CURRICULUM VITAE

DR. GOUTAM KUMAR PATRA

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Deptt.of Chemistry
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GURU GHASIDAS UNIVERSITY, (A Central University)
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Professional Experience:
Associate Prof., Dept. of Chemistry Guru Ghasidas Viswavidyalaya
Asst Prof., Department of Chemistry, Vijoygarh Jyotish Ray College, Jadavpur, Kolkata – 32; from December 2003.
Editorial board member, Global Journal of Inorganic Chemistry, Simplex academic publishers (http://www.simplex-academic-publishers.com/editorial/gjic)

Awards and Honours

- INSA Research Award**-2012**
- Visiting Fellow, JNCASR, Jakkur, Bangalore**, 2010-11.**
- Summer Research Fellow at Indian Institute of Science, Bangalore**, (May-July, 2009)**
- Visiting Researcher, Maxplank Institute of Bio-Inorganic Chemistry, **2007**
- *BOYSCAST* Scholarship **2006**, from Department of Science and Technolology
- NSF Fellow, USA-**2003**
- USA-Israil binational fellowship-**2000**
- CSIR Fellowship-**1997**

AREAS OF RESEARCH INTEREST:
Photophysics, redox activity and aza macrocyclic chemistry, crystal engineering, porphyrin chemistry and supramolecular chemistry, peptide nucleic acid (PNA) synthesis of monomers and polymers and transition metal ions incorporation in PNA, radical chemistry.

Ph.D: Indian Association For The Cultivation of Sciences, Jadavpur

Thesis Title: "Studies on some metal complexes of several new aza macrocycles and related ligands"

Number of funded Research projects as PI :

Agency	Project Sanction No.	Amount
University Grants Commission	PSW-076/05-06	**Rs. 87,500/-**
Department of Science and Technology	SR/FTP/CS-14/2006	**Rs. 15,90,000/-**
University Grants Commission	Postdoctoral research award	**Rs. 3,00,000/-**
Dept. of Biotechnology	BT/PR13754/MED/29/181/2010	**Rs. 45,00,000/-**

PUBLICATIONS

Thesis works

1. D. A. Tocher, G. K. Patra, J. P. Naskar and D. Datta
   First example of a carboxylato bridged Zn(II) polymer. Synthesis and structure of $[Zn(dien)(CH_3CO_2)]_n(ClO_4)_n$ (dien ≡ diethylenetriamine)
   Indian J. Chem. 38A (1999) 870-873

2. N. A. Lewis, G. K. Patra, S. Hati and D. Datta
   Use of barbituric acid as a "padlock" to generate azamacrocyclic complexes of Ni(II) containing fused aromatic rings
   Indian J. Chem. 38A (1999) 985-990

3. N. A. Lewis, S. Ray, G. K. Patra and D. Datta
   Template synthesis and characterisation of a copper(II) complex of a half-cyclised tetraaza ligand derived from 1,8-diaminonaphthalene, nitroethane and formaldehyde
   Indian J. Chem. 38A (1999) 991-996

4. M. Zimmer, D. A. Tocher, G. K. Patra, J. P. Naskar and D. Datta
   First example of a double stranded helicate with square-planar coordination for the metal
   Indian J. Chem. 38A (1999) 1087-1091

5. S. Basu Majumder, M. Mukherjee, G. K. Patra, D. Datta and M. Helliwell
   2-(2,3-Diphenylpiperazin-1-yl)ethyl ammonium chloride
   Indian J. Chem. 38A (1999) 1087-1091

6. G. K. Patra, G. Mostafa, D. A. Tocher and D. Datta
   Towards engineering crystals of ionic complexes.Control over the nuclearity of a cationic metal complex by non-coordinating anions
   Inorg. Chem. Commun. 3 (2000) 56-58

7. G. K. Patra, S. Samajdar and D. Datta
   First Schiff base of vinyl amine and an α-diketone. Synthesis, properties and its copper(I) complex
   J. Chem. Soc., Dalton Trans., (2000) 1555-1558

8. N. A. Lewis, D. A. Tocher, G. K. Patra, J. P. Naskar and D. Datta
   1-(8'-amino-α-naphthyl)-4-(8'-amino-α-naphthylamine)-1-azabuta-1,3-diene, a tetra-aza half-cyclised ligand, and characterisation of its copper(II) complexes
   Indian J. Chem., 39A (2000) 400-406

9. P. Purkayastha, N. Chattopadhyay, G. K. Patra and D. Datta
   Metal ion induced enhancement of emission of an organic fluorophore
   Indian J. Chem., 39A (2000) 375-377

10. G. K. Patra and D. Datta
    First tetraaza macrocycle containing fused naphthalene rings. Synthesis and its Complexation
    Indian J. Chem., 39A (2000) 480-483

11. G. K. Patra, G. Mostafa, M. G. B. Drew and D. Datta
    Engineering crystals of ionic complexes. A deliberate synthesis of an acetato bridged zinc dimer
    Crystal Engg. Commun, 2000,19-21

12. P. R. Bangal, G. K. Patra and D. Datta
Introducing unsaturations into the 1,4,7-triazacyclononane skeleton. Photochemical reaction between benzil and diethylenetriamine: synthesis and properties of 2,3-di-phenyl-1,4,7-triazacyclonona-1,3-diene
New J. Chem, 2000, 719-723

13. G. Mostafa, J. Jana, G. K. Patra and D. Datta
A ferromagnetically coupled acetato bridged Cu(II) dimer
Indian J. Chem, 39A, 2000, 1174-76

14. G. K. Patra, M. G. B. Drew and D. Datta
Transmetallation. Synthesis of a novel acetato bridged low-spin Co(II)-Zn(II) heterodinuclear complex from an acetato bridged one-dimensional Zn(II) polymer
Inorg. Chem. Commun., 2001, 195-197

15. S. W. Ng, M. G. B. Drew, G. Mostafa, G. K. Patra and D.Datta
An unexpected synthesis of 1-*H* perimidine. X-ray crystal structure of 1-*H* perimidine hydrochloride dihydrate.
Ind. J. Chem, Sect.41B, 2001, 211-214

Other works

16. D. Sur, S. C. Bera, N. Chattopadhyay, G. K. Patra and D. Datta
Photophysics of an 1*H*-1,5-benzodiazepine in some selected solvents
Indian J. Chem. 36A (1997) 917-919.

17. **G. K. Patra**
On the alkylation of tributylphosphinocobaloxime$_s$ by alkyl chlorides
Indian J. Chem. 37A (1998) 813-815

18. G. K. Patra, S. Hati and D. Datta
Proofs for Pearson's HSAB principle
Indian J. Chem. 38A (1999) 1-3

19. S. Chowdhury, G. K. Patra and D. Datta
Electrochemistry of an anionic electroactive species at a negatively charged electrode
Indian J. Chem. 38A (1999) 973-976

20. S. Chowdhury, G. K. Patra, M. G. B. Drew, N. Chattopadhyay and D. Datta
New photoluminescent $Cu^{I}N_4$ chromophores. Stabilisation of copper(I) by unconjugated diimines
J. Chem. Soc., Dalton Trans. (2000) 235-237

21. S. Hati, G. K. Patra, J. P. Naskar, M. G. B. Drew and D.Datta
Copper mediated synthesis of 2,2-dimethyl-2*H*-benzimidazole from 1,2-phenylene-diamine and acetone
New J. Chem, 2001, 218-220

22. M. G. B. Drew, S. Chowdhury, G. K. Patra and D. Datta
Stabilisation of copper(I)-amino N bonds in presence of imino N's
Indian J. Chem. 42A , 2003 , 478-483

Post-doc Work

23. G. K. Patra and I. Goldberg
Syntheses and characterization of New bis bi-dentate Schiff base ligands and their Supramolecular complexes with silver(I), copper(I) and zinc(II) d^{10} metal ions
New. J. Chem. Soc., 2003, 27, 1124-1131.

24. G. K. Patra and I. Goldberg
Supramolecular design of coordination complexes of silver(i) with polyimine ligands. Syntheses, materials characterization and structures of new polymeric and oligomeric materials
Crystal Growth and Design, 2003, 3, 321-329.

25. Goutam Kumar Patra and Israel Goldberg
Syntheses and crystal structures of copper and silver complexes with new imine ligands. Air stable photoluminescent $Cu^{I}N_4$ chromophores
Eur. J. Inorg. Chem., 2003 , 969-977.

26. G.K.Patra, I, Goldberg, A.Sarkar, S.Chowdhury and D.Datta
Metal ion complexes of the optically active bis(phenyl-1,3-oxazoline) ligand. Synthesis, characterization and X-ray crystal structure.
Inorg. Chim. Acta 2003, 344, 7-14

27. G.K.Patra and I. Goldberg
Mercury(II) – Dien complexes (Dien ≡ diethylene triamine). First example of dien bridged Hg(II) dimmer. Syntheses, characterization and X-ray crystal structures.
Polyhedron 2002, 21, 2195-2199.

28. G. K. Patra and I. Goldberg
Coordination polymers of transition metal ions with polydentate imine ligands. Syntheses, materials characterization, and crystal structures of polymeric complexes of copper(I), silver(I) and zinc(II)
J. Chem. Soc., Dalton Trans., 2002 , 1051- 1057

29. G. K. Patra, I. Goldberg, B. C. Maiti, S. K. Chowdhury, A. Sarkar, S. Chakravorti, N. Chattopadhyay, M.G.B.Drew, S. Chowdhury and D. Datta
A new photoluminescent $Cu^{I}_2N_6$ chromophore exhibiting delayed fluorescence
New J. Chem., 2001, 25, 1371-1373

30. Yael D. Posner, G. K. Patra and I. Goldberg
Crystal-engineering of 2-D and 3-D multiporphyrin architectures. The versatile topologies of tetracarboxyphenylporphyrin-based materials
Euor. J. Inorg. Chem., 2001, 2515-2523

31. Yael D. Posner, G. K. Patra and I. Goldberg
Supramolecular assembly of metalloporphyrins in crystals by axial coordination Through amine ligands
J. Chem. Soc., Dalton Trans., 2001 , 2775-2782

32. Yael D. Posner, S. Balasubramanian, G. K. Patra and I. Goldberg
[5,10,15,20-meso-Tetrakis(2-thienyl)porphyrin-ato-K^4N]copper(II)
Acta Cryst (2001), E57, m346-m348

33. G. K. Patra and I. Goldberg
N, N'-Bis(4-cyanopyridylidene)benzil dihydrazone
Acta Cryst (2001), E57, o988-o989

34. G. K. Patra and I. Goldberg
Tetrakis(4-acetylpyridine)diisothiocyanatocobalt(II)
Acta Cryst (2001), E57, m483-m484

35. G. K. Patra and I. Goldberg
N,N'-Bis[1-(4-pyridyl)ethylidine]-p-phenylenediamine
Acta Cryst (2002), E58, o528-o529

36. G. K. Patra, Y.D.Posner and I. Goldberg
meso-(4-Nitrophenyl)dipyrromethane, Acta Cryst (2002), E58, o530-o531

37. Yael D. Posner, G. K. Patra and I. Goldberg
Supramolecular porphyrin-based materials. Assembly modes of
[5,10,15,20-meso- tetrakis(4-hydroxyphenyl)porphyrinato] with bipyridyl ligands.
Cryst. Eng. Commun. (2002) 4, 296-301.

38. Yael D. Posner, G. K. Patra and I. Goldberg
Hydrogen-bonded supramolecular lattice of the 1:3:4 complex between
[5,10,15,20-meso-tetrakis(4-hydroxyphenyl)porphyrinato-K^4N]zinc(II), dibenzo-24-crown-8
and methanol, Acta Cryst (2002), C58, m344-m346.

39. Yael D. Posner, G. K. Patra and I. Goldberg
Crystal engineering of metalloporphyrin assemblies. New supramolecular architecture
mediated by bi-pyridyl ligands
J. Chem. Soc., Chem. Commun. (2002) 1420 – 1421.

40. R. Franzini, R.M.Watson, G. K. Patra D.L.Popescu and C. Achim
Metal incorporation in modified peptide nucleic acids
Polymer Preprints, 2004, 45, 337-338.

41. A. Dragulescu-Andrasi, G. K. Patra, J. J. Dorando and C. Achim
Towards Polynuclear Iron(II) complexes with spin transitions.
MS submitted for publication.

42. R.M.Watson, Y.A.Sharik, G.K.Patra and C. Achim
Sequence independent formation of ligand modified PNA duplexes by metal
Co-ordination driven assembly.
J. Am. Chem. Soc., 2005, 127(42) 14628-14639

43. R. Franzini, R.M.Watson,G. K. Patra,R.M.Breece, D.L.Tierney, M.P.Hendrich and C.Achim
Metal binding to bipyridine modified PNA
Inorg. Chem., 2006, 45, 9798-9811

44. G.K.Patra, I. Goldberg, S.De and D.Datta
Effect of the size of discrete anions on the nuclearity of a complex cation
Cryst. Eng. Comm. 2007, 9, 828-832

45. G. K. Patra, I. Goldberg, M. G. B. Drew, S. De, J. P. Naskar and D. Datta
2,2-Dialkyl-2H-benzimidazoles, the high energy tautomers of corresponding 1,2-dialkyl-1H
Benzimidazoles. Synthesis and their complexes with Cu(I) and Ag(I)
Indian J. Chem. 46A , 2007 , 1758-1762

WORK FROM VIJOYGARH JYOTISH RAY COLLEGE AND GURU GHASIDAS UNIVERSITY

46. Benzil bis(ketazine)
G.K. Patra, A. Mukherjee and S.W. Ng,
Acta Cryst. E65, 2009, o1745

47. N,N-Bis(4-pyridylmethylene)octane-1,8-diamine
G.K. Patra, A. Mukherjee, P. Mitra and S.W. Ng
Acta Cryst. E65, 2009, o1728

48. Syntheses and Crystal Structures of 3-D interpenetrating Cu(I) coordination polymers of Polypyridyl ligands
A. Mukherjee, R. Chakraborty and **G.K. Patra**
Inorg. Chem. Commun., 2009,12, 1227-1230

49. The syntheses, characterization, x-ray crystal structures and properties of Cu(I) complexes of Bi-dentate Schiff base ligand
A. Mukherjee, R. Chakraborty and **G.K. Patra**,
Inorganica Chimica Acta, 363, 2010, 1707-1712

50. K.S. Banu, T. Chattopadhyay, S. Bhattacharya, **G. K. Patra**, Ennio Zangrando and D.Das
Mono- and dinuclear manganese(III) complexes showing efficient catechol oxidase activity: Synthesis, characterization and spectroscopic studies.
Dalton Trans., 2009, 8755-8764

51. Octahedral monodithilone complexes of Iron: Charaterization of S,S' Coordinated Dithiolate (1-) pi radical monoanions. A specetroscopic and density functional theoretical investigation
C. Milsman, **G.K. Patra**, E. Bill, T. Weyhermuller and Karl Wieghardt
Inorg. Chem., 2009 , 48,7430-7445

52. Structural diversity in Silver(I) azine complexes – effect of substituents and counter Anions
G.K.Patra, A. Mukherjee P. Mitra and Adersh N. M.
J. Mol. Str., 2011, 1000, 29 – 34.

53. Coordination assemblies of Cu(I)/Ag(I) and novel azino-pyridine ligands: syntheses, crystal structures, thermal studies and photophysical properties
G.K.Patra, A.Mukherjee and Atish Dipankar Jana.
MS Under revision

54. Catena-Poly[[(triphenylphosphane)-copper(I)]-di-l-iodido-[(triphenylphosphane)copper(I)]-l-[N,N00-bis[1-(pyridin-4-yl) ethylidene]hydrazine]]
H. K. Fun, W.S.Loh, G.K.Patra and A. Mukherjee, Acta Cryst 2011, E67, m1389

54. Substituion dependent dimensionality of Cadmium(II) Coordination polymers of Imino pyridyl ligands
P.K.Pal, S. Mohapatra, A. Jana and G. K. Patra
J. Mol. Str., 2012, in press

55. A new two dimensional coordination polymer having 4,4-net grid topology: poly [{μ_4-*N*,*N*′-bis(4-pyridylmethylene)diphenylethanedione dihydrazone)}][μ_2-iodo]-cadmium(II)
G.K.Patra, A. Mukherjee P. Mitra and Adersh N. M.
M.S. submitted for publication

POSTER PRESENTATION:

1. C. Achim, D. -L. Popescu, R. Franzini, G. K. Patra
   Modified peptide nucleic acids as scaffold for transition metal ions
   Abstract of Papers, 226th ACS Meeting , NY, USA, Sept 7-11, 2003

2. A. Dragulescu Andrasi, G. K. Patra, J. Dorando, C. Achim
   Towards Polynuclear Iron(II) Complexes with spin transition
   Abstract of Papers, 35th ACS Central Regional Meeting, Pittsburgh, USA, October 19-22, 2003

3. C. Achim, R. Franzini, R. M. Watson, G. K. Patra
   Metal modified Peptide Nucleic Acids
   Abstract of Papers, 227th ACS Meeting , CA, USA, March 28- April 1, 2004

4. Y. A. Skorik, R. M. Watson, G. K. Patra and C. Achim
   Thermodynamic aspects of metal-mediated PNA duplex formation
   Abstract of Papers, 230th ACS Meeting , Washington DC, USA, Aug 28- Sept 1, 2005