16, 2001)

Department of Chemistry, University of Durham, UK (May 09, 2001)

In the group of Prof. R. H. Holm, Department of Chemistry, Harvard University (August 28, 1998)

In the group of Prof. R. H. Holm, Department of Chemistry, Harvard University (April 07, 1993)

Department of Chemistry, University of North Carolina at Chapel Hill (April 06, 1993)

Department of Chemistry, Yale University (April 02, 1993)

**Invited Lectures in Conference/Symposium/Workshop/Winter School:**

**In India**

International Conference on "Molecular Organization and Complexity: A Chemical Perspective", Department of Chemistry, Calcutta University (February 06-08, 2013), Saha Institute of Nuclear Physics, Kolkata (February 08, 2013)

RSC India Roadshow, Organized by the Royal Society of Chemistry (RSC) and Indian Association for the Cultivation of Science (IACS) Kolkata (February 05, 2013)

Symposium on Inorganic Chemistry at Interface, Department of Chemistry, Indian Institute of Technology Kharagpur, Kharagpur (October 14, 2012)

National Symposium: Chemistry in 21<sup>st</sup> Century, Department of Chemistry, Guru Nanak Dev University, Amritsar (December 23-24, 2011) (also Chaired a session)

International Symposium on Chemistry & Complexity, Indian Association for the Cultivation of Science, Kolkata (December 06-08, 2011) (December 08, 2011) (also Chaired a session)

Celebration of Chemistry@IITK: International Year of Chemistry-2011, Department of Chemistry, Indian Institute of Technology Kanpur (December 03-05, 2011) (Organized along with Drs. Pratik Sen, J. K. Bera, and M. L. N. Rao) (also Chaired a session)

Exploration of Biological Processes through Chemical Sciences, UGC Sponsored National Level Seminar, Department of Chemistry and Department of Zoology, Narasinha Dutt College, Howrah (December 07-08, 2011) (December 08, 2011)

National Symposium on “New Horizons in Chemistry” (International Year of Chemistry – 2011) Department of Chemistry, Indian Institute of Technology Bombay, Mumbai (October 03, 2011)

National Seminar (International Year of Chemistry: Chemistry in our lives) under the thrust area “Design, Synthesis, Interaction, Chemical and Biochemical Activities of Different Functional Molecules” on the occasion of the 150th Birth Anniversary of Acharya Prafulla Chandra Ray, Department of Chemistry, The University of Burdwan (March 15-17, 2011) (March 15, 2011)

Celebration of the 150th Birth Anniversary of Acharya Prafulla Chandra Ray and the International Year of Chemistry, “Frontiers in Synthetic and Bioorganic Chemistry 2011, Indian Institute of Science Education and Research (IISER) Kolkata, Mohanpur Campus (March 13, 2011)

One-Day Seminar, Department of Chemistry, University of Delhi, Delhi (March 05, 2011)

“Emerging Trends in Chemical Sciences (ECTS-2011)” Department of Chemistry, Faculty of Science, Banaras Hindu University (February 19, 2011)

13th CRSI National Symposium in Chemistry and 5th CRSI-RSC Symposium in Chemistry, National Institute of Science Education and Research (NISER), Bhubaneswar (February 04-06, 2011)

Workshop on “Frontiers in Bioinorganic Chemistry”, Centre for Bioinorganic Chemistry, School of Chemistry, Bharathidasan University, Tiruchirapalli, (February 25-27, 2010) (February 26, 2010)

National Seminar on “Contemporary Research in Material Science and Chemical Biology” (January 31-February 2, 2010), Department of Chemistry, University of Allahabad, Allahabad, (February 01, 2010)

Workshop for ‘College Chemistry Students and Teachers’, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore and Foundation for Capacity Building in Science (FCBS), Trivandrum (October 29-31, 2009)

Symposium – VII on ‘Current Trends of Chemical Research’, Chemical Research Society of India (Kolkata Chapter), Narendrapur Ramakrishna Mission, Kolkata (August 08, 2009)

Discussion Meeting on ‘Crystal Engineering and Noncovalent interactions: Contemporary Themes and Futuristic Developments’ Orange County, Coorg (February 22-25, 2009)

National Symposium on Modern Trends in Inorganic Chemistry (MTIC-XII), Indian Institute of Technology Madras, Madras (December 06-08, 2007)

Department of Science & Technology (DST) – Sponsored Winter School in Bioinorganic Chemistry, Department of Chemistry, Indian Institute of Technology Bombay, Mumbai (November 26, 2007)

National Convention of Chemistry Teachers and National Conference on *Chemistry Vision 2020*, Department of Chemistry, Hislop College, Nagpur (October 28, 2007)

Third Symposium on Advances in Bioinorganic Chemistry (SABIC-2004) in Conjunction with Second Asian Biological Inorganic Chemistry Conference (AsBIC-II), Goa; organized by Tata Institute of Fundamental Research, Mumbai (December 05-10, 2004)

Indo-French Seminar on Structure and Function of Metalloenzymes, Goa; organized by Indo French Centre for the Promotion of Advances Research, New Delhi (IFCPAR), Centre Franco-Indien Pour La Promotion de La Recherche Avanchee (CEFIPRA) and Tata Institute of Fundamental Research, Mumbai (December 03-05, 2004)

One Day Colloquium on Inorganic Chemistry, Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Kolkata (November 04, 2003)

Mid-Year Meeting of Indian Academy of Sciences, Bangalore (July 05-06, 2002)

National Seminar on “Teaching Chemistry”, Department of Chemistry, Presidency College, Kolkata (December 14, 2002)

UGC Sponsored Seminar on “Emerging Trends in Chemistry in the New Millennium”, Department of Chemistry, University of North Bengal (September 06-07, 2001)

3rd National Symposium in Chemistry, Panjab University, Chandigarh (February 02-04, 2001)

Indo-French Workshop on Current Trends in Molecular Magnetism, Jawaharlal Nehru Centre for Advanced Scientific Research, Indian Institute of Science, Bangalore (December 04-08, 2000)

International Symposium on Advances in Bioinorganic Chemistry, Tata Institute of Fundamental Research, Mumbai (November 20-24, 2000)



One Day Symposium in Chemistry, Department of Chemistry, Indian Institute of Technology Kharagpur (August 11, 2000)

Fifth IUPAC International Symposium on Bioorganic Chemistry, National Chemical Laboratory, Pune (January 30 – February 04, 2000)

National Symposium on Modern Trends in Inorganic Chemistry, Indian Institute of Science, Bangalore (January 18-20, 2000)

National Symposium in Chemistry, Indian Institute of Science, Bangalore (January 27-30, 1999)

Symposium on Advances in Bioinorganic Chemistry, Tata Institute of Fundamental Research, Mumbai (October 07-11, 1996)

National Symposium on Perspectives of Inorganic Chemistry, Indian Association for the Cultivation of Science, Calcutta (December 21-22, 1995)

National Symposium on Modern Trends in Inorganic Chemistry, School of Chemistry, University of Hyderabad, Hyderabad (August 17-19, 1995)

Fifth National Symposium on Bioorganic Chemistry, Shivaji University, Kolhapur and Indian Society of Bio-organic Chemists (February 24-25, 1995)

Symposium to Commemorate the 150th Years of the Royal Society of Chemistry (East India Section) “Chemistry at the Turn of the Century”, Indian Association for the Cultivation of Science, Calcutta (December 05-07, 1991)

National Symposium on Modern Trends in Inorganic Chemistry, Central Salt & Marine Chemicals Research Institute, Bhavnagar (October 21-23, 1991)

Department of Science & Technology (DST) – Sponsored Workshop on Bioinorganic Chemistry, Indian Institute of Technology Madras, Madras (December 09-15, 1990)

National Symposium on Modern Trends in Inorganic Chemistry, Indian Institute of Technology Madras, Madras (January 04-06, 1988)

### **Abroad**

“ZiNG Conference on Bioinorganic Chemistry”, Lanzarote, Spain (February 19-22, 2013)

“International Conference on Coordination Chemistry (ICCC40)”, Valencia, Spain (September 09-13, 2012)

“International Conference on Coordination Chemistry (ICCC39)”, Adelaide, Australia (July 25-30, 2010)

“European Biological Inorganic Chemistry (EUROBIC10)” Conference, Thessaloniki, Greece (June 22-26, 2010)

“The 4th Asian Biological Inorganic Chemistry Conference (AsBIC-IV)”, Jeju, Korea (November 10-13, 2008)

“International Conference on Coordination Chemistry (ICCC38)”, Jerusalem, Israel (July 20-25, 2008)

“International Conference on Biological Inorganic Chemistry (ICBIC 13)”, Vienna, Austria (July 15-20, 2007)

“The 3rd Asian Biological Inorganic Chemistry Conference (AsBIC-III)”, Nanjing, China (October 31 – November 03, 2006)

“International Conference on Coordination Chemistry (ICCC37)”, Cape Town, South Africa (August 13-18, 2006)

“Crystal Engineering Discussion 2004: New Trends in Crystal Engineering”, University of Nottingham, UK; Invited to prepare a paper for publication in *CrystEngComm* (September 08-10, 2004)

“International Conference on Coordination Chemistry (ICCC36), Merida, Mexico (July 18-23, 2004)

227th American Chemical Society National Meeting in Anaheim, CA, as part of the Symposium on ‘Non-Heme Iron Chemistry in Biology’ (March 28 – April 1, 2004)

Singapore International Chemical Conference II: Frontiers in Chemical Design and Synthesis”, Singapore (December 18-20, 2002)

216th American Chemical Society National Meeting in Boston, Massachusetts, as part of the Symposium on “Multinuclear Enzymes in Oxygen Metabolism” (August 23-27, 1998)

Member of the Official Indian delegation of the Indo-Russian Symposium on Structural Inorganic Chemistry and Organometallic Chemistry, Moscow – Nizhny Novgorod, Russia (September 24 – October 5, 1993)

205th American Chemical Society National Meeting in Denver, Colorado, as part of the Minisymposium: Advances in Bioinorganic-II (March 28 – April 2, 1993)

**Conferences/Symposia/ Workshops Attended:**  
**In India**

International Meeting on Chemical Biology – 2013 (May 26-28, 2013), IISER Pune (May 26, 2013)

National Policy Dialogue on University Rankings, Research Evaluation and Research Funding – Planning Commission/MHRD/British Council/Times Higher Education and Thomas Reuters, Hotel Le Meridien, New Delhi, May 23, 2013

AICTE-CII University-Industry Congress 2012, Eastern Region Conclave - Special address to showcase IISER Kolkata, Indian Association for the Cultivation of Science, Kolkata, July 31, 2012

1<sup>st</sup> Meeting of DST-Ramanujan Fellows, Indian Institute of Science Education and Research Pune (IISER Pune), Merriott Hotel and Convention Centre, Pune, May 04-06, 2012

Foundation Day: CSIR – Indian Institute of Chemical Biology, Kolkata (Speech as Guest-in-Chief), April 02, 2012

One-day Brain Storming workshop on Fostering Innovation in an Academic Environment – initiative of MHRD/UGC, Indian Institute of Technology Bombay, March 01, 2012

Education Roundable in Delhi – State Government of Victoria Australia, February 12, 2012

14th Chemical Research Society of India National Symposium in Chemistry (NSC-14), CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram & Indian Institute of Science Education and Research, Thiruvananthapuram (IISER-TVM), February 03-05, 2012) (Chaired a session)

J-NOST Conference, Indian Institute of Science Education and Research (IISER) Mohali (December 15-18, 2011) (December 15, 2011) (Chaired a session)

3rd Asian Coordination Chemistry Conference (ACCC-3), India Habitat Centre, New Delhi (October 17-20, 2011) (Chaired a session)

12th Chemical Research Society of India National Symposium in Chemistry (NSC-12): Indian Institute of Chemical Technology, Hyderabad (February 05- 07, 2010)

International Symposium on Frontiers in Inorganic Chemistry (FIC-2010), Indian Association for the Cultivation of Science, Kolkata (December 11-13, 2010)

Modern Trends in Inorganic Chemistry, Indian Institute of Science, Bangalore (December 05-07, 2009)

11th Chemical Research Society of India National Symposium in Chemistry (NSC-11), National Chemical Laboratory, Pune (February 05-07, 2009)

Singapore-India Collaborative and Co-operative Chemistry Symposium – III, Department of Chemistry, Indian Institute of Technology Kanpur, Kanpur (December 16-17, 2004)

Symposium on Recent Trends in Photochemical Sciences, Regional Research Laboratory, Trivandrum (January 08-10, 2001) (Chaired a session)

Discussion Meeting: From Homogeneous to Heterogeneous Catalysis, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore (January 27-29, 1992).

### **Abroad**

Celebration of 275<sup>th</sup> Anniversary of Georg-August-Universität Göttingen, Göttingen, May 29-31, 2012

“International Conference on Biological Inorganic Chemistry-12”, University of Michigan, Ann Arbor, USA (July 31 – August 5, 2005)

### **Special Visits Abroad:**

In response to the invitations by the Max Planck Society, Germany all five Directors of IISERs at Pune, Kolkata, Mohali, Bhopal and Thiruvananthapuram visited Max Planck Institutes (MPIs) at Müich, Göttingen and Berlin for collaboration on exchange of students and scientists, joint workshops and Max Planck partner groups between the IISERs and the Max Planck Society (November 25-31, 2012)

**List of Publications (h-index 30) (in reverse chronological order):**

(128) A. K. Sharma, F. Lloret, and R. N. Mukherjee, “Phenolate- and Acetate (Both  $\mu_2$ -1,1 and  $\mu_2$ -1,3 Modes)-Bridged Linear  $\text{Co}^{\text{II}}_3$  and  $\text{Co}^{\text{II}}_2\text{Mn}^{\text{II}}$  Trimers: Magnetostructural Studies”, *Inorg. Chem.* **2013**, *52*, 4825-4833.

(127) A. Rajput and R. N. Mukherjee, “Coordination Chemistry with Pyridine/Pyrazine Amide Ligands. Some Noteworthy Results”, *Coord. Chem. Rev.* **2013**, *257*, 350-368 (Edward Solomon Invitation Issue).

(126) S. Mandal, J. Mukherjee, F. Lloret, and R. N. Mukherjee, “Modeling Tyrosinase and Catecholase Activity Using New *m*-Xylyl- Based Ligands with Bidentate Alkylamine Terminal Coordination”, *Inorg. Chem.* **2012**, *51*, 13148-13161.

(125) H. Arora, S. K. Barman, F. Lloret, and R. N. Mukherjee, “Isostructural Dinuclear Phenoxo-/Acetato-Bridged Manganese(II), Cobalt(II), and Zinc(II) Complexes with Labile Sites: Kinetics of Transesterification of 2-Hydroxypropyl-*p*-nitrophenylphosphate”, *Inorg. Chem.* **2012**, *51*, 5539-5553.

(124) S. Pandey, P. P. Das, A. K. Singh, and R. N. Mukherjee, “Cobalt(II), Nickel(II) and Copper(II) complexes of a Hexadentate Pyridine Amide Ligand. Effect of Donor Atom (Ether vs. Thioether) on Coordination Geometry, Spin-State of Cobalt and  $\text{M}^{\text{III}}-\text{M}^{\text{II}}$  redox potential”, *Dalton Trans.* **2011**, *40*, 10758–10768 (Special Issue: Dalton Transactions 40th Anniversary).

(123) H. Arora, J. Cano, F. Lloret, and R. N. Mukherjee, “Unprecedented Heptacopper(II) Cluster with Body-Centred Anti-Prismatic Topology. Structure, Magnetism and Density Functional Study”, *Dalton Trans.* **2011**, *40*, 10055–10062.

(122) S. Javed, V. Balamurugan, W. Jacob, A. K. Sharma, and R. N. Mukherjee, “Discrete monomeric and chloride-bridged dimeric and 1D coordination polymeric mercury(II) complexes of a class of pyridyl-pyrazole ligands with variable denticity and flexibility”, *Indian J. Chem. Sec.*, **2011**, *50A*, 1248–1256 (Special Issue Dedicated to 150th Birth Anniversary of Acharya Prafulla Chandra Ray)

(121) A. K. Sharma, A. De, V. Balamurugan, and R. N. Mukherjee, “Conformational Flexibility of 2,6-Bis(pyrazol-1-ylmethyl)pyridine ( $\text{L}^5$ ) in  $[(\text{L}^5)\text{Co}^{\text{II}}(\text{H}_2\text{O})_3]\text{Cl}_2$  and  $[(\text{L}^5)\text{Ni}^{\text{II}}(\text{H}_2\text{O})_2\text{Cl}]\text{Cl}\cdot\text{H}_2\text{O}$ . Molecular Structures and Non-covalent Interactions”, *Inorg. Chim. Acta* **2011**, *372*, 327–332. (Special Issue Dedicated to Professor S. S. Krishnamurthy on the occasion of his 70th birthday)

(120) A. Mukherjee and R. N. Mukherjee, “Bidentate Coordination of a Potentially Tridentate Ligand. A Mononuclear Four-Coordinate Ni(II) Complex Supported by Two *o*-Iminobenzosemiquinonato Units”, *Indian J. Chem.* **2011**, *50A*, 484–490. (Special Issue on Bioinorganic Chemistry: Dedicated to Professor S. Mitra on the occasion of his 70th birthday)

(119) A. K. Sharma, S. Biswas, S. K. Barman, and R. N. Mukherjee, “Azo-Containing Pyridine Amide Ligand. A Six-Coordinate Nickel(II) Complex and Its One-Electron Oxidized Species: Structure and Properties”, *Inorg. Chim. Acta* **2010**, 363, 2720–2727. (Special Issue Dedicated to Professor Animesh Chakravorty on the occasion of his 75th birthday)

(118) H. Arora and R. N. Mukherjee, “Coordination Polymers using (2-Pyridyl)alkylamine-appended Carboxylates: Magnetic Properties”, *New J. Chem.* **2010**, 34, 2357–2365 (**Invited Perspective Article**). Themed Issue: Coordination Polymers: Structure and Function (Editor: K. Biradha)

(117) H. Mishra and R. N. Mukherjee, “[ $(\eta^6\text{-C}_6\text{H}_6)\text{Ru}^{\text{II}}(\text{L})(\text{Cl}/\text{N}_3/\text{CN}/\text{CH}_3\text{CN})$ ] $^{+2+}$  Complexes of Non-Planar Pyrazolylmethylpyridine Ligands: Formation of Helices Due to C–H $\cdots$ X (X = Cl, N) Interaction”, *J. Organomet. Chem.* **2010**, 695, 1753–1760.

(116) A. Mukherjee, F. Lloret, and R. N. Mukherjee, “Diphenoxo-Bridged  $\text{Co}^{\text{II}}$  and  $\text{Zn}^{\text{II}}$  Complexes of Tripodal  $\text{N}_2\text{O}_2$  Ligands: Stabilization of  $\text{M}^{\text{II}}$ -Coordinated Phenoxyl Radical Species”, *Eur. J. Inorg. Chem.* **2010**, 1032–1042.

(115) H. Arora, F. Lloret, and R. N. Mukherjee, “Molecular Squares of  $\text{Ni}^{\text{II}}$  and  $\text{Cu}^{\text{II}}$ : Ferromagnetic Exchange Interaction Mediated by Syn–Anti Carboxylate–Bridging”, *Dalton Trans.* **2009**, 9759–9769.

(114) V. Mishra, H. Mishra, R. N. Mukherjee, E. Codjovi, J. Linares, J.-F. Létard, C. Desplanches, C. Baldé, C. Enachescu, and F. Varret, “Spin-transition in  $[\text{Fe}^{\text{II}}(\text{L}^5)_2][\text{ClO}_4]_2$  [ $\text{L}^5 = 2\text{-}[3\text{-}(2'\text{-pyridyl})\text{pyrazol-1-ylmethyl}]\text{-}(1\text{-methylimidazole})$ ]: A Further Example of Coexistence of Features Typical for Disorder and Cooperativity”, *Dalton Trans.* **2009**, 7462–7472.

(113) S. Mandal, V. Balamurugan, F. Lloret, and R. N. Mukherjee, “Syntheses, X-ray Structures, and Physicochemical Properties of Phenoxo-Bridged Dinuclear Nickel(II) Complexes: Kinetics of Transesterification of 2-Hydroxypropyl-*p*-nitrophenylphosphate”, *Inorg. Chem.* **2009**, 48, 7544–7556.

(112) H. Arora, F. Lloret, and R. N. Mukherjee, “One-Dimensional Coordination Polymers of  $\text{Mn}^{\text{II}}$ ,  $\text{Cu}^{\text{II}}$ , and  $\text{Zn}^{\text{II}}$  Supported by Carboxylate-Appended (2-Pyridyl)alkylamine Ligands. Structure and Magnetism”, *Eur. J. Inorg. Chem.* **2009**, 3317–3325.

(111) V. Mishra, H. Mishra, and R. N. Mukherjee, “Generation and Properties of  $\text{Co}^{\text{I}}/\text{Ni}^{\text{I}}$  Species Supported by a Tetradentate Pyridylpyrazole Ligand: Crystal Structures of  $\text{Co}^{\text{III}}$ -Dialkyl Complexes”, *Eur. J. Inorg. Chem.* **2009**, 2973–2980.

(110) H. Mishra, V. Mishra, F. Varret, R. N. Mukherjee, C. Balde, C. Desplanches, and J.-F. Létard, “Opposite Effects of Interactions and Disorder on the Switching Properties of the Spin Transition Compound  $[\text{Fe}^{\text{II}}(\text{L})_2][\text{ClO}_4]_2 \cdot \text{C}_7\text{H}_8$ ”, *Polyhedron* **2009**, 28, 1678–1683.

(109) H. Arora, F. Lloret, and R. N. Mukherjee, “One-Dimensional  $\text{Co}^{\text{II}}$  and  $\text{Cu}^{\text{II}}$  Coordination Polymers and Discrete  $\text{Cu}^{\text{II}}_4$  Complex of Carboxylate-Appended (2-Pyridyl)alkylamine Ligands: Spin-Canting and Anti-/Ferromagnetic Coupling”, *Inorg. Chem.* **2009**, 48, 1158–1167.

(108) W. Jacob, H. Mishra, S. Pandey, F. Lloret, and R. N. Mukherjee, “Six-coordinate  $\text{Co}^{\text{III}}$  and Four-Coordinate  $\text{M}^{\text{II}}$  ( $\text{M} = \text{Co}, \text{Zn}$ ) Mixed-Valence Dimers Supported by a Deprotonated Pyridine Amide Ligand: Magnetism of a  $\text{Co}^{\text{III}}\text{Co}^{\text{II}}$  Complex and C-H $\cdots$ O/Cl/Br Interactions”, *New J. Chem* **2009**, 33, 893–901.

(107) H. Mishra, A. K. Patra, and R. N. Mukherjee, “Relative Stability of Half-Sandwich  $\eta^6$ -Benzene Ru(II) Complexes of Tridentate (2-Pyridyl)alkylamine Ligands of Varying Chelate Ring-Size: Nucleophilic Addition of Hydride ion onto the Benzene Ring”, *Inorg. Chim. Acta* **2009**, 362, 483–490.

(106) V. Mishra, R. N. Mukherjee, J. Linares, E. Codjovi, F. Varret, and M. Lawson-Daku, “Spin-Transition in Nearly Cubic Site in  $[\text{Fe}^{\text{II}}(\text{L})_3][\text{PF}_6]_2$ ”, *Hyperfine Interactions* **2009**, 188, 71–78.

(105) A. K. Sharma, A. De, and R. N. Mukherjee, “Design, Structure, and Properties of Functional Metal-Ligand Inorganic Modules”, (Special thematic issue on *Crystal Engineering: Structure, Design and Function*), *Curr. Opin. Solid State and Mat. Sci.* **2009**, 13, 54–67.

(104) S. Mandal, F. Lloret, and R. N. Mukherjee, “Discrete and 1D Coordination Polymeric Chloro-Bridged Copper(II) Dimers Exhibiting Ferro- and Antiferromagnetic Exchange Coupling: Magneto-Structural Correlations and Non-Covalent Interactions”, *Inorg. Chim. Acta* **2009**, 362, 27–37.

(103) V. Mishra, R. N. Mukherjee, J. Linares, C. Balde, C. Desplanches, J.-F. Létard, E. Collet, L. Toupet, M. Castro, and F. Varret, “Temperature-dependent interactions and Disorder in the Spin-Transition Solid  $[\text{Fe}^{\text{II}}(\text{L})_2][\text{ClO}_4]_2 \cdot \text{C}_7\text{H}_8$  Through Structural, Calorimetric, Magnetic, Photo-magnetic, and Diffuse Reflectance Investigations” *Inorg. Chem.* **2008**, 47, 7577–7587.

(102) A. Mukherjee, F. Lloret, and R. N. Mukherjee, “Synthesis and Properties of Diphenoxo-Bridged  $\text{Co}^{\text{II}}$ ,  $\text{Ni}^{\text{II}}$ ,  $\text{Cu}^{\text{II}}$ , and  $\text{Zn}^{\text{II}}$  Complexes of a New Tripodal Ligand: Generation and Properties of  $\text{M}^{\text{II}}$ -Coordinated Phenoxyl Radical Species”, *Inorg. Chem.* **2008**, 47, 4471–4480.

- (101) A. K. Singh, W. Jacob, A. K. Boudalis, J.-P. Tuchagues, and R. N. Mukherjee, "A Tetragonal Core with Asymmetric Iron Environments Supported Solely by Bis( $\mu$ -OH){ $\mu$ -(O-H $\cdots$ O)} Bridging and Terminal Pyridine Amide (N, O) Coordination: A New Member of the Tetrairon(III) Family", *Eur. J. Inorg. Chem.* **2008**, 2820–2828.
- (100) A. K. Sharma and R. N. Mukherjee, "Synthesis and properties of (2-pyridyl)alkylamine- and (2-pyridyl)alkylamine-amide-coordinated copper(II) complexes. Structures and non-covalent interactions", *Inorg. Chim. Acta* **2008**, *361*, 2768–2776.
- (99) S. Mandal, A. De, and R. N. Mukherjee, "Reaction Between a Mononuclear Copper(I) Complex and Dioxygen Forms a {Cu<sup>III</sup><sub>2</sub>( $\mu$ -O)<sub>2</sub>}<sup>2+</sup> Core: Exogenous Substrate Reactivity", *Chemistry & Biodiversity*, **2008**, *5*, 1594–1608. [Invited Article: Special Issue on International Conference on Biological Inorganic Chemistry (ICBIC 13), Vienna, Austria]
- (98) W. Jacob and R. N. Mukherjee, "Coordination Polymers of Manganese(II) and Cobalt(II) of a Flexible Tetradentate Pyridine Amide Ligand: 1D Zigzag Network", *Inorg. Chim. Acta* **2008**, *361*, 1231–1238.
- (97) A. De, S. Mandal, and R. N. Mukherjee, "Modeling Tyrosinase Activity. Effect of ligand topology on aromatic ring hydroxylation: An Overview", *J. Inorg. Biochem.* **2008**, *102*, 1170–1189. [Invited Focused Review Article: Special Issue on International Conference on Biological Inorganic Chemistry (ICBIC 13), Vienna, Austria]
- (96) W. Jacob and R. N. Mukherjee, "Two-Dimensional Supramolecular Networks via C–H $\cdots$ Cl and N–H $\cdots$ Cl Interactions Utilizing Bidentate neutral Pyridine Amide Coordinated Mn<sup>II</sup>Cl<sub>2</sub> Tectons", *J. Chem. Sci.* **2008**, *120*, 447–453.
- (95) J. Astner, M. Weitzer, S. P. Foxon, S. Schindler, F. W. Heinemann, J. Mukherjee, R. Gupta, V. Mahadevan, and R. N. Mukherjee, "Syntheses, characterization, and reactivity of copper complexes with tridentate N-donor ligands", *Inorg. Chim. Acta* **2008**, *361*, 279–292.
- (94) A. K. Singh and R. N. Mukherjee, "Co<sup>II</sup> and Co<sup>III</sup> Complexes of Thioether-Containing Hexadentate Pyrazine Amide Ligands. Effect of Chelate Ring-Size on Base-induced Transformation of Cobalt(III)-Thioether Chelates: C–S Bond Cleavage and Cyclometalation Reaction", *Dalton Trans.* **2008**, 260–270. (Selected as Hot Article).
- (93) A. K. Sharma, F. Lloret, and R. N. Mukherjee, "Phenolate-and Acetate-Bridged (both  $\mu$ -1,1 and  $\mu$ -1,3 mode) Face-Shared Trioctahedral Linear Ni<sup>II</sup><sub>3</sub>, Ni<sup>II</sup><sub>2</sub>M<sup>II</sup> (M = Mn, Co) Complexes: Ferro- and Antiferromagnetic Coupling", *Inorg. Chem.* **2007**, *46*, 5128–5130.



- (92) A. K. Singh and R. N. Mukherjee, “Synthesis and crystal structure of a copper(II) complex of deprotonated N,N'-bis(2-pyridinecarboxamide)-2,2'-biphenyl: Comparative redox study of CuN<sub>4</sub> pyridine amide complexes”, *Inorg. Chim. Acta* **2007**, *360*, 3456–3461.
- (91) H. Mishra and R. N. Mukherjee, “Half-sandwich  $\eta^6$ -benzene Ru(II) complexes of phenolate-based pyridylalkylamine/alkylamine ligands: synthesis, structure, and stabilization of one-electron oxidized species”, *J. Organomet. Chem.* **2007**, *692*, 3248–3260. (**Invited Article:** Special Issue on One-Electron Organometallic Reactivity; Editor: R. Poli).
- (90) V. Mishra, F. Lloret, and R. N. Mukherjee, “Bis- $\mu$ -Pyrazolate-Bridged Dinickel(II) and Dicopper(II) Complexes: An Example of Stereoelectronic Preference of Metal Ions and Stabilization of Mixed-Valence Ni<sup>III</sup>Ni<sup>II</sup> Species”, *Eur. J. Inorg. Chem.* **2007**, 2161–2170.
- (89) V. Mishra, S. Singh, and R. N. Mukherjee, “Synthesis, Structure and Properties of a Monomeric Copper(II) Complex with a Multidentate Pyridylpyrazole Ligand”, *Indian J. Chem.* **2007**, *46A*, 1573–1578.
- (88) V. Balamurugan, J. Mukherjee, M. S. Hundal, and R. N. Mukherjee, “Supramolecular Architectures with Ladder and Lamellar Topologies Using Metal-Ligand Coordination Units via C-H  $\cdots$  Cl and O-H  $\cdots$  Cl Hydrogen-Bonding”, *Struct. Chem.* **2007**, *18*, 133–144. (**Invited Article:** Special Issue on Structural Chemistry in India; Editor: R. J. Butcher).
- (87) W. Jacob and R. N. Mukherjee, “Synthesis, Structure and Properties of Monomeric Fe(II), Co(II), and Ni(II) Complexes of Neutral N-(aryl)-2-pyridinecarboxamides”, *Inorg. Chim. Acta* **2006**, *359*, 4565–4573.
- (86) V. Mishra, F. Lloret, and R. N. Mukherjee, “Coordination versatility of 1,3-bis[3-(2-pyridyl)pyrazol-1-yl]propane: Co(II) and Ni(II) complexes”, *Inorg. Chim. Acta* **2006**, *359*, 4053–4062.
- (85) S. Mandal and R. N. Mukherjee, “A new tyrosinase model with 1,3-bis[(2-dimethylaminoethyl)iminomethyl]benzene: binuclear copper(I) and phenoxo-/hydroxo-bridged dicopper(II) complexes”, *Inorg. Chim. Acta* **2006**, *359*, 4019–4026.
- (84) H. Mishra and R. N. Mukherjee, “Half-sandwich  $\eta^6$ -benzene Ru(II) complexes of pyridylpyrazole and pyridylimidazole ligands: synthesis, spectra, and structure”, *J. Organomet. Chem.* **2006**, *691*, 3545–3555.

- (83) J. Mukherjee and R. N. Mukherjee, "Reaction with dioxygen of a Cu(I) complex of 1-benzyl-[3-(2'-pyridyl)]pyrazole triggers ethyl acetate hydrolysis: acetato-/pyrazolato-, dihydroxo- and diacetato-bridged Cu(II) complexes", *Dalton Trans.* **2006**, 1611–1621 (**Appeared as Cover Page Article: Issue #13**).
- (82) A. K. Singh and R. N. Mukherjee, "Bivalent and Trivalent Iron Complexes of Acyclic Hexadentate Ligands Providing Pyridyl/Pyrazine-Amide-Thioether Coordination", *Inorg. Chem.* **2005**, *44*, 5813–5819.
- (81) A. K. Singh and R. N. Mukherjee, "Structure and Properties of Bivalent Nickel and Copper Complexes with Pyrazine-Amide-Thioether Coordination: Stabilization of Trivalent Nickel", *Dalton Trans.* **2005**, 2886–2891.
- (80) J. Mukherjee, R. Gupta, T. Mallah, and R. N. Mukherjee, "A New ( $\mu_3$ -carbonato)-tricopper(II) Complex with Symmetry Related Equilateral Triangular Array of Metal Centers: Structure and Magnetism", *Inorg. Chim. Acta* **2005**, *358*, 2711–2717.
- (79) V. Balamurugan and R. N. Mukherjee, "Helical vs. Zigzag Coordination Polymer: Influence of Structural Preference of Metal-ion Coordination Geometry", *Inorg. Chim. Acta* **2005**, *359*, 1376–1382.
- (78) V. Balamurugan and R. N. Mukherjee, "Homochiral 1D-Helical Metal-Organic Frameworks from Achiral Components. Formation of Chiral Channel via C-H...Cl Interaction", *CrystEngComm* **2005**, *7*, 337–341.
- (77) J. Mukherjee, V. Balamurugan, M. S. Hundal, and R. N. Mukherjee, "Fixation of CO<sub>2</sub> in Air: Synthesis and Crystal Structure of a  $\mu_3$ -CO<sub>3</sub>-Bridged Tricopper(II) Compound", *J. Chem. Sci.* **2005**, *117*, 111–116.
- (76) C. Enachescu, J. Linares, F. Varret, K. E. Codjovi, S. G. Salunke, and R. N. Mukherjee, "Nonexponential Relaxation of the Metastable State of the Spin-Crossover System [Fe(L)<sub>2</sub>](ClO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O [L = 2,6-bis(pyrazol-1'-ylmethyl)pyridine]", *Inorg. Chem.* **2004**, *43*, 4880–4888.
- (75) S. P. Foxon, D. Utz, J. Astner, S. Schindler, F. Thaler, F. W. Heinemann, G. Liehr, J. Mukherjee, V. Balamurugan, D. Ghosh, and R. N. Mukherjee, "Reaction Behaviour of Copper(I) Complexes with *m*-Xylyl-based Ligands Towards Dioxygen", *Dalton Trans.* **2004**, 2321–2328.
- (74) V. Balamurugan, M. S. Hundal, and R. N. Mukherjee, "First Systematic Investigation of C–H...Cl Hydrogen Bonding Using Inorganic Supramolecular Synthons: Lamellar, Stitched Stair-Case, Linked-Ladder and Helical Structures", *Chem. Eur. J.* **2004**, *10*, 1683–1690.

(73) R. N. Mukherjee, Chapter on Copper in *Comprehensive Coordination Chemistry-II: From Biology to Nanotechnology*, Vol. 6 (Volume Editor: D. E. Fenton), Editors: J. A. McCleverty and T. J. Meyer, Elsevier/Pergamon, Amsterdam, **2004**, pp. 747–910.

(72) V. Balamurugan, W. Jacob, J. Mukherjee, and R. N. Mukherjee, “Designing Neutral Coordination Networks Using Inorganic Supramolecular Synthons: Combination of Coordination Chemistry and C-H ... Cl Hydrogen Bonding”, *CrystEngComm* **2004**, 6, 396–400.

(71) R. N. Mukherjee, “Bioinorganic Chemistry of Dinuclear Copper Proteins”, *Proc. Indian Natl. Sci. Acad., Part A, Physical Sciences*, **2004**, 70, 329–341. (Special Thematic Issue on Bioinorganic Chemistry; Guest Editor: R. N. Mukherjee).

(70) A. K. Singh, V. Balamurugan, and R. N. Mukherjee, “Synthesis and Characterization of Low-Spin and Cation Radical Complexes of Ruthenium(III) of a Tridentate Pyridine Bis-Amide Ligand”, *Inorg. Chem.* **2003**, 42, 6497–6502.

(69) J. Mukherjee, V. Balamurugan, R. Gupta, and R. N. Mukherjee, “Synthesis and properties of Fe<sup>III</sup> and Co<sup>III</sup> complexes: structures of [(L<sup>2</sup>)Fe(N<sub>3</sub>)<sub>3</sub>], [(L<sup>2</sup>)<sub>2</sub>Fe<sub>2</sub>(μ-O)-(μ-O<sub>2</sub>CMe)<sub>2</sub>][ClO<sub>4</sub>]<sub>2</sub>·2H<sub>2</sub>O and [(L<sup>2</sup>)<sub>2</sub>Co<sub>2</sub>(μ-OH)<sub>2</sub>(μ-O<sub>2</sub>CMe)][ClO<sub>4</sub>]<sub>3</sub>·MeCN [L<sup>2</sup> = methyl[2-(2-pyridyl)ethyl](2-pyridylmethyl)amine]”, *Dalton Trans.* **2003**, 3686–3692.

(68) S. Singh, V. Mishra, J. Mukherjee, N. Seethalekshmi, and R. N. Mukherjee, “Synthesis and Properties of [M<sup>II</sup>(L<sup>6</sup>)<sub>2</sub>][ClO<sub>4</sub>]<sub>2</sub> (M = Fe, Co and Ni): Structures of Co and Ni Complexes and Spin-State Transition by Fe Complex (L<sup>6</sup> = 2-[3-(2'-pyridyl)pyrazol-1-ylmethyl]pyridine)”, *Dalton Trans.* **2003**, 3392–3397.

(67) D. Utz, F. W. Heinemann, J. Mukherjee, and R. N. Mukherjee, "Synthesis and Structural Characterization of a New Tetranuclear Macrocyclic Copper(I) Complex", *Z. Anorg. Allg. Chem.* **2003**, 629, 2211–2215.

(66) R. N. Mukherjee, “The Bioinorganic Chemistry of Copper”, *Indian J. Chem.* **2003**, 42A, 2175–2184. (Special Issue on Modern Inorganic Chemistry; Guest Editor and Co-editors: A. Chakravorty; P. Banerjee and S. Goswami).

(65) R. Gupta, T. K. Lal, and R. N. Mukherjee, “Synthesis and Properties of [Cu(L<sup>5</sup>)<sub>2</sub>]-[ClO<sub>4</sub>]<sub>2</sub>·H<sub>2</sub>O having Square Planar and Pseudo-Octahedral Geometries in the Same Unit Cell, and Anion-bound Complexes [Cu(L<sup>5</sup>)<sub>2</sub>X][ClO<sub>4</sub>] (X = Cl<sup>-</sup>, NCS<sup>-</sup>, N<sub>3</sub><sup>-</sup>) [L<sup>5</sup> = 2-(3,5-dimethylpyrazol-1-ylmethyl)pyridine]”, *Polyhedron* **2002**, 21, 1245–1253.

(64) J. Mukherjee and R. N. Mukherjee, “Catecholase Activity of Dinuclear Copper(II) Complexes with Variable Endogenous and Exogenous Bridge”, *Inorg. Chim. Acta* (Special Issue Dedicated to Prof. K. Wieghardt) **2002**, 337, 429–438.

- (63) R. Gupta and R. N. Mukherjee, “Five-Coordinate Anion –Bound Copper(II) Complexes with Non-Planar Tridentate Ligands. X-ray Structures of  $[\text{Cu}(\text{L}^3)(\text{N}_3)_2]$  and  $[\text{Cu}(\text{L}^3)(\text{ONO})(\text{OCIO}_3)]$  ( $\text{L}^3 = 2,6\text{-bis}(3,5\text{-dimethyl-pyrazol-1-ylmethyl})\text{pyridine}$ )”, *Polyhedron*, **2001**, 20, 2545–2549.
- (62) S. Mahapatra, R. J. Butcher, and R. N. Mukherjee, “Crystal Structure of  $[\text{Fe}(\text{L}^1)_2](\text{ClO}_4)_2 \cdot \text{H}_2\text{O}$  having  $\text{Fe}^{\text{II}}\text{N}_6$  coordination [ $\text{L}^1 = 2,6\text{-bis}(\text{pyrazol-1-ylmethyl})\text{pyridine}$ ]”, *Indian J. Chem.* **2001**, 40A, 973–975.
- (61) R. Gupta and R. N. Mukherjee, “Catalytic Oxidation of Hindered Phenols by a Copper(I) Complex and Dioxygen”, *Tetrahedron Letters* **2000**, 41, 7763–7767.
- (60) R. Gupta, R. Hotchandani, and R. N. Mukherjee, “Magnetic Interactions in Dicopper(II) Complexes of a New Endogenous Alkoxo Bridging Ligand with Exogenous Pyrazolate, Azide and Acetate Bridges. X-ray Structure of  $[\text{Cu}_2\text{L}(\mu\text{-C}_3\text{H}_3\text{N}_2)(\text{OCIO}_3)(\text{H}_2\text{O})](\text{ClO}_4) \cdot \text{H}_2\text{O}$  ( $\text{HL} = 1,3\text{-bis}[N\text{-methyl-}N\text{-(2-pyridylethyl)amino]propan-2-ol}$ )”, *Polyhedron* **2000**, 19, 1429–1435.
- (59) A. K. Patra, M. Ray, and R. N. Mukherjee, “Magneto-structural Studies of Monohydroxo-Bridged Dicopper(II) Complexes  $\text{M}[\text{Cu}_2\text{L}_2(\text{OH})] \cdot 2\text{H}_2\text{O}$  [ $\text{M} = \text{Na}^+/\text{K}^+$  **1** and **2**;  $\text{H}_2\text{L} = 2,6\text{-bis}[N\text{-(phenyl)carbamoyl}] \text{pyridine}$ ]. Effect of Cu-OH-Cu Bridge Angle on Antiferromagnetic Coupling”, *Polyhedron* **2000**, 19, 1423–1428.
- (58) R. Gupta and R. N. Mukherjee, “Synthesis and Properties of  $[\text{CuLCl}_2]$  and  $[\text{CuL}(\text{N}_3)(\text{OCIO}_3)] \cdot \text{H}_2\text{O}$  ( $\text{L} = \alpha, \alpha'\text{-Bis}(\text{pyrazolyl})\text{-}m\text{-xylene}$ ). X-ray Structure of  $[\text{CuLCl}_2]_2$ ”, *Polyhedron* **2000**, 19, 719–724.
- (57) A. K. Patra, M. Ray, and R. N. Mukherjee, “Synthesis and Characterization of Pyridine Amide Cation Radical Complexes of Iron: Stabilization Due to Coordination with Low-Spin Iron(III) Center”, *Inorg. Chem.* **2000**, 39, 652–657.
- (56) R. Gupta, D. Ghosh, and R. N. Mukherjee, “Modelling Tyrosinase Monooxygenase Activity. Activation of Dioxygen by Dicopper(I) Complexes and Characterization of Dicopper(II) Complexes”, *Proc. Indian Acad. Sci. (Chem. Sci.)* **2000**, 112, 179–186 (Special Issue on Modern Trends in Inorganic Chemistry).
- (55) R. N. Mukherjee, “Pyrazole-Containing Chelating Ligands: Molecular Structural Aspects”, *Coord. Chem. Rev.* **2000**, 203, 151–218.
- (54) R. Gupta, S. Mukherjee, and R. N. Mukherjee, “Synthesis, magnetism,  $^1\text{H}$  NMR and Redox Activity of Dicopper(II) Complexes having a Discrete  $\{\text{Cu}_2(\mu\text{-phenoxide})_2\}^{2+}$  Unit Supported by a Non-Macrocyclic Ligand Environment. X-Ray Structure of  $[\text{Cu}_2(\text{L})_2(\text{OCIO}_3)_2]$  [ $\text{L} = 4\text{-Methyl-}2,6\text{-bis}(\text{pyrazol-1-ylmethyl})\text{phenol}$ ]”, *J. Chem. Soc., Dalton Trans.*, **1999**, 4025–4030.

(53) A. K. Patra, M. Ray, and R. N. Mukherjee, “Synthesis, Crystal Structure and Properties of Bipyramidal  $[M(L^5)_2(H_2O)] \cdot H_2O$  Complexes [ $M = \text{Cobalt(II)} (S = 3/2)$  and  $\text{Copper(II)} (S = 1/2)$ ;  $HL^5 = N\text{-}2\text{-Chloro-}6\text{-methylphenyl-pyridine-}2\text{-carboxamide}$ ]”, *J. Chem. Soc., Dalton Trans.* **1999**, 2461–2466.

(52) T. K. Lal, R. Gupta, S. Mahapatra and R. N. Mukherjee, “Synthesis, Spectra and Redox Properties of Mononuclear Five-Coordinate Copper(II) Complexes with Non-Communicable Pyrazole/Pyridyl Containing Ligands. X-ray Structure of  $[2,6\text{-bis}(3,5\text{-dimethylpyrazol-}1\text{-ylmethyl)pyridine}][2\text{-}(3,5\text{-dimethylpyrazol-}1\text{-ylmethyl)pyridine}]\text{-copper(II) Perchlorate}$ ”, *Polyhedron* **1999**, 18, 1743–1750.

(51) A. K. Patra and R. N. Mukherjee, “Bivalent, Trivalent, and Tetravalent Nickel Complexes with a Common Tridentate Deprotonated Pyridine Bis-Amide Ligand. Molecular Structures of Nickel(II) and Nickel(IV) and Redox Activity”, *Inorg. Chem.* **1999**, 38, 1388–1393.

(50) A. K. Patra and R. N. Mukherjee, “Synthesis and Properties of a Monomeric and a  $\mu$ -Oxo-Bridged Dimeric Iron(III) Complex with a Tetradentate Pyridine Amide In-Plane Ligand. X-ray Structure of  $[\text{Fe}(\text{bpc})\text{Cl}(\text{DMF})][\text{H}_2\text{bpc} = 4,5\text{-Dichloro-}1,2\text{-bis(pyridine-}2\text{-carboxamido)benzene}]$ ”, *Polyhedron*, **1999**, 18, 1317–1322.

(49) R. N. Mukherjee, “Coordination Chemistry of Life Processes: Bioinorganic Chemistry”, *Resonance* **1999**, 4, 53–62.

(48) D. Ghosh and R. N. Mukherjee, “Modeling Tyrosinase Monooxygenase Activity. Spectroscopic and Magnetic Investigations of Products Due to Reactions between Copper(I) Complexes of Xylyl-Based Dinucleating Ligands and Dioxygen: Aromatic Ring Hydroxylation and Irreversible Oxidation Products”, *Inorg. Chem.* **1998**, 37, 6597–6605.

(47) T. K. Lal and R. N. Mukherjee, “Modeling the Oxygen-Evolving Complex of Photosystem II. Synthesis, Redox Properties, and Core Interconversion Studies of Dimanganese Complexes Having  $\{\text{Mn}^{\text{III}}_2(\mu\text{-O})(\mu\text{-OAc})_2\}^{2+}$ ,  $\{\text{Mn}^{\text{III}}\text{Mn}^{\text{IV}}(\mu\text{-O})_2(\mu\text{-OAc})\}^{2+}$  and  $\{\text{Mn}^{\text{IV}}_2(\mu\text{-O})_2(\mu\text{-OAc})\}^{3+}$  Cores with MeL as a Terminal Ligand: A New Asymmetric Mixed-Valence Core”, *Inorg. Chem.* **1998**, 37, 2373–2382.

(46) T. K. Lal, J. F. Richardson, M. S. Mashuta, R. M. Buchanan, and R. N. Mukherjee, “Synthesis, X-ray Structure, and Properties of a New Nitrite-Bound Copper(II) Complex with 2-(3,5-dimethyl-pyrazol-1-ylmethyl)pyridine in a  $\text{CuN}_4(\text{O})$  Coordination”, *Polyhedron* **1997**, 16, 4331–4336.

(45) T. K. Lal and R. N. Mukherjee, “New Cobalt(II) and Nickel(II) Complexes with 2-(pyrazol-1-ylmethyl)pyridine. Stereochemical Variations in Cobalt(II) Complexes and X-ray Crystal Structure of Bis[2-(pyrazol-1-ylmethyl)pyridine]dichloro-cobalt(II) Tetrahydrate”, *Polyhedron* **1997**, 16, 3577–3583.

- (44) M. Ray, D. Ghosh, Z. Shirin, and R. N. Mukherjee, “Highly Stabilized Low-Spin Iron(III) and Cobalt(III) Complexes of a Tridentate Bis-Amide Ligand 2,6-Bis(*N*-phenylcarbamoyl)pyridine. Novel Nonmacrocyclic Tetraamido-N Coordination and Two Unusually Short Metal-Pyridine Bonds”, *Inorg. Chem.* **1997**, *36*, 3568–3572.
- (43) R. N. Mukherjee, “Binuclear Iron, Manganese, and Copper Centers in Biology: Synthetic Analogue Approach”, *Current Science* **1997**, *72*, 802–807.
- (42) R. Gupta and R. N. Mukherjee, “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”, *Inorg. Chim. Acta* (Special Issue Dedicated to Prof. R. H. Holm) **1997**, *263*, 133–137.
- (41) Z. Shirin, A. Pramanik, P. Ghosh, and R. N. Mukherjee, “Stable Cyclohexadienyl Complexes of Ruthenium in a Piano Stool Geometry Containing a Tridentate Nitrogen Donor Ligand. First Structural Characterization of the ( $\eta^5$ -Cyanocyclohexadienyl)ruthenium(II) Complex and Spectroelectrochemical Correlation”, *Inorg. Chem.* **1996**, *35*, 3431–3433.
- (40) D. Ghosh, T. K. Lal, and R. N. Mukherjee, “Dicopper Complexes of Relevance to Tyrosinase Modelling: An Overview”, *Proc. Indian Acad. Sci. (Chem. Sci.)* **1996**, *108*, 251–256 (Special Issue on Modern Trends in Inorganic Chemistry).
- (39) D. Ghosh, T. K. Lal, S. Ghosh, and R. N. Mukherjee, “Aromatic Hydroxylation in a New Tyrosinase Model System and Formation of a Novel Bis( $\mu$ -hydroxo)-dicopper(II) Complex Due to Unprecedented Ligand Coupling Reaction”, *Chem. Commun.* **1996**, 13–14.
- (38) S. Mahapatra, T. K. Lal, and R. N. Mukherjee, “Synthesis, Characterization, and Novel Redox Properties of a New Triply Bridged Dimanganese(III) Complex with a  $\{\text{Mn}^{\text{III}}_2(\mu\text{-O})(\mu\text{-O}_2\text{CCH}_3)_2\}^{2+}$  Core”, *Inorg. Chem.* **1994**, *33*, 1579–1580.
- (37) M. Ray, R. N. Mukherjee, J. F. Richardson, M. S. Mashuta and R. M. Buchanan, “Control of the Stereochemistry of Four-Coordinate Copper(II) Complexes by Pyridinecarboxamide Ligands: Crystal Structure, Spectral, and Redox Properties”, *J. Chem. Soc., Dalton Trans.* **1994**, 965–969.
- (36) Z. Shirin, R. N. Mukherjee, J. F. Richardson, and R. M. Buchanan, “New Piano-Stool Ruthenium(II) Complexes of Benzene and Bidentate/Tridentate Nitrogen-Donor Ligands: Synthesis and Characterization”, *J. Chem. Soc., Dalton Trans.* **1994**, 465–469.

- (35) S. Mahapatra, R. J. Butcher, and R. N. Mukherjee, "Observation of the Longest Fe-N(pyridine) Bond in an Fe<sup>II</sup>N<sub>6</sub> Chromophore. Crystal Structure and <sup>1</sup>H Nuclear Magnetic Resonance Studies of [FeL<sub>2</sub>]<sup>2+</sup>[ClO<sub>4</sub>]<sub>2</sub> [ L<sup>2</sup> = 2-(3,5-dimethylpyrazol-1-ylmethyl)-6-(pyrazol-1-ylmethyl)pyridine]", *J. Chem. Soc., Dalton Trans.* **1993**, 3723–3726.
- (34) M. Ray, R. N. Mukherjee, J. F. Richardson and R. M. Buchanan, "Spin-State Regulation of Iron(III) Centres by Axial Ligands with Tetradentate Bis(picolinamide) In-plane Ligands", *J. Chem. Soc., Dalton Trans.* **1993**, 2451–2457.
- (33) S. Mahapatra and R. N. Mukherjee, "Singlet ↔ Quintet Transition in a Six-Coordinate Iron(II) Complex of a Tridentate Bis(pyrazolyl)pyridine Ligand", *Polyhedron* **1993**, 12, 1603–1606.
- (32) S. Mahapatra, T. K. Lal, and R. N. Mukherjee, "Highest Co<sup>III</sup>-Co<sup>II</sup> Redox Potential in Co<sup>II</sup>N<sub>6</sub> (S = 3/2) Complexes of Tridentate Ligands. Predominance of Steric over Electronic Effect", *Polyhedron* **1993**, 12, 1477–1481.
- (31) S. Mahapatra and R. N. Mukherjee, "A New Mixed-Ligand Ruthenium(II) Complex with RuN<sub>6</sub> Coordination Sphere having Weak π-Accepting Ligand", *Indian J. Chem.* **1993**, 32A, 428–430.
- (30) S. Mahapatra, P. Das, and R. N. Mukherjee, "A New Mixed-Valence Binuclear Complex Containing the [Mn<sup>IV</sup>(μ-O)<sub>2</sub>(μ-O<sub>2</sub>CMe)Mn<sup>III,2+</sup>]<sup>+</sup> Core: Synthesis, Magnetism, Electron Paramagnetic Resonance and Redox Properties", *J. Chem. Soc., Dalton Trans.* **1993**, 217–220.
- (29) S. Mahapatra and R. N. Mukherjee, "Synthesis and Spectral Characterization of Mono and Bis Chelates of Nickel(II) (S = 1) with Tridentate Pyridylpyrazole Ligands", *Indian J. Chem.* **1993**, 32A, 64–66.
- (28) K. Ramesh, T. K. Lal, and R. N. Mukherjee, "Synthesis, Spectra, and Electrochemistry of Non-Oxo Vanadium(IV) Bischelates of Tridentate Schiff Base Ligands. Magnetism of Bis[N-(2-hydroxyphenyl)-5-Methylsalicylideniminato]-vanadium(IV)", *Polyhedron* **1992**, 11, 3083–3089.
- (27) S. Mahapatra, N. Gupta, and R. N. Mukherjee, "New Triply Bridged Diiron(III) Complexes with [Fe<sub>2</sub>(μ-O)(μ-X)<sub>2</sub>]<sup>2+</sup> Cores (X = MeCO<sub>2</sub>, PhCO<sub>2</sub> or (PhO)<sub>2</sub>PO<sub>2</sub>)", *J. Chem. Soc., Dalton Trans.* **1992**, 3041–3045.
- (26) M. Ray and R. N. Mukherjee, "Cobalt(III) Complexes Using In-Plane Tetradentate Pyridinecarboxamide ligands and Two Monodentate Axial Ligands: Spectro-electrochemical Correlation", *Polyhedron* **1992**, 11, 2929–2937.

- (25) Z. Shirin and R. N. Mukherjee, "Synthesis, Spectra, and Electrochemistry of Ruthenium(III) Complexes with Cage-Like Schiff Base Ligands", *Polyhedron* **1992**, *11*, 2625–2630.
- (24) S. Mahapatra and R. N. Mukherjee, "Synthesis, Spectroscopy, and Electrochemistry of Ruthenium(II) Complexes of Tridentate Pyridylpyrazole Ligands. Predominance of Electronic over Steric Effects", *J. Chem. Soc., Dalton Trans.* **1992**, 2337–2341.
- (23) S. Mahapatra, D. Bhuniya, and R. N. Mukherjee, "Consequences of Electronic/Steric Effect on Monochelate and Bischelate Manganese(II) ( $S = 5/2$ ) Complexes Using Pyridinylpyrazole Ligands. Synthesis and Electrochemistry", *Polyhedron* **1992**, *11*, 2045–2049.
- (22) N. Gupta, S. Mukerjee, S. Mahapatra, M. Ray, and R. N. Mukherjee, "Triply Bridged Diruthenium Complexes with  $[\text{Ru}^{\text{III}}_2(\mu\text{-O})(\mu\text{-O}_2\text{CCH}_3)_2]^{2+}$  and  $[\text{Ru}^{\text{IV}}\text{Ru}^{\text{III}}(\mu\text{-O})(\mu\text{-O}_2\text{CCH}_3)_2]^{3+}$  Cores: Synthesis, Spectra, and Electrochemistry", *Inorg. Chem.* **1992**, *31*, 139–141.
- (21) K. Ramesh and R. N. Mukherjee, "Trends in the Spectral and Redox Potential Data of Mononuclear Iron(III) ( $S = 5/2$ ) Phenolate Complexes", *J. Chem. Soc., Dalton Trans.* **1992**, 83–89.
- (20) K. Ramesh and R. N. Mukherjee, "Vanadium(III) Complexes with  $\text{VN}_3\text{O}_3$  Coordination by Sexidentate Schiff Base Ligands: Synthesis, Spectra and Redox Activity", *J. Chem. Soc., Dalton Trans.* **1991**, 3259–3262.
- (19) K. Ramesh and R. N. Mukherjee, "Manganese(III) Complexes with  $\text{Mn}^{\text{III}}\text{N}_3\text{O}_3$  ( $S = 2$ ) Coordination by Sexidentate Schiff Base Ligands: Synthesis, Spectra and Electrochemistry", *J. Chem. Soc., Dalton Trans.* **1991**, 2917–2920.
- (18) S. Mahapatra, N. Gupta, and R. N. Mukherjee, "Consequences of Incremental Steric Crowding at the  $\text{Fe}^{\text{II}}\text{N}_6$  ( $S = 2$ ) Coordination Sphere. Synthesis, Spectra and Electrochemistry", *J. Chem. Soc., Dalton Trans.* **1991**, 2911–2915.
- (17) K. Ramesh and R. N. Mukherjee, "A Low Spin Iron(II) Diimine Complex of a Schiff Base Ligand: Charge Transfer Transition and Electrochemistry", *Indian J. Chem.* **1991**, *30A*, 1057–1059.
- (16) M. Ray, S. Mukerjee, and R. N. Mukherjee, "Manganese(III) Complexes of 1,2-Bis(2-pyridinecarboxamido)benzene: Synthesis, Spectra and Electrochemistry", *J. Chem. Soc., Dalton Trans.* **1990**, 3635–3638.



- (15) R. N. Mukherjee, A. J. Abrahamson, G. S. Patterson, T. D. P. Stack, and R. H. Holm, "A New Class of (*N,N'*Bis(salicylideneamino)-ethanato)iron(II) Complexes: Five-Coordinate  $[\text{Fe}^{\text{II}}(\text{salen})\text{L}]^-$ . Preparation, Properties, and Mechanism of Electron-Transfer Reactions", *Inorg. Chem.* **1988**, 27, 2137-2144.
- (14) R. N. Mukherjee, T. D. P. Stack, and R. H. Holm, "Angle Dependence of the Properties of the  $[\text{Fe}_2\text{X}]$  Bridge Unit (X = O, S): Structures, Antiferromagnetic Coupling and Properties in Solution", *J. Am. Chem. Soc.* **1988**, 110, 1850-1861.
- (13) B. K. Ghosh, R. N. Mukherjee, and A. Chakravorty, "Osmium Azo Oxime Chemistry. Facial Tris Chelate and Trinuclear OsMOs Species", *Inorg. Chem.* **1987**, 26, 1946-1950.
- (12) S. Bhattacharya, R. N. Mukherjee, and A. Chakravorty, "A Nickel(III) Complex with a  $\text{NiO}_6$  Coordination Sphere", *Inorg. Chem.* **1986**, 25, 3448-3452.
- (11) R. N. Mukherjee, Ch. Pulla Rao, and R. H. Holm, "Solution Chemistry of Ethane-1,2-dithiolate Complexes: Equilibria and Electron-Transfer Reactions", *Inorg. Chem.* **1986**, 25, 2979-2989.
- (10) S. Pal, R. N. Mukherjee, M. Thomas, L. R. Falvello, and A. Chakravorty, "Trinucleation of Arylazo Oxime Ensembles. Linear  $\text{Fe}^{\text{II}}\text{Ni}^{\text{II}}\text{Fe}^{\text{II}}$  and Related Systems", *Inorg. Chem.* **1986**, 25, 200-207.
- (9) R. N. Mukherjee, S. Goswami, and A. Chakravorty, "Binding of a Nickel(IV) Complex in a Polyion-Modified Graphite Electrode: Electroprotic Equilibria", *Inorg. Chem.* **1985**, 24, 4528-4533.
- (8) S. Pal, T. Melton, R. N. Mukherjee, A. R. Chakravarty. M. Thomas, L. R. Falvello, and A. Chakravorty, "Trinucleation of Arylazo Oxime Ensembles: Structure and Reactions of Novel Linear  $\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}\text{Fe}^{\text{II}}$  Species", *Inorg. Chem.* **1985**, 24, 1250-1257.
- (7) R. N. Mukherjee and A. Chakravorty, "Ligand Redistribution in Triazene-1-Oxide Complexes: A Voltammetric Study", *Inorg. Chem.* **1984**, 23, 4753-4755.
- (6) S. Bhattacharya, A. Chakravorty, F. A. Cotton, R. N. Mukherjee, and W. Schwotzer, "Ruthenium(IV) in Centrosymmetric  $\text{RuX}_2\text{N}_2\text{O}_2$  Coordination: Synthesis, Structure and Redox Properties of Dihalobis(triazene-1-oxidato)ruthenium Species", *Inorg. Chem.* **1984**, 23, 1709-1713.

- (5) S. Goswami, R. N. Mukherjee, and A. Chakravorty, "Reactions of Bidentate Ligands with Diaquobis[2-(aryloxy)pyridine]ruthenium(II) Cation. Stereoretentive Synthesis of Tris Chelates and Their Characterization: Metal Oxidation, Ligand Reduction and Spectroelectrochemical Correlation", *Inorg. Chem.* **1983**, 22, 2825–2832
- (4) R. N. Mukherjee and A. Chakravorty, "Triazene-1-Oxide Complexes of Bis(2,2'-bipyridine)ruthenium-(II) and -(III). Synthesis, Spectra and Electrochemistry", *J. Chem. Soc., Dalton Trans.* **1983**, 2197–2203.
- (3) R. N. Mukherjee and A. Chakravorty, "New Tris Complexes of Ruthenium(III). Synthesis, Spectra and Redox Activity", *J. Chem. Soc., Dalton Trans.* **1983**, 955–959.
- (2) R. N. Mukherjee, O. A. Rajan, and A. Chakravorty, "Electron Transfer in Groups of Iron, Cobalt and Copper Triazene-1-Oxides: Hammett Correlation, Ligand Redistribution and Crystal Field Effects", *Inorg. Chem.* **1982**, 21, 785–790.
- (1) R. N. Mukherjee and A. Chakravorty, "Identification of a One-Electron Redox Process in Fe(III), Co(III) and Cu(II) Complexes of 1-Ethyl-3-phenyltriazene-1-Oxide", *Indian J. Chem., Sec. A.* **1981**, 20, 73–74.

**Popular Level Article:**

- (1) R. N. Mukherjee, "A Dicopper(II) Complex Hydrolyzes the Phosphate Diester Bond!" *Resonance* **1996**, 1, 58–60.

## Symposia Proceedings:

### In India

(47) A. Rajput, D. Dhar, Priyabrata Ghana, S. K. Barman, and R. N. Mukherjee, "Coordination Chemistry with Metal-Coordinated Radical Species", Asian Coordination Chemistry Conference (ACCC-3), Delhi, (October 17-20, 2011)  
(Poster Presentation by A. Rajput)

(46) S. K. Barman, A. K. Sharma, and R. N. Mukherjee, "Chemistry with Non-innocent Ligands. Molecular and Electronic Structure, and Properties", International Symposium on Frontiers in Inorganic Chemistry (FIC-2010), Indian Association for the Cultivation of Science, Kolkata, Book of Abstracts (P-84), (December 11-13, 2010)  
(Poster Presentation by S. K. Barman)

(45) P. P. Das, S. Pandey, A. K. Singh, and R. N. Mukherjee, "Chemistry with Multidentate Pyridine Amide Ligands: Structures and Properties", International Symposium on Frontiers in Inorganic Chemistry (FIC-2010), Indian Association for the Cultivation of Science, Kolkata, Book of Abstracts (P-52), (December 11-13, 2010)  
(Poster Presentation by P. P. Das)

(44) R. Singh and R. N. Mukherjee, "Reactivity Studies of a Dihydroxo-bridged Dicopper(II) Complex of Tridentate Ligand Methyl[2-(2-pyridyl)ethyl]- (2-pyridylmethyl)amine", Symposium on Modern Trends in Inorganic Chemistry (MTIC-XIII), Department of Inorganic & Physical Chemistry, Indian Institute of Science, Bangalore, Book of Abstracts (p-188), (December 07-10, 2009)  
(Poster Presented by R. Singh)

(43) S. K. Barman, S. Mandal, H. Arora and R. N. Mukherjee, "Kinetics of Transesterification of 2-Hydroxypropyl-*p*-nitrophenylphosphate using Phenoxo-bridged Dinuclear Co<sup>II</sup>, Ni<sup>II</sup>, and Zn<sup>II</sup> Complexes", Symposium on Modern Trends in Inorganic Chemistry (MTIC-XIII), Department of Inorganic & Physical Chemistry, Indian Institute of Science, Bangalore, Book of Abstracts (p-109), (December 07-10, 2009)  
(Oral Presentation by S. K. Barman)

(42) R. Singh and R. N. Mukherjee, "Kinetics of Transesterification of 2-Hydroxypropyl-*p*-nitrophenylphosphate by a Dimer-of-Dimer Type Tetranuclear Copper(II) Complex", Symposium on Advanced Biological Inorganic Chemistry (SaBIC-2009), Tata Institute of Fundamental Research, Mumbai, Book of Abstracts (P-235), (November 02-07, 2009)  
(Poster Presented by R. Singh)

(41) W. Jacob, H. Mishra, S. Pandey, F. Lloret, and R. N. Mukherjee, “Six-coordinate  $\text{Co}^{\text{III}}$  and Four-Coordinate  $\text{M}^{\text{II}}$  ( $\text{M} = \text{Co}, \text{Zn}$ ) Mixed-Valence Dimers: Magnetism of a  $\text{Co}^{\text{III}}\text{Co}^{\text{II}}$  Complex and C–H $\cdots$ O/Cl/Br Interactions”, 11th National Symposium in Chemistry (NSC-11), National Chemical Laboratory, Pune, Book of Abstracts (P-49), (February 06-08, 2009)

(Poster Presentation by S. Pandey)

(40) S. Pandey and R. N. Mukherjee, “Ferrocene-based Anion Receptors: A Voltammetric Study”, Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology Madras, Chennai, Book of Abstracts (P-D3-201), (December 06-08, 2007)

(Poster Presentation by S. Pandey)

(39) A. De and R. N. Mukherjee, “Cyano-bridged Polynuclear Complexes: Structure and Magnetism”, Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology Madras, Madras, Book of Abstracts (P-D1-015), (December 06-08, 2007)

(Poster Presentation by A. De)

(38) A. Mukherjee, F. Lloret, and R. N. Mukherjee, “Diphenoxo-bridged Dimers: Stabilization of Phenoxy Radical”, 9th National Symposium in Chemistry (NSC-9), University of Delhi, Delhi, Book of Abstracts (P-142), (February 01-04, 2007)

(Poster Presentation by A. Mukherjee)

(37) S. Mandal and R. N. Mukherjee, “Demonstration of Aromatic Ring Hydroxylation (Tyrosinase-like Activity) Using New *m*-Xylyl-Based Schiff Base Ligand: Copper-Oxygen Intermediate Due to Reaction between Bis( $\mu$ -hydroxo)dicopper(II) and Hydrogen Peroxide”, 8th National Symposium in Chemistry (NSC-8), Indian Institute of Technology Bombay, Mumbai, Book of Abstracts (P-9), (February 03-05, 2006)

(Poster Presentation by S. Mandal)

(36) A. K. Singh and R. N. Mukherjee, “Co(II) and Co(III) Complexes of Thioether-Containing Pyrazine Amide Ligands: Effect of Ligand Ring Size on Metal Oxidation State”, 8th National Symposium in Chemistry (NSC-8), Indian Institute of Technology Bombay, Mumbai, Book of Abstracts (P-27), (February 03-05, 2006)

(Poster Presentation by A. K. Singh)

(35) H. Arora and R. N. Mukherjee, “Mononuclear and Dinuclear Oxo-bridged  $\text{Fe}^{\text{III}}$  Complexes of Phenol-based Dinucleating Compartmental Ligands”, Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology Delhi, New Delhi, Book of Abstracts (p-80), (December 08-10, 2005)

(Poster Presentation by H. Arora)

(34) V. Mishra and R. N. Mukherjee, “Singlet  $\rightleftharpoons$  Quintet Spin Transition in Six-Coordinate Iron(II) Complexes of Tridentate Pyridyl/Pyrazole/Imidazole-based Ligands”, Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology Delhi, New Delhi, Book of Abstracts (p-79), December 08-10, 2005)

(Poster Presentation by V. Mishra)

(33) A. K. Singh and R. N. Mukherjee, “Co(II) and Co(III) Complexes of Thioether-containing Pyrazine Amide Ligands. Effect of Ligand Ring Size on Metal Oxidation State”, 8th National Symposium in Chemistry (NSC-8), Indian Institute of Technology Bombay, Mumbai, Book of Abstracts (p-27), (February 03-05, 2006)

(Poster Presented by A. K. Singh)

(32) S. Mandal and R. N. Mukherjee, “Demonstration of Aromatic Ring Hydroxylation (Tyrosinase-like Activity) Using New *m*-Xylyl-Based Schiff Base Ligand: Copper-Oxygen Intermediate Due to Reaction between Bis( $\mu$ -hydroxo)dicopper(II) and Hydrogen Peroxide”, 8th National Symposium in Chemistry (NSC-8), Indian Institute of Technology Bombay, Mumbai, Book of Abstracts (p-9), (February 03-05, 2006)

(Poster Presentation by S. Mandal)

(31) H. Mishra, A. K. Patra, and R. N. Mukherjee, “Half-Sandwich ( $\eta^6$ -C<sub>6</sub>H<sub>6</sub>)Ru<sup>II</sup> Complexes with Evidence for C-H  $\cdots$  Cl Interaction and Structure of a Cyclohexadienyl Derivative”, 7th National Symposium in Chemistry (NSC-7), Indian Association for the Cultivation of Science, Kolkata, Book of Abstracts (p-367), (February 04-06, 2005)

(Poster Presentation by H. Mishra)

(30) A. K. Singh and R. N. Mukherjee, “Transition Metal Complexes of Pyridine/Pyrazine-2-carboxamide-based Hexadentate Ligands with Amido-Pyridyl/Pyrazine-Thioether Coordination”, 7th National Symposium in Chemistry (NSC-7), Indian Association for the Cultivation of Science, Kolkata, Book of Abstracts (p-366), (February 04-06, 2005)

(Poster Presentation by A. K. Singh)

(29) V. Mishra, J. Mukherjee, V. Balamurugan, and R. N. Mukherjee, “Spin-State Transition in Fe(II), Inorganic Crystal Engineering *via* C-H  $\cdots$  Cl Hydrogen Bonding and Mononuclear/Di- $\mu$ -pyrazolato-bridged Cu(II) Complexes with Pyridyl/Pyrazole-based Chelating Ligands”, 6th National Symposium in Chemistry (NSC-6), Indian Institute of Technology Kanpur, Book of Abstracts (p-129), (February 06-08, 2004)

(Poster Presentation by V. Mishra)

(28) J. Mukherjee, V. Balamurugan, and R. N. Mukherjee, “Triply-bridged Diiron(III), Dicobalt(III) and Phenoxo-bridged Dinickel(II) Complexes: A Bioinorganic Perspective”, 6th National Symposium in Chemistry (NSC-6), Indian Institute of Technology Kanpur, Book of Abstracts (P-4), (February 06-08, 2004), (Poster Presentation by J. Mukherjee)

(27) A. K. Singh and R. N. Mukherjee, “Synthesis and Characterization of Low-Spin and Cation Radical Complexes of Ruthenium(III) of a Tridentate Pyridine Bis-Amide Ligand”, Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai, Book of Abstracts (P-25), (December 14-17, 2003) (Poster Presentation by A. K. Singh)

(26) V. Balamurugan, M. S. Hundal and R. N. Mukherjee, “Non-Charge-Assisted Inorganic Crystal Engineering via Intra- and Intermolecular C-H  $\cdots$  Cl<sub>2</sub>-M<sup>II</sup> Hydrogen Bonds”, Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai, Book of Abstracts (P-25), (December 14-17, 2003), (Poster Presentation by V. Balamurugan)

(25) V. Balamurugan, J. Mukherjee and R. N. Mukherjee, “Reactions of Copper(I) Complexes of Designed Ligands with Dioxygen from the Standpoint of Modeling Tyrosinase/Catechol Oxidase Activity”, 5th National Symposium in Chemistry (NSC-5), Central Leather Research Institute, Chennai, Book of Abstracts (p-22), (February 07-09, 2003) (Poster Presentation by V. Balamurugan)

(24) J. Mukherjee and R. N. Mukherjee, “Bioinorganic Studies on Catechol Oxidase”, Modern Trends in Inorganic Chemistry, Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Kolkata (125 years of IACS and 50 years of the Department), Book of Abstracts (P-25), (December 12-14, 2001) (Poster Presentation by J. Mukherjee)

(23) R. N. Mukherjee, “Chemistry of Dinuclear Metal Complexes from Bioinorganic Perspectives” National Seminar on ‘Emerging Trends in Chemistry in New Millennium’ Department of Chemistry, University of North Bengal, Darjeeling (September 06-07, 2001) (Oral Presentation)

(22) R. N. Mukherjee, “Copper(I)-Iodosylbenzene Reactivity: Bioinorganic and Environmental Perspectives”, 3<sup>rd</sup> National Symposium in Chemistry (NSC-3), Department of Chemistry & Centre of Advanced Studies in Chemistry, Panjab University, Chandigarh, Book of Abstracts (p-22), (February 02-04, 2001), (Oral Presentation)

(21) R. N. Mukherjee, “Magnetic Exchange Interactions in Ligand-Bridged Dimetal Systems: Some Recent Results”, Indo French Workshop on Current Trends in Molecular Magnetism, Book of Abstracts, Jawaharlal Nehru Centre for Advanced Scientific Research, Indian Institute of Science, Bangalore (December 04-08, 2000)  
(Oral Presentation)

(20) R. N. Mukherjee, “Reactivity of Copper(I) Complexes with Dioxygen/Iodosylbenzene from Bioinorganic Perspectives: Aromatic Ring Hydroxylation and Exogenous Substrate Reactivity”, One Day Symposium in Chemistry, Book of Abstracts, (p.10), Department of Chemistry, Indian Institute of Technology, Kharagpur, (August 11, 2000)  
(Oral Presentation)

(19) R. N. Mukherjee and R. Gupta, “Modeling Tyrosinase Activity: Dioxygen Activation by Copper(I) Complexes: Exogenous Substrate Oxidation”, Fifth IUPAC International Symposium on Bio-Organic Chemistry, Book of Abstracts (IL-28), National Chemical Laboratory, Pune, (January 30 – February 04, 2000)  
(Oral Presentation by R. N. Mukherjee)

(18) R. N. Mukherjee, “Modeling Tyrosinase Monooxygenase Activity. Synthesis, Structure and Reactivity of Dicopper Complexes”, Symposium on Frontiers in Inorganic Chemistry, Department of Inorganic and Physical Chemistry and Jawaharlal Nehru Center for Advanced Scientific Research, Indian Institute of Science, Bangalore, Book of Abstracts, L-4 (January 18-20, 2000),  
(Oral Presentation)

(17) R. N. Mukherjee, “Dicopper Complexes of Relevance to Tyrosinase Modelling”, Twelfth Annual National Symposium, Department of Chemistry, Panjab University, Chandigarh, Book of Abstracts (March 13, 1999)  
(Oral Presentation)

(16) R. N. Mukherjee, “Modelling the Oxygen-Evolving Complex of Photosystem II and Manganese-Containing Catalase”, First National Symposium in Chemistry, Indian Institute of Science, Bangalore, Book of Abstracts, IL-11 (January 27-30, 1999)  
(Oral Presentation).

(15) R. Gupta, S. Mukhopadhyay and R. N. Mukherjee, “Nonheme Iron Centers in Oxygen Activation”, Symposium on Frontiers in Inorganic Chemistry, Department of Inorganic and Physical Chemistry and Jawaharlal Nehru Center for Advanced Scientific Research, Indian Institute of Science, Bangalore, Book of Abstracts, P-8 (July 08-10, 1998)  
(Poster Presentation by R. Gupta)

(14) A. K. Patra, M. Ray and R. N. Mukherjee, “Mononuclear Iron(III), Cobalt(III), Nickel(II) and Nickel(IV) and Dinuclear Copper(II) Complexes of a Tridentate Bis-Amide Ligand. Novel Structural Features and Properties”, National Seminar on Coordination Chemistry, Department of Chemistry, Utkal University, Vani Vihar, Bhubaneswar, Book of Abstracts (March 30-31, 1998)

(Poster Presentation by R. N. Mukherjee)

(13) S. Mukhopadhyay, R. Gupta and R. N. Mukherjee, “Oxo-Bridged Motifs in Caged Environment”, Symposium on Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology, Kanpur, Book of Abstracts, P-58 (December 04-06, 1997)

(Poster Presentation by R. Gupta)

(12) A. K. Patra, M. Ray and R. N. Mukherjee, “Supramolecular Array of Cation-Anion Interactions. The Use of Dianionic 2,6-Bis(*N*-phenylcarbamoyl)pyridine as an Assembler of Anionic Single Hydroxo-Bridged Dicopper(II) Motifs Bound to Distorted Tetrahedrally Coordinated Sodium Cations”, Symposium on Modern Trends in Inorganic Chemistry, Department of Chemistry, Indian Institute of Technology, Kanpur, Book of Abstracts, P-11 (December 04-06, 1997)

(Poster Presentation by A. K. Patra)

(11) R. N. Mukherjee, “Dicopper Complexes of Relevance to Biology”, Symposium on Advances in Bioinorganic Chemistry, Tata Institute of Fundamental Research, Mumbai, Book of Abstracts, L-5 (October 07-11, 1996)

(Oral Presentation)

(10) R. N. Mukherjee, “New Copper(II) Complexes of Interesting Structural Varieties Using Bidentate and Tridentate Pyrazole/Pyridine-Containing Ligands”, National Symposium on Perspectives of Inorganic Chemistry, Department of Inorganic Chemistry, Indian Association for the Cultivation of Science, Calcutta, Book of Abstracts, L-14 (December 21-22, 1995)

(Oral Presentation)

(9) R. N. Mukherjee, “A Dicopper Chemistry with Nitrogen Donor Ligand: Inorganic and Bioinorganic Perspectives”, Symposium on Modern Trends in Inorganic Chemistry, School of Chemistry, University of Hyderabad, Hyderabad, Book of Abstracts, L-19 (August 17-19, 1995)

(Oral Presentation)

(8) R. N. Mukherjee, “Biomimetic Studies on Tyrosinase: Some Recent Results”, Fifth National Symposium on Bio-Organic Chemistry, Department of Chemistry, Shivaji University, Kolhapur, Book of Abstracts, OC-10 (February 24-25, 1995),

(Oral Presentation)



(7) Z. Shirin and R. N. Mukherjee, “New Piano-Stool Ruthenium(II) Complexes of  $\eta^6\text{-C}_6\text{H}_6$  and Bidentate/Tridentate Nitrogen Donor Ligands: Synthesis, Characterization and Reactivity”, Winter School-Cum-Workshop on Organometallic Chemistry, Department of Chemistry, Indian Institute of Technology, New Delhi, Book of Abstracts, PP-13 (December 06-08, 1993)  
(Poster Presentation by Z. Shirin)

(6) S. Mahapatra, T. K. Lal, and R. N. Mukherjee, “A Novel  $[\text{Mn}^{\text{III}}(\mu\text{-O})(\mu\text{-OH})(\mu\text{-OAc})\text{Mn}^{\text{III}}]^{2+}$  Core. Synthesis, Characterisation and Proton-Coupled Electron Transfer Properties”, Symposium on Modern Trends in Inorganic Chemistry, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, Book of Abstracts, P-51 (August 11-13, 1993)  
(Poster Presentation by R. N. Mukherjee)

(5) M. Ray and R. N. Mukherjee, “Chemistry of Transition Metal Complexes Using Pyridinecarboxamide Ligands: An Overview”, “Chemistry at the Turn of the Century”, Symposium to Commemorate the 150 Years of The Royal Society of Chemistry, The Royal Society of Chemistry – Eastern India Section, Calcutta, Book of Abstracts, IL-4 (December 05-07, 1991)  
(Poster Presentation by R. N. Mukherjee)

(4) R. N. Mukherjee and S. Mahapatra, “Tuning of Electronic/Steric Effect on Metal Coordination Chemistry”, Symposium on Modern Trends in Inorganic Chemistry, Central Salt & Marine Chemicals Research Institute, Bhavnagar, Book of Abstracts (October 21-23, 1991)  
(Oral Presentation by R. N. Mukherjee)

(3) R. N. Mukherjee and K. Ramesh, “Trends in the Spectral and Redox Potential Data of Mononuclear High-Spin Ferric Complexes: Spectroelectrochemical Correlation and Ligand Electrochemical Series”, Workshop on Bioinorganic Chemistry, Indian Institute of Technology, Chennai, Book of Abstracts, P-38 (December 09-15, 1990)  
(Poster Presentation by R. N. Mukherjee)

(2) R. N. Mukherjee, “ $\text{M}_2\text{O}(\text{O}_2\text{CR})_2$  Core (M = Fe and Ru(III)) Formation Using Tridentate  $\text{N}_3$  as Capping Ligands: Synthesis and Properties”, Workshop on Bioinorganic Chemistry, Indian Institute of Technology, Chennai, Book of Abstracts, L-24 (December 09-15, 1990)  
(Oral Presentation)

(1) M. Ray and R. N. Mukherjee, “Iron Complexes of the Bis-Amide Tetradentate Ligand. Preparation, Properties and Reactivity”, *Proc. Indian Acad. Sci. (Chem. Sci.)* **1990**, *102*, 442, Symposium on Modern Trends in Inorganic Chemistry”, Tata Institute of Fundamental Research, Mumbai (November 20 – 22, 1989)  
(Poster Presentation by R. N. Mukherjee)

## Abroad

(11) S. K. Barman, S. Mandal, H. Arora and R. N. Mukherjee, "Transesterification of 2-Hydroxypropyl-*p*-nitrophenylphosphate using Phenoxo-bridged Dinuclear Co<sup>II</sup>, Ni<sup>II</sup>, and Zn<sup>II</sup> Complexes", Asian Coordination Chemistry Conference (ACCC-2), Nanjing, China Book of Abstracts (p-293), (November 01-04, 2009) (Poster Presentation by S. K. Barman).

(10) A. K. Sharma, F. Lloret and R. N. Mukherjee, "Homo- and Hetero- Face-Shared Trioctahedral Linear Complexes: Syntheses, Structure and Magnetism", Asian Coordination Chemistry Conference (ACCC-1), Okazaki, Japan, Book of Abstracts (p-xxx), (July 29 –August 02, 2007) (Poster Presentation by A. K. Sharma) (**Best Poster Award**).

(9) S. Mandal, J. Mukherjee and R. N. Mukherjee, "Modeling of Tyrosinase and Catechol Oxidase Activity Using Designed Ligands: Some Recent Results", XIII International Conference on Biological Inorganic Chemistry, Vienna, Austria, Book of Abstracts (p-292), (July 15-20, 2007) (Poster Presentation by S. Mandal)

(8) H. Mishra and R. N. Mukherjee, "Half-Sandwich  $\eta^6$ -Benzene and  $\eta^5$ -Cyclohexadienyl Ruthenium(II) Complexes: Molecular Structures and Noncovalent Interactions" XXII International Conference on Organometallic Chemistry, Zaragoza, Spain, Book of Abstracts (p-329), (July 23-28, 2006) (Poster Presentation by H. Mishra)

(7) A. K. Singh and R. N. Mukherjee, "Bivalent and Trivalent Iron Complexes of varying Nuclearity with Pyridine Amide Ligands. Inorganic and Bioinorganic Perspectives", 2<sup>th</sup> International Conference on Bio-Inorganic Chemistry, Ann Arbor, Michigan, USA (July 31 – August 05, 2005) (Poster Presentation by A. K. Singh)

(6) B. C. Karthik and R. N. Mukherjee, "Hydrolysis of phosphodiester by Non-heme Bimetallic Complexes: Relevance to the Purple Acid Phosphatases", 227<sup>th</sup> American Chemical Society National Meeting, "Non-heme Iron Chemistry in Biology", Anaheim, California, USA (March 28 – April 01, 2004) (Oral Presentation by R. N. Mukherjee)

(5) R. N. Mukherjee, "Spin State Properties of Iron(III) Complexes of Deprotonated Ligands", Book of Abstracts (p.142), "Singapore International Chemical Conference II: Frontiers in Chemical Design and Synthesis", Singapore (December 18-20, 2002) (Oral Presentation)

(4) R. N. Mukherjee, R. Gupta, D. Ghosh and S. Mukhopadhyay “Effect of Reduced Coordination on Dicopper Complexes of *m*-Xylyl-Based Ligands: Relevance to Tyrosinase-like Activity”, Book of Abstracts (p. 295), “XXXIII International Conference on Coordination Chemistry “The Chemistry of Metal Ions in Everyday Life”, Florence, Italy (August 30-September 04, 1998)  
(Poster Presentation by R. N. Mukherjee)

(3) R. N. Mukherjee, R. Gupta and S. Mukhopadhyay, “Dimanganese Systems of Relevance to Photosystem II and Catalase-like Activity”, 216<sup>th</sup> American Chemical Society National Meeting, “Multinuclear Enzymes in Oxygen Metabolism”, Boston, Massachusetts, USA (August 23-27, 1998)  
(Oral Presentation by R. N. Mukherjee)

(2) R. N. Mukherjee, “Oxo-/Hydroxo-/Acetato-Bridged Dimanganese Complexes: Syntheses, Properties, and Reactivity”, 205<sup>th</sup> American Chemical Society National Meeting: Minisymposium: Advances in Bioinorganic-II, Denver, Colorado, USA (March 28-April 02, 1993)  
(Oral Presentation by R. N. Mukherjee)

(1) R. H. Holm, M. J. Carney, J. A. Kovacs, R. N. Mukherjee and T. D. P. Stack, “Recent Results on Biologically Relevant Iron-Sulfur Clusters”, 194<sup>th</sup> American Chemical Society National Meeting, Symposium on Metal Clusters in Proteins. Metal-Sulfur Clusters, American Chemical Society Meeting, New Orleans, USA (August 30 – September 04, 1987)  
(Oral Presentation by R. H. Holm)