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Academic Profile of Dr. Alak Kumar Ghosh

(a) Brief personal introduction

Dr. A.K. Ghosh was born on 16th January, 1964. After having his M.Sc. from Burdwan University he got the offer of scientific officer in BARC, Trombay, Mumbai 1989. However, he joined as JRF in BU and obtained Ph.D. degree from Burdwan University in the year 1995, under the supervision of Prof. G S De. In the same year he joined as Lecturer in Regional Engineering College (Now National Institute of Technology), Durgapur. After serving NIT, Durgapur for ten years, he joined as a 'Reader in Chemistry', BU in the year 2005. Presently he is a Professor of Chemistry, BU. He acted as HOD from 01.09.2012 - 31.08.2014. His research interest is in the area of Inorganic Reaction Mechanism. He also did some works on Polymer Chemistry. He produced total 17 Ph.D. students

He also guided a number of M.Tech (Corrosion Science and Technology) and M. Phil. dissertations. He published more than ninety articles in journals of national and international repute.

(b) Present designation: Professor in Chemistry

(c) Area of research interest: Inorganic Reaction Mechanism

(d) Research scholars guided by the faculty mentioning the name of the scholar, title of the thesis, degree awarded (Ph.D.) and year of award (if already awarded):

Sl. No.	Name of the student	Degree awarded (Ph.D./D. Sc.) & year of award	Thesis title	Supervisor(s)
1	Dr. Sankar Ch. Moi	Ph.D. awarded on 08.09.2005, (B.U.).	Kinetics and Mechanism of the Substitution on Palladium(II) Complexes with Special Emphasis on Bioactive Ligands	Dr. A.K.Ghosh
2	Dr. Hriday	Ph.D.	Kinetic and Mechanistic Studies of the Substitution on Octahedral Ru(II)	Dr. A.K.Ghosh

	Chattopadhyay	awarded on 18.11.2005, (B.U.).	Complexes	
3	Dr. Sudip Kr. Mukhopadhyay	Ph.D. awarded on 31.01.2006, (B.U.).	Interaction of Octahedral Rhodium(III) Complexes with Bioactive Ligands: Kinetic and Mechanistic Studies	Dr. A.K.Ghosh
4	Dr. Tarakeswar Kundu	Ph.D. awarded on 17.01.2008 from NIT, Durgapur	Studies on Graft Polymerization of Vinyl Monomers on to Guar Gum in Presence of Metal Ions,	Dr. A.K.Ghosh & Dr.P.Chowdhury, presently Professor, Visva-Bharati, Santiniketan
5	Dr. Sudipta Samui	Ph.D. awarded on 17.01.2008 from NIT, Durgapur	Studies on Ceric Ions Initiated Graft Polymerization of Vinyl Monomers from Natural Polymers,	Dr. A.K.Ghosh & Dr.P. Chowdhury, presently Professor, Visva-Bharati, Santiniketan,
6	Dr. Tandra Das (Karfa)	Ph.D. awarded on 23.09.2009 (B.U.)	Kinetics and Mechanism of Ligand Substitution in Octahedral Ruthenium(II) Complexes	Dr. A.K.Ghosh
7	Dr. Subhasis Mallick	Ph.D. awarded on 31.01.2013 (B.U.)	Kinetic and Mechanistic Studies on Square Planar d^8 Metal Ion Complexes with Some N/O/S Donor Ligands.	Dr. A.K.Ghosh
8	Dr. Parnajyoti Karmakar	Ph.D. awarded on 27.03.2014 (B.U.)	Mechanistic Studies on Substitution Reactions of Some Square Planar Platinum(II) Complexes	Dr. A.K.Ghosh
9	Dr. Biplab Kumar Bera	Ph.D. awarded on 06.06.2014	Kinetics of Substitution on Octahedral Rhodium(III) Complexes	Dr. A.K.Ghosh

		(B.U.)		
10	Dr. Subala Mondal	Ph.D. awarded on 13.11.2014 (B.U.)	Substitution on Octahedral $4d^6$ Metal Ion Complexes: Kinetic and Mechanistic Studies with Bioactive Ligands	Dr. A.K.Ghosh
11	Dr. Arup Mandal	Ph.D. awarded on 04.06.2015 (B.U.)	Interaction of Different Bio-relevant Molecules with Ru(II) Azopyridine and Dimethyl Sulfoxide Complexes	Dr. A. K. Ghosh
12	Dr. Sumon Ray	Ph.D. awarded on 25.05.2017 (B.U.)	Solution Phase Kinetic Studies on the Reactivity of Monomeric (N,N) Chelated Platinum(II) and Palladium(II) Oxalate and/or Malonato Complexes with Bioactive Ligands	Dr. A.K.Ghosh
13	Dr. Sushovan Ukil	Ph.D. awarded on 22.11.2017	Chemical and biochemical investigation on some secondary metabolites of crotalaria pallida ait	Jointly by Prof. S. Laskar & Prof. A.K.Ghosh
14	Dr. Debabrata Nandi	Ph.D. awarded on 23.11.2017	Reactivity of some square planar platinum(II)-amine complexes with selected bioactive ligands: kinetic and mechanistic approach	Jointly by Prof. S. Laskar & Prof. A.K.Ghosh
15	Dr. Arnab Nayek	Ph.D. awarded on 02 .01.2018	Bioinformatic analysis of sequence and structure of halophilic protein in comparison to mesophilic ones	Jointly by Dr. A. Bandyopadhyay, Biotech. & Prof. A.K.Ghosh
16	Shyamashree Banerjee	Thesis submitted on August 2017. Ph.D. awarded on 07.06.2019	Immunoinformatics and bioinformatics studies on proteins from virus, bacteria and archea	Jointly by Dr. A. Bandyopadhyay, Biotech. & Prof. A.K.Ghosh
17	Dr. Animesh Chattopadhyay	Ph.D. awarded on 09.07.2018	Studies on the chemical reactivities of ruthenium(II/III) complexes with ligands having different sets of donor	Dr. A.K.Ghosh

			centers.	

Student worked/working as post-doctoral fellow

1. Dr. Ramesh Kumar (DSKPDF, 28.10.2016 -27.10.2019)
2. Dr. Prasenjit Chakraborty (DSKPDF, joined on 30.09.2021)

Students working for Ph.D.

Sl. No.	Name of the student	Present Status	Title	Supervisor (s)
1	Anwesha De	State-funded JRF	Reactivity of Zn(II) complexes towards biologically relevant molecules	Dr. A. K. Ghosh
2	Satyaki Goswami	Part-time	Synthesis of sprout-like nanostructures on the TiO_2 nanobelts and enhancement of visible-light photocatalytic activity through N and S codoping	Dr. A. K. Ghosh
3	Snigdha Sen	Part-time	Application of analytical tools for the characterisation and estimation of sponge iron effluents affecting quality of urban life	Dr. A. K. Ghosh

9. **M. Phil. Supervision: 01**

1. **Utpal Gupta** – 2009

(e) List of publications

1. Kinetics of the interaction of aquo-ethylenediaminetetraacetatoruthenate(III) with ferricyanide ion in water, **A.K. Ghosh** and D. Chatterjee, *Transition Met. Chem.*, 16, 481 (1991).
2. Kinetics and mechanism of ligand substitution of aquopropylenediaminetetra-acetatoruthenate (III) in water, **A.K. Ghosh** and D. Chatterjee, *Transition Met. Chem.*, 16, 484 (1991).

3. Interaction of thiourea with hydroxopentaaquarhodium(III) ion in ethanol-water, **A.K. Ghosh** and G.S. De, *Transition Met. Chem.*, 17, 260 (1992).
4. Kinetics and mechanism of the reaction of the of thiocyanate ion with hexaaquarhodium(III) ion, **A.K. Ghosh** and G.S. De, *Transition Met. Chem.*, 17, 435 (1992).
5. Ligand substitution in $[Rh(OH_2)_6]^{3+}$ by β-diketones : Applicability of ligand constants, **A.K. Ghosh** and G.S. De, *Indian J. Chem.*, 33A, 247 (1994).
6. Mechanistic studies on ligand substitution in hexaaquarhodium(III) ion by salicylaldoxime, **A.K. Ghosh** and G.S. De, *Indian J. Chem.*, 33A, 929 (1994).
7. Kinetics and mechanism of anation of hydroxopentaaquarhodium(III) ion by DL-methionine, **A.K. Ghosh**, S.Ghosh and G.S. De, *Indian J. Chem.*, 35A, 342 (1996).
8. Displacement of aqua ligands from hydroxopentaaquarhodium(III) ion by pyridine-2-aldoxime : A kinetic and mechanistic approach, **A.K. Ghosh**, S. Ghosh and G.S. De, *Transition Met. Chem.*, 21, 358 (1996).
9. Interaction of L-cysteine with hydroxopentaaquarhodium(III) ion : Kinetic and mechanistic studies, **A.K. Ghosh**, P.S. Sengupta and G.S. De, *Indian J. Chem.*, 36A, 611 (1997).
10. Kinetics and mechanism of the interaction of L-cysteine with diaquaethylenediamine-platinum(II) perchlorate in aqueous solution, S. Ghosh, G.S. De and **A.K. Ghosh**, *Indian J. Chem*, 36A, 863 (1997).
11. Kinetics of the anation of cis-diaqua-bis(biguanide)cobalt(III) by glutamic acid in mixed ethanol-water media, S. Ghosh, C.C. Mukhopadhyay, G.S. De and **A.K. Ghosh**, *J. Indian. Chem. Soc.*, 75, 219 (1998).
12. Kinetic and mechanistic studies on the interaction of adenosine with hydroxopenta aquarhodium(III) ion, **A.K. Ghosh**, *Transition Met. Chem.*, 23, 269 (1998).
13. Kinetics and mechanism of the interaction of thioglycollic acid with cis - diaquaethylenediamineplatinum(II) perchlorate in aqueous medium, S. Ghosh, G.S. De and **A.K. Ghosh**, *J. Indian Chem.Soc.*, 76, 41 (1999).
14. Kinetic and mechanistic studies on the interaction of adenosine with diaquaethylene-diamineplatinum(II) ion, S. Ghosh, G.S. De and **A.K. Ghosh**, *Inorg. React. Mech.*, 1, 189 (1999).

15. Kinetic and mechanistic studies on the interaction of cytidine with hydroxopentaaquarhodium(III) ion, S. K. Mukhopadhyay, **A.K. Ghosh** and G.S. De, *Indian J. Chem.*, 38A, 895 (1999).
16. Kinetics and mechanism of substitution studies on cis-diaqua-bis(bipyridyl) ruthenium(II) by dimethylglyoxime in 10 % (v/v) ethanol, T. Das, G.S. De and **A.K. Ghosh**, *J. Indian Chem. Soc.*, 78, 451 (2001).
17. Kinetic and mechanistic studies on the interaction of DL-methionine with di-μ-hydroxobis(bipyridyl)dipalladium(II) ion, S.C. Moi, **A.K. Ghosh** and G.S. De, *Indian J. Chem.*, 40A, 1187 (2001).
18. Kinetic and mechanistic studies on the interaction of uridine with hydroxopentaaquarhodium(III) ion, S.K. Mukhopadhyay and **A.K. Ghosh**, *Indian J. Chem.*, 41A, 489 (2002).
19. Kinetics and mechanism of the interaction of thiosemicarbazide with di-μ-hydroxobis(bipyridyl)dipalladium(II) ion, S.C. Moi, **A.K. Ghosh** and G.S. De, *Indian J. Chem.*, 41A, 1188 (2002).
20. Isolation of one-electron reduced product of $[OsL_3]^{2+}$ [L = 2-(arylazo) pyridines], H. Rahaman, D. Bose, J. Banerjee, **A.K. Ghosh** and B.K. Ghosh, *J. Indian Chem. Soc.*, 79. 755 (2002).
21. Graft polymerization of ethyl methacrylate onto guar gum using Ceric ion/Dextrose reddox pair, P. Chowdhury, S. Samui, T. Kundu, B. Saha and **A.K. Ghosh,** *Indian J. Chem. Technol*., 10, 38 (2003).
22. Kinetics and mechanism of the interaction of azide with $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion at physiological pH, H. Chattopadhyay, B.K. Ghosh and **A.K. Ghosh,** *Transition Met.Chem.*, 29, 24 (2004).
23. Interaction of adenosine with $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion in aqueous medium: Kinetic and mechanistic studies, H. Chattopadhyay, B.K. Ghosh and **A.K. Ghosh**, *Inorg. React. Mech.*, 5, 87 (2004).
24. Kinetic and mechanistic studies on the interaction of DL-Penicillamine with hydroxopentaaquarhodium(III) ion, S.K. Mukhopadhyay, S.B. Das and **A.K. Ghosh**, *Transition Met. Chem.*, 30, 107 (2005).
25. Kinetic and mechanistic studies on the interaction of thymidine with hydroxopentaaquarhodium(III) ion, S.K. Mukhopadhyay and **A.K. Ghosh**, *Transition Met. Chem.*, 30, 141 (2005).

26. Kinetic and mechanistic studies on the interaction of inosine with hydroxopentaaquarhodium(III) ion, S.K. Mukhopadhyay, and **A.K. Ghosh**, *Inorg. React. Mech.*, 5, 255 (2005).
27. Substitution on $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion with inosine at physiological pH in aqueous medium, H. Chattopadhyay and **A.K. Ghosh**, *Indian J. Chem.*, 44A, 483 (2005).
28. Kinetics and mechanism of the reaction of di-μ-hydroxobis(bipyridyl)dipalladium(II) ion with l-cysteine at physiological pH in aqueous medium, S.C. Moi and **A.K. Ghosh,** *Indian J. Chem*, 44A, 2486 (2005).
29. Kinetic and mechanistic studies of substitution on $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion with uridine in aqueous medium, H. Chattopadhyay and **A.K. Ghosh**, *Inorg. React. Mech.*, 6, 9 (2006).
30. Kinetics and mechanism of the interaction of thioglycolic acid with $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion at physiological pH, **A.K. Ghosh,** *Transition Met. Chem.*, 31,912 (2006).
31. Kinetic studies of substitution on $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion by DL-penicillamine at physiological pH, **A.K. Ghosh,** *Indian J. Chem.*, 46A, 610 (2007).
32. Effect of 1,10-phenanthroline on graft polymerisation of vinyl monomer onto guar gum in presence of Fenton's reagent, Pranesh Chowdhury, Md A Ali, Tarkeswar Kundu and **Alak K Ghosh,** *J. Indian Chem. Soc.*, 84, 88 (2007).
33. Synthesis, characterisation and kinetic studies of PEMA grafted acacia gum, , Sudipta Samui, **Alak K Ghosh**, Md A. Ali, and Pranesh Chowdhury, *Indian J. Chem. Technol.*, **14**, 126 (2007).
34. Graft polymerisation of methyl methacrylate onto guar gum in presence of ammonium vanadate and hydrogen peroxide, Pranesh Chowdhury, K Roy, Md A Ali, Tarkeswar Kundu and **Alak K Ghosh,** *J. polym, Mater.*, **24**,263 (2007).
35. Kinetic and mechanistic studies on the substitution of aqua ligands from cis-diaqua-bis(bipyridylruthenium(II) ion by vicinal-dioximes, Tandra Das (Karfa), Biplab K Bera, Asok K Datta and **Alak K Ghosh**, *Transition Met. Chem.*, **34**, 247-253, 2009.
36. Kinetic and mechanistic studies on the reaction of DL-methionine with $[(H_2O)(tap)_2RuORu(tap)_2((H_2O)]^{2+}$ ion in aqueous medium at physiological pH, Tandra Das (Karfa), Asok K Datta and **Alak K Ghosh**, *Research Letters in Inorganic*

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37. Kinetics and mechanism of the ligand substitution reaction of di-mu-hydroxobis(bipyridyl)dipalladium(II) ion with thiourea in aqueous solution, Subhasis Mallick, Subala Mondal, Parnajyoti Karmakar, Biplab K Bera, Sankar C Moi and **Alak K Ghosh**, *Transition Met. Chem.*, 35, 469-475 (2010).
38. Kinetics and mechanism of the reaction of hydroxopentaaquarhodium(III) ion with L-Arginine in aqueous solution, Biplab K Bera, Subhasis Mallick, Arup Mandal, Parnajyoti Karmakar, Asok K Datta and **Alak K Ghosh**, *Transition Met. Chem.*, 35, 541-547 (2010).
39. Kinetics and mechanism of the interaction of DL-penicillamine with cis-diaqua(cis-1,2-diaminocyclohexane)platinum(II) perchlorate in aqueous medium, Parnajyoti Karmakar, Biplab K Bera, Kanai L Barik, Sudip K Mukhopadhyay and **Alak K Ghosh**, *J. Coord. Chem.*, 63, 2158-2171 (2010).
40. Kinetic and mechanistic studies on the reaction of thiosemicarbazide with $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ {tap = 2-(m-tolylazo)pyridine}, Tandra Das(Karfa), Biplab K. Bera, Subhasis Mallick, Parnajyoti Karmakar, Arup Mandal, Subala Mondal, Gauri S De and A.**K. Ghosh**, *Transition Met. Chem*, 35, 885-890 (2010). DOI : 10.1007/s11243-010-9408-4.
41. Mechanistic aspects of ligand substitution on c*is*-diaqua(*cis*-1,2-diaminocyclohexane)platinum(II) ion by Glycine-L-Leucine, Parnajyoti Karmakar, Subhasis Mallick, Biplab K Bera, Arup Mandal, Subala Mondal, Sudip K Mukhopadhyay and **Alak K Ghosh**, *Transition Met. Chem*, 35, 911-916 (2010). DOI 10.1007/s11243-010-9411-9.
42. Kinetics and mechanism of reduction of a coordinated superoxide with hydroxylamine derivatives, K. Mandal, S. Mukhopadhyay, Rupendranath Banerjee and **Alak K Ghosh,** *Polyhedron*, 29, 2833-2836 (2010).
43. Kinetic and mechanistic studies on the interaction between azide and cis-diaqua-chloro-tris-(dimethyl sulfoxide)-ruthenium(II) complex in aqueous medium, **Alak K Ghosh,** Arup Mandal, Biplab K Bera, Subhasis Mallick, Subala Mondal, Parnajyoti Karmkar, *Inorganic Chemistry : An Indian Journal*, **5**, (2010).
44. Kinetics and mechanism of the ligand substitution reaction of the di-µ-hydroxobis(bipyridyl)dipalladium(II) ion with some bio-relevant ligands, Subhasis

Mallick, Biplab K Bera, Parnajyoti Karmakar, Subala Mondal, Arup Mandal and **Alak K Ghosh**, *J. Soln. Chem.*, 40, 532-544 (2011), DOI: 10.1007/s10953-011-9659-5..

45. Kinetic and mechanistic studies on the interaction of DL-penicillamine with di-μ-hydroxobis(bipyridyl)dipalladium(II) ion in aqueous solution, Subhasis Mallick, Arup Mandal, Biplab .K Bera, Subala Mandal, Parnajyoti Karmakar and **Alak K Ghosh,** *J. Indian Chem. Soc.*, 88, 859-863 (2011).
46. Kinetics and mechanism of the ligand substitution reaction of di-μ-hydroxobis(bipyridyl)dipalladium(II) ion with dipeptides in aqueous solution, Subhasis Mallick, Biplab K Bera, Arup Mandal, Asok K Datta, Subala Mondal, Parnajyoti Karmakar and **Alak K Ghosh**, *Prog. React. Kinet. Mec.*, **36,** 272-286 (2011).
47. Interaction of glycyl-glycine with hydroxopentaaquarhodium (III) ion in aqueous medium: kinetic and mechanistic studies, Biplab K Bera, Subhasis Mallick, Arup Mandal, Subala Mondal, Parnajyoti Karmakar and **Alak K Ghosh**, *Prog. React. Kinet. Mec.*, 36 (No. 4), 371-385 (2011).
48. Kinetics and mechanism of the ligand substitution reaction of di-μ - hydroxobis(bipyridyl)dipalladium(II) ion with diethyldithiocarbamate anion in aqueous solution, Subhasis Mallick, Biplab K. Bera, Subala Mondal, Parnajyoti Karmakar, Arup Mandal, and **Alak K. Ghosh**, *J. Chem. Sc.*, **123**, 311–318 (2011).
49. Kinetics and Mechanism of the interaction of Adenosine with c*is*-diaqua(*cis*-1,2-diaminocyclohexane)platinum(II) perchlorate in aqueous medium, Parnajyoti Karmakar, Subhasis Mallick, Subala Mondal, Biplab K Bera, Arup Mandal, Sudip K Mukhopadhyay and **Alak K Ghosh**, *Int. J. Chem. Kinet.*, vol. **43**, 219-229 (2011), *DOI 10.1002/kin.20549*
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51. Kinetic studies of substitution on *cis*-diaqua-chloro-tris-(dimethyl sulfoxide)-ruthenium(II) complex with glycylglycine in aqueous medium, Arup Mandal, Biplab K Bera, Subhasis Mallick, Subala Mondal, Parnajyoti Karmakar and **Alak K Ghosh**, *Int. J. Life Sc. Pharma Research*, **1**, 110-120 (2011).

52. Kinetics and mechanism of the ligand substitution reaction of di-μ-hydroxobis(bipyridyl)dipalladium(II) ion with N,N'- diethylthiourea in aqueous solution, Mallick Subhasis, Nandi Debabrata, Mandal Arup, Mondal Subala, Bera Biplab K, Karmakar Parnajyoti and **Ghosh Alak K** , *Int. J. Res. Chem. Environ*, **2**, 275-282 (2012).
53. Interaction of Glutathione (reduced) with $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ (tap ={2-(m-tolylazo)pyridine}) ion at physiological pH, Tandra Das(Karfa), Subala Mondal, Asok K.Datta, Biplap K Bera, Parnajyoti Karmakar, Subhasis Mallick, Arup Mandal, and **Alak K Ghosh**, *Int. J. Life Sc. Pharma. Res.,* **2**, 76-88 (2012).
54. Kinetics and mechanism of the interaction of Glycyl-L-Leucine with $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion at physiological pH, Arup Mandal, Subhasis Mallick, Parnajyoti Karmakar, Biplab K Bera, Subala Mondal and **Alak K Ghosh**, *Prog. React. Kinet. Mech.*, **37**, 1-17 (2012).
55. Kinetic and mechanistic studies on the interaction of diethyldithiocarbamate anion with diaquaethylenediamineplatinum(II) ion in aqueous medium, Subhasis Mallick, Arup Mandal, Biplab K Bera, Parnajyoti Karmakar, Subala Mondal and **Alak K Ghosh**, *Prog. React. Kinet. Mec.*, **37**, 18-29 (2012).
56. Mechanistic aspects of ligand substitution on $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ ion{tap=2-(m-tolylazo)pyridine} by some amino acids in aqueous medium at physiological pH**,** Arup Mandal, Subala Mondal, Parnajyoti Karmakar, Subhasis Mallick, Biplab K Bera, and **Alak K Ghosh**, *Int. J. Chem. Kinet.*, **44**, 612-623 (2012).
57. Kinetic studies on the interaction of three glycine-containing dipeptides with hydroxopentaaquarhodium(III) ion in aqueous medium, Biplab K. Bera, Subala Mondal, Subhasis Mallick, Arup Mandal, , Parnajyoti Karmakar and **Alak K. Ghosh**, *J. Soln. Chem.*, **41**, 741-753 (2012).
58. Mechanistic aspects of ligand substitution on [(H2O)(tap)2RuORu(tap)2(H2O)]2+ {tap=2-(m-tolylazo)pyridine} ion by three glycine-containing dipeptides in aqueous medium at physiological pH, Arup Mandal, Subala Mondal, Parnajyoti Karmakar, Biplab K. Bera, Subhasis Mallick and **Alak K Ghosh**, *J. Chem. Sci.*, Vol. **124**, No. 3, May 2012, pp. 587–596.
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Subhasis Mallick, and **Alak K Ghosh**,. *J. Chem. Sci.* Vol. **124**, No. 4, July 2012, pp. 791–799.

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62. Reactivity of hydroxopentaaquarhodium(III) ion towards glycine-containing dipeptides in aqueous medium, Biplab K. Bera, Arup Mandal, Parnajyoti Karmakar, Subhasis Mallick, Subala Mondal, and **Alak K Ghosh**, *J Indian Chem. Soc.*, **90**, 449-458 (2013).
63. Kinetics and mechanism of the ligand substitution reaction of $[(H_2O)(tap)_2RuORu(tap)_2(H_2O)]^{2+}$ {tap=2-(m-tolylazo)pyridine} with diethyldithiocarbamate anion in aqueous solution at pH 7.4, Subala Mondal, Debabrata Nandi, Arup Mandal, Biplab Kumar Bera, Parnajyoti Karmakar, Sumon Ray, Subhasis Mallick and **Alak K Ghosh**, *J Indian Chem. Soc.*, **90**, 903-911 (2013).
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65. Kinetic Studies on Interaction of Platinum(II) Complexes with 'S' Containing Ligand in Aqueous Medium, Parnajyoti Karmakar, Sumon Ray, Debabrata Nandi, Arup Mandal, Subala Mondal, Subhasis Mallick, Biplab K Bera & **Alak K Ghosh**, *J Solution Chem*, **42**, 441-458 (2013), DOI 10.1007/s10953-013-9969-x
66. Mechanistic and Kinetic Investigations on the Interaction of Model Platinum(II) Complex with Ligands of Biological Significance in Reference to the Antitumour Activity, Parnajyoti Karmakar, Sumon Ray, Arup Mandal, Subala Mondal, Subhasis Mallick, Biplab K Bera and **Alak K Ghosh**, *Synth.& React. in Inorg.,Metal-org.and Nano-Metal Chem.*, **43,** 1563–1570, 2013.

67. Kinetics and mechanism of interaction of some bioactive ligands with *cis*-diaqua(*cis*-1,2-diaminocyclohexane)platinum(II) in aqueous medium, P. Karmakar, Sumon Ray, Subhasis Mallick, Biplab K Bera, Arup Mandal, Subala Mondal and **Alak K Ghosh**, *J. Chem. Sc.*, **125**, 1133-1143 (2013).
68. Kinetics and Mechanism of the interaction of Bio-Active ligands with cis-diaqua-bis (bipyridyl) ruthenium (II) in aqueous medium, Subala Mondal, Arup Mandal, Parnajyoti Karmakar, Biplab K Bera, Subhasis Mallick Sumon Ray and **Alak K Ghosh**, *J. Indian Chem. Soc.*, **90** (2), 153-162 (2013).
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