Dr. Somnath Roy
Assistant Professor, Department of Chemistry,
Maharajadhiraj Uday Chand Women's College, Purba Bardhaman, West Bengal, India

PERSONAL INFORMATIONS:

- ***Name*** : Dr. Somnath Roy
- ***Date of birth*** : 2nd Day of March, 1980
- ***Father's name*** : Late Sukumar Roy
- ***Mother's name*** : Swarnalata Roy
- ***Marital status*** : Married
- ***Permanent address*** : Vill. – Bizra, P.O. – Amadpur, P.S. – Memari, Dist. – Burdwan, PIN – 713154, West Bengal, India.
- ***Official address*** : Maharajadhiraj Uday Chand Women's College, Department of Chemistry, B.C. Road, P.O. – Rajbati, Dist. – Purba Bardhaman, PIN – 713104, West Bengal, India.
  Tel: [+91] 0342– 2533168/ 2531900 (O), [+91] 7584004124 (M);
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RESEARCH INTERESTS:

Synthetic Inorganic Chemistry, Coordination Chemistry of Transition Metals, Chemistry of Heterocycle based Compounds, Self-assembly Reactions, Metallo-supramolecular Chemistry, Synthesis of Metal Grids, Developing Metal-based prodrugs, Small molecule-nucleic acid interactions, Medicinal Inorganic Chemistry – Breast cancer, Ovarian cancer and Anti-tuberculosis.

PROFESSIONAL APPOINTMENTS:

Maharajadhiraj Uday Chand Women's College, Purba Bardhaman, West Bengal, India.

- *Duration:* 20th February 2021 – Till date
- *Position:* Assistant Professor (Stage – II)

Ananda Chandra College, Department of Chemistry, Jalpaiguri, West Bengal, India.

- *Duration:* 20th March 2015–19th February 2021
- *Position:* Assistant Professor

Instituto Superior Tecnico, Centro Quimica Estrutural, Lisbon, Portugal.

- *Duration:* 1st May 2011–31st December 2014
- *Supervisor:* Prof. Joao Costa Pessoa
- *Position:* Postdoctoral Fellow, Pursued postdoctoral research on the topic "Metal Complexes Including Aromatic (N-N) Type Ligands for Therapeutic Applications".

Experience:

- Design and synthesis of amino acid based Cu(II) and V(IV) complexes for efficient cleavage of DNA.
- Synthesis of bipy and phenanthroline based Cu(II) and V(IV) compounds for anti-cancer and anti-tuberculosis.
- Synthesis and characterization of functionalized V(IV) compounds as vehicles for drug delivery.
- Biological activity of the metal complexes under different physiological conditions.
- Mechanistic aspects of DNA cleavage by metal complexes.

Department of Chemistry, University of Calcutta, Kolkata, India.

- *Duration:* February 2010 – January 2011
- *Supervisor:* Prof. Susanta Kumar Kar
- *Position:* Research Associate on the topic 'Metallo-supramolecular Chemistry'.

Experience:

- Design, synthesis, structure and reactivity of multi nuclear metal complexes.
- Design and synthesis of polytopic ligands for the formation of metal grids.

Department of Chemistry, University of Calcutta, Kolkata, India.

- *Duration:* 1st May 2005 – 31st January 2010: Ph.D. in Inorganic Chemistry.
- *Title:* Studies On Transition Metal Complexes Of Biologically Relevant Pyrazole And Pyrimidine Derived Ligands.
- *Supervisor:* Prof. Susanta Kumar Kar.

Experience:

- Design and synthesis of polytopic ligands for the formation of metal grids.
- Synthesis of biologically relevant organic ligands with pyrazole and pyrimidine derived groups.
- Coordination chemistry of transition metal complexes [Cu(II), Ni(II), Co(II/III), Mn(II), Fe(II/III).
- Mechanistic aspects of metallo-supramolecular chemistry.
- Synthesis and characterization of V(IV), V(V) and Mo(VI) complexes.

<u>EDUCATION</u>:

- ***M.Sc.*** ► *September 2002 – August 2004:* Master of Science (M.Sc.) in Chemistry (Specialization in Inorganic Chemistry); Visva Bharati University, Santiniketan, India, Class I. *Percentage:* 67.66.

- ***B.Sc.*** ► *July 1999 – June 2002:* Bachelor of Science (B.Sc.) with Honours in Chemistry; (*Other Subjects:* Phys, Math, Eng, Beng, Env. Sc.), University of Burdwan, India (Kalna College), Class II. *Percentage:* 58.25.

- ***H.S.*** ► *May 1996 – April 1999:* Higher Secondary (H.S.), (Board: W.B.C.H.S.E.) Dhatrigram High School, India, *Subjects:* Phys., Chem., Math., Eng., Beng., Bio-Sc. (Opt.), Class I. *Percentage:* 71.3.

- ***M.P.*** ► *April 1994 – March 1996:* Secondary (M.P.), (Board: W.B.B.S.E.) Dhatrigram High School, India, *Subjects:* Beng, Eng, Math, P.Sc., L.Sc., Geo, Hist, Phys (Opt.), Class I. *Percentage:* 76.33.

AWARDS/HONOURS:

- Young Scientist – Fast Track Project, DST-SERB, New Delhi, Govt. of India, 2014.
- Awarded postdoctoral fellowship by Instituto Superior Técnico, Portugal. (Sanc. No. PEst – OE/QUI/UI0100/2013 (RD0211/CC 930204). *Periods:* 06/2014 to 12/2014.
- Young Scientist - Fast Track Project, DST-SERB, New Delhi, Govt. of India, 2013 (Not implemented).
- Awarded FCT BPD postdoctoral fellowship by Government of Portugal (Sanc. No. SFRH/ BPD/ 74390/2010). *Periods:* 05/2011 to 04/2014.
- Awarded postdoctoral fellowship by Government of Taiwan in 2010 (Not accepted).
- Qualified National Eligibility Test (NET) conducted by CSIR-UGC, India, 2010. All India Rank 116.
- Awarded Senior Research Fellowship (SRF) by CSIR, India, 2008. (Sanc. No. 09/028/(0698)2008-EMR-I dated 14/03/2008). *Periods:* 04/2008 – 02/2010.
- Awarded Senior Research Fellowship (SRF) in CSIR project in 2007 (Sanction No. 01(1916)/04/ EMR-II dated 24/06/04). *Periods:* 08/2007 – 03/2008.
- Awarded Junior Research Fellowship (JRF) in CSIR project in 2005 (Sanction No. 01(1916) /04/EMR-II dated 24/06/04). *Periods:* 05/2005 – 07/2007.
- Qualified National Level Test: Graduate Aptitude Test in Engineering in "GATE-2004 and 2005".

RESEARCH EXPERIENCE:

- ***Experimental Skills:*** Synthesis of various heterocycle based organic ligands and their metal complexes, purification and characterization, various techniques for bio-related experiments, synthesis, characterization and handling atmosphere-sensitive compounds in glove box, various crystallization techniques for growing single crystals and vacuum line techniques.
- ***Crystallography:*** In operation, and handling of Bruker SMART APEX CCD diffractometer, data collection, data reduction, structure solution and refinement using SHELX, WINGX and other crystallographic softwares.
- ***Spectroscopy:*** In operation and handling NMR, FT-IR (KBr), UV-visible, fluorescence, ESI-MS, Circular Dichroism spectrophotometers (both in solid and solution). Analysis and interpretation of infrared, electronic, mass spectra, EPR, magnetic moment and NMR spectral data.
- ***Electrochemistry:*** Studies of redox behavior of metal complexes and ligands by cyclic voltammetry. Mechanistic studies by Electrochemistry.
- ***DNA binding & DNA cleavage Study:*** Binding of small molecules with DNA by emission spectroscopy, absorption spectroscopy, CD spectral measurements, DNA melting studies, viscosity. Studies of cleavage of plasmid supercoiled DNA by oxidative (chemical nuclease) or by hydrolytic pathway by agarose gel-electrophoresis. Mechanistic investigations, relegation experiments.
- ***Roki Program:*** Simulation of the EPR spectra of inorganic complexes.
- ***PSEQUAD Program:*** To obtain the binding constant values from protein-complex titration spectra (CD and UV-vis spectra).
- ***Molecular Imaging:*** Hands-on experience in atomic force microscopy (AFM).

TEACHING EXPERIENCE:

- Supervised and instructed M.Sc. and Ph.D. students on advanced synthetic inorganic techniques, spectroscopic analysis and small molecule-nucleic acid interactions during postdoctoral training.
- Taught B.Sc. Honours and General students for 6 years

Courses Taught:

- ***Theory:*** Atomic Structures; Chemical Bonding; Chemical Periodicity; Radioactivity; Group Chemistry; Compounds of Noble gases; Acids and Bases; Inorganic Quantum Chemistry; Molecular Orbital Theory; Metallic Bond; Coordination Complexes; Crystal Field Theory; Thermodynamic Aspects of Metal Complex; Chemistry of π-acid Ligands; Organometallic Compounds; Reaction in non-aqueous Solvents; Bioinorganic Chemistry; Chemistry of Lanthanides and Actinides.

- ***Practical:*** Qualitative and Quantitative Analysis of Inorganic Samples.

EXPERIENCE WITH SCIENTIFIC EQUIPMENTS:

In operation and handling Bruker SMART APEX II **CCD diffractometer**, Varian Mercury plus 400 MHz and Varian Inova 500 MHz **NMR spectrometers**. Bruker, Perkin Elmer, Thermo Nicolet **FT-IR**; Perkin-Elmer, Hitachi **UV-visible** spectrophotometers with Peltier; Perkin Elmer **Steady state fluorescence** spectrophotometer, JASCO J-720 **spectropolarimete**r, Bruker ESP 300E **EPR spectrometer**, PAR model 155 **electrochemical system**; Schott Gerate AVS 310 Automated **Viscometer**, UVITECH **Gel documentation system**; MBRAUN Unilab **Glovebox**, Metller **Thermogravimetric analyzer**.

EDITORIAL WORKS:

- ***Journal Name:*** International Journal of Analytical and Applied Chemistry
  Website: www.journalspub.com (2016-2018)

- ***Journal Name:*** American Journal of Applied and Industrial Chemistry
  Website: www.sciencepublishinggroup.com (2018-2019)

JOURNALS REVIEWED:

- Physical Chemistry Chemical Physics (RSC)
- Arabian Journal of Chemistry (ELSEVIER)
- Cryst Eng Comm (RSC)

PROJECTS REVIEWED:

- Act as a Referee for evaluation of DST-SERB projects, New Delhi, Government of India.

PROFESSIONAL RESPONSIBILITES:

- Question paper setter of N.B.U. for 1st year Honours exams. 2016, 2017 and 2018.
- Board of Examiner of N. B. U. for 2nd year Honours practical exams. 2016-2019.
- Board of Examiner of N. B. U. for 3rd year Honours practical exams. 2016-2019.
- Evaluated answer scripts of N. B. U. for 3rd year General exams. 2016 and 2017.
- Evaluated answer scripts of N. B. U. for 3rd year Hons. exam. 2019.
- Act as a Chairman of N. B. U. for moderation of 3rd year General exam. 2017 and 2018.
- Act as an External Examiner at Maynaguri College for 2nd year General Practical exam. 2017, 2018.
- Act as an Examiner of Gour Banga University for Re-assessment in 2016.
- Evaluated answer scripts of Netaji Subhas Open University in 2016 and 2017.

SEMINAR, CONFERENCES AND PRESENTATIONS:

- Seminar on Acharya Prafulla Chandra Ray and Chemistry Today (In commemoration of the 146th Birth Anniversary of Acharya Prafulla Chandra Ray) organized by the Indian Chemical Society, September 15, 2006.
- Poster Presentation on International Conference on "Stucture and Dynamics: From Micro to Macro" organized by University of Calcutta, 15-17 December, 2006, Kolkata, India.
- Seminar on Acharya Prafulla Chandra Ray and Chemistry Today (In commemoration of the 147th Birth Anniversary of Acharya Prafulla Chandra Ray) organized by the Indian Chemical Society, August 02-03, 2007, India.
- Seminar on Acharya Prafulla Chandra Ray and Chemistry Today (In commemoration of the 148th Birth Anniversary of Acharya Prafulla Chandra Ray) organized by the Indian Chemical Society, August 01-02, 2008, India.
- Poster Presentation on International Conference on "Frontiers on Functional Materials" organized by University of Calcutta, 6-7 January, 2009, Kolkata, India.
- Participated in one day Outreach Programme organized by Institute of Nano Science and Tecnology, Government of India and Ananda Chandra College, Jalpaiguri on 10th Sept. 2016.
- Poster presented in the one day State Level Seminar on "Vocational Education and Training through ODL" on 4th Sept. 2016 at Ananda Chandra College, Jalpaiguri.
- Participated in the 27th Orientation Programme from 27th July to 24th August, 2016 at UGC-HRDC in University of North Bengal.
- Participated in the 3rd Refresher Course on 'Nano-Science and Nano-Technology' from 14th Sept. 2018 to 4th Nov. 2018 at UGC-HRDC in University of Burdwan.
- Participated in one day International Seminar on "Recent Trends in Chemistry" on 3rd January 2019 at P. D. Women's College, Jalpaiguri.
- Participated Online 2nd Refresher Course in "Yoga and Wellness (MDC)" from 31-08-2021 to 13-09 2021 at UGC-HRDC in Devi Ahilya University, Khandwa Road, Indore-452017.

ONGOING AND COMPLETED PROJECTS:

- *Title:* From drug design to new materials: structural approach in emergent fields
  Ref. no: RECI/QEQ-QIN/0189/2012; *Role:* Investigator; *Contribution:* 15%;
  Duration: 01/06/2013 to 31/05/2016; *Cost:* 498869 euro
  Funding Agency: Fundação para a Ciência e a Tecnologia (FCT), Portugal.

- *Title:* From small bioactive molecules to an integrated OMICS approach: Mass Spectrometry tools for mechanistic insights into drug-like and functional properties, toxicity, and stress responses
  Ref. no: RECI/QEQ-MED/0330/2012; *Role:* Investigator; *Contribution:* 30%;
  Duration: 01/06/2013 to 31/05/2016; *Cost:* 494426 euro
  Funding Agency: Fundação para a Ciência e a Tecnologia (FCT), Portugal.

- *Title:* Development of metal-based drugs as effective therapeutic agents – Old Diseases with New Challenges
  Ref. no: SB/FT/CS-137/2014;
  Role: Principal Investigator; *Duration:* 3 years; *Cost:* 17.16 lakhs (in rupees);
  Funding Agency: DST, New Delhi, India.

RESEARCH PUBLICATIONS:

(h-index = 21, i10-index = 28, total no. of citation = 1094 Google Scholar, dated, 28th July., 2022)

1. S. Roy, T. N. Mandal, A. K. Barik, S. Pal, R. J. Butcher, M. S. El Fallah*, J. Tercero and S. K. Kar*, *"An orthogonal ferromagnetically coupled tetracopper(II) 2×2 homoleptic grid supported by μ-O_4 bridges and its DFT study"* Dalton Trans., 2007, 1229-1234. (I.F. – 4.097). N.B.: *Among top ten accessed article in March, 2007.*

2. S. Roy, T. N. Mandal, A. K. Barik, S. Gupta, R. J. Butcher, M. S. El Fallah*, J. Tercero and S. K. Kar*, *"Ferro- and anti-ferromagnetically coupled tetracopper(II) 2x2 homoleptic rectangular grids supported by both μ-O and μ-(N-N) bridges derived from a new pyrazole based polydentate Schiff base ligand–magneto-structural correlations and DFT calculation"* Dalton Trans., 2009, 8215-8226. (I.F. – 4.177)

3. S. Roy**,** T. N. Mandal, A. K. Barik, S. Gupta, R. J. Butcher, M. S. El Fallah*, J. Tercero and S. K. Kar*, ***"****A pyrazole based orthogonal ferromagnetically coupled [2x2] homoleptic square Cu4 grid: magnetostructural correlations"*, Polyhedron, 27 (2008) 105-112. (I.F. – 2.108)

4. S. Roy, T. N. Mandal, A. K. Barik, S. Gupta, R. J. Butcher, M. Nethaji**,** S. K. Kar*, *"Syntheses, characterization and X-ray crystal structures of Co(III) and Mn(II) complexes of pyrimidine derived Schiff base ligands"* Polyhedron, 27 (2008) 593-601. (I.F. – 2.108)

5. S. Roy, T. N. Mandal, A. K. Barik, S. Pal, S. Gupta, A. Hazra, R. J. Butcher, A. D. Hunter, M. Zeller, S. K. Kar*, *"Metal complexes of pyrimidine derived ligands – Syntheses, characterization and X-ray crystal structures of Ni(II), Co(III) and Fe(III) complexes of Schiff base ligands derived from S-methyl/S-benzyl dithiocarbazate and 2-S-methylmercapto-6-methyl pyrimidine-4-carbaldehyde"* Polyhedron, 26 (2007) 2603-2611. (I.F. – 2.108)

6. T. N. Mandal, S. Roy, S. Konar, A. Jana, S. Ray, K. Das, R. Saha, M. S. El Fallah*, R. J. Butcher, S. K. Kar*, *"Self-assembled tetranuclear Cu_4(II), Ni_4(II) [2x2] square grids and a dicopper(II) complex of heterocycle based polytopic ligands - EPR and Magnetic studies"* Dalton Trans., 40 (2011) 11866-11875. (I.F. – 4.177)

7. T. N. Mandal, S. Roy, S. Gupta, R. Saha, G. Mostafa, K. Das, S. Konar, A. Jana, S. Ray, M. S. El Fallah*, J. Tercero, R. J. Butcher, S. K. Kar*, *"Synthesis, structural, magnetic, DFT calculations and CShM studies of three new pentanuclear Mn(II) clusters"* Dalton Trans., 41 (2012) 413-423. (I.F. – 4.177)

8. A. Hazra, A. K. Barik, S. Pal, S. Gupta, S. Roy, R. J. Butcher , S. M. Peng, G. H. Lee , S. K. Kar*, *"Synthesis and structural studies on di-oxovanadium(V) complexes of N(4)-substituted pyrazole based thiosemicarbazones"* Polyhedron, 26 (2007) 773-781. (I.F. – 2.108)

9. S. Gupta, A. K. Barik, S. Pal, A. Hazra, S. Roy, R. J. Butcher, S. K. Kar*, *"Oxomolybdenum(VI) and (IV) complexes of pyrazole derived ONO donor ligands – synthesis, crystal structure studies and spectro-electrochemical correlation"* Polyhedron, 26 (2007) 133-141. (I.F. – 2.108)

10. S. Pal, A. K. Barik, S. Gupta, S. Roy, T. N. Mandal, A. Hazra, M. S. El Fallah*, R. J. Butcher, S. M. Peng, G. H. Lee and S. K. Kar*, *"Anion dependent formation of linear trinuclear mixed valance cobalt(III/II/III) complexes and mononuclear cobalt(III) complexes of a pyrazole derived ligand –*

Synthesis, characterization and X-ray structures" Polyhedron, 27 (2008) 357-365. (I.F. – 2.108)

11. S. Gupta, S. Pal, A. K. Barik, A. Hazra, S. Roy, T. N. Mandal, S-M Peng, G. H. Lee, M. S. El Fallah*, J. Tercero, S. K. Kar*, ***"****Synthesis, characterization and magnetostructural correlation studies on three binuclear copper complexes of pyrimidine derived Schiff base ligands"* Polyhedron, 27 (2008) 2519-2528. (I.F. – 2.108)

12. T. N. Mandal, S. Roy, A. K. Barik, S. Gupta, R. J. Butcher and S. K. Kar*, *"Unusual complexation of Cu(I) by pyrimidine/pyridine-pyrazole derived ligands exploiting the molecular function of 2-mercapto-4, 6-dimethylpyrimidine – Syntheses, crystal structures and electrochemistry"* Inorg. Chim. Acta, 362 (2009) 1315-1322. (I.F. – 1.918)

13. S. Gupta, S. Pal, A. K. Barik S. Roy, A. Hazra, T. N. Mandal, R. J. Butcher and S. K. Kar*, *"Molybdenum(VI) complexes of a few pyrimidine derived ligands and the study of a metal mediated C=N bond cleavage resulting in ligand transformation during complex formation"* Polyhedron, 28 (2009) 711-720. (I.F. – 2.108)

14. T. N. Mandal, S. Roy, A. K. Barik, S. Gupta, R. J. Butcher, and S. K. Kar*, *"Synthesis and structural characterisation of copper(II) and vanadium(V) complexes of pyridyl/pyrimidyl-pyrazole derived Schiff base ligands – Metal specific adjustment of ligand binding mode"* Polyhedron, 27 (2008) 3267-3274. (I.F. – 2.108)

15. S. Gupta, B. K. Paul, A. K. Barik, T. N. Mandal, S. Roy, N. Guchhait, R. J Butcher and S. K. Kar*, *"Modulation of fluorescence emission of 1-(2-pyridyl) pyrazole derived Schiff base ligands by exploiting their metal ion sensitive binding modes"* Polyhedron, 28 (2009) 3577-3585. (I.F. – 2.108)

16. S. Gupta, S. Roy, T. N. Mandal, K. Das, S. Ray, R. J. Butcher and S. K. Kar*, *"Synthesis, characterization and spectrochemical studies on a few binuclear μ-oxo Molybdenum(V) complexes of pyrimidine derived Schiff base ligands"* J. Chemical Sciences, 122 (2010) 239-245. (I.F. – 1.085)

17. S. Roy, T. N. Mandal, K. Das, R. J. Butcher, A. L. Rheingold and S. K. Kar*, *"Syntheses, characterization and X-ray crystal structures of two cis-dioxovanadium(V) complexes of pyrazole derived Schiff base ligands"* J. Coord. Chem., 63 (2010) 2146-2157. (I.F. – 1.756)

18. K. Das, T. N. Mandal, S. Roy, S. Gupta, A. K. Barik, P. Mitra, A. L. Rheingold and S. K. Kar*, *"Syntheses, characterization, X-ray crystal structures and emission properties of Copper(II), Zinc(II) and Cadmium(II) complexes of pyridyl-pyrazole derived Schiff base ligand - metal selective ligand binding modes"* Polyhedron, 29 (2010) 2892-1899. (I.F. – 2.108)

19. A. Hazra, S. Gupta, S. Roy, T. N. Mandal, K. Das, S. Konar, A. Jana, S. Ray, R. J. Butcher and S. K. Kar*, *"Alkali metal ion mediated self-assembly of vanadium(V) ions and pyrazole based polydentate ligands leading to formation of helix, double helix and supramolecular cage like structures"* Polyhedron, 30 (2011) 187-194. (I.F. – 2.108)

20. K. Das, T. N. Mandal, S. Roy, A. Jana, S. Konar, C. M. Liu, A. K. Barik and S. K. Kar*, *"Syntheses, Crystal structures and Magnetic Properties of two Dicopper (II) complexes and a Zigzag 1-D Cu(II) Complex of a Bidentate Pyridyl-pyrazole Ligand"* Polyhedron, 30 (2011) 715-724. (I.F. – 2.108)

21. T. N. Mandal, S. Roy, S. Gupta, K. Das, R. Saha, G. Mostafa, R. J. Butcher, C.-M. Liu, S. K. Kar*, *"A 1D Cu(II) coordination polymer exhibiting ferromagnetic interactions and a mononuclear Cu(II) complex of substituted pyrazole carboxylic acids: Synthesis, characterization and crystal structure"* Polyhedron, 30 (2011) 1571-1578. (I.F. – 2.108)

22. T. N. Mandal, S. Roy, S. Gupta, B. K. Paul, R. J. Butcher, A. L. Rheingold, S. K. Kar*, *"Syntheses, characterization, X-ray crystal structures and emission properties of five oxovanadium(V) complexes with pyridyl/pyrimidyl–pyrazole derived ditopic ligands"* Polyhedron, 30 (2011) 1595-1603. (I.F. – 2.108)

23. S. Roy*, R. J. Butcher, M. S. El Fallah*, J. Tercero and J. C. Pessoa, *"An unusual half-open cubane like tetranuclear copper(II) complex supported by both μ-alkoxo and μ_3-hydroxo bridges: Structure, magnetic properties, EPR and DFT studies"* Polyhedron, 53 (2013) 269-277. (I.F. – 2.108)

24. S. Mehtab, G. Gonçalves, S. Roy, A. I. Tomaz, T. S.-Silva, M. F. A. Santos, M. J. Romão, T. Jakusch, T. Kiss, J. C. Pessoa*, *"Interaction of vanadium(IV) with human serum apo-transferrin" J. Inorg. Biochem.,* 121 (2013) 187-195. (I.F. – 3.277)

25. J.C. Pessoa*, G. Gonçalves, S. Roy, I. Correia, S. Mehtab, M.F.A. Santos, T. Santos-Silva, *"New insights on vanadium binding to human serum transferrin"* Inorg. Chim. Acta, 420 (2014) 60-68. (I.F. – 1.918)

26. I. Correia, P. Adão, S. Roy, M. Wabba, C. Matos; M. R. Maurya, F. Marques, F. R. Pavan, C. Q Leite, J. C. Pessoa*, *"Hydroxyquinoline derived vanadium (IV and V) and copper(II) complexes as potential anti-tumor and anti-tuberculosis agents"* J. Inorg. Biochem., 141 (2014) 83-93. (I.F. – 3.277)

27. A. Karmakar, C. L. Oliver*, S. Roy, L. R. Öhrström, *"Synthesis, Structure, Topology and Catalytic Application of a Novel Cubane-based Copper(II) Metal–Organic Framework derived from a Flexible Amido Tripodal Acid"* Dalton Trans., 44 (2015) 10156-10165. N.B.: *Among hot articles in 2015.* (I.F. – 4.177)

28. I. Correia*, S. Roy, C. P.Matos, S. Borovic, N. Butenko, I. Cavaco, F. Marques, J. Lorenzo, A. Rodriguez, V. Moreno, J. C. Pessoa, *"Vanadium(IV) and copper(II) complexes of salicylaldimines and aromatic heterocycles: cytotoxicity, DNA binding and DNA cleavage properties"* J. Inorg. Biochem., 147 (2015) 134-146. (I.F. – 3.277)

29. N. Ribeiro, S. Roy, N. Butenko, I. Cavaco, T. Pinheiro, I. Alho, F. Marques, F. Avecilla, J. C. Pessoa, I Correia,* *"New Cu(II) complexes with pyrazolyl derived Schiff base ligands: synthesis and biological evaluation"* J. Inorg. Biochem., 174 (2017) 63-75. (I.F. – 3.277)

30. I. Correia, I. Chorna, I. Cavaco, S. Roy, M. L. Kuznetsov, N. Ribeiro, G. Justino, F. Marques, T. S. Silva, M.F.A. Santos, H. M. Santos, J. L. Capelo, J. Doutch, J. C. Pessoa,* *"Interaction of $[V^{IV}O(acac)_2]$ with human serum transferrin and albumin"* Chemistry – An Asian Journal, 12 (2017) 2062-2084. (I.F. – 4.083)

31. I. Correia, S. Borovic, I. Cavaco, C. P. Matos, S. Roy, H. M. Santos, L. Fernandes, J. L. Capelo, L. Ruiz-Azuara, J. C. Pessoa,* *"Evaluation of the binding of four anti-tumor Casiopeínas® to human serum albumin"* J. Inorg. Biochem., 175 (2017) 284-297. (I.F. – 3.277)

32. S. Gupta*, B. K. Paul, S. Roy, R. J. Butcher, "*A molybdenum mediated transformation of a carbohydrazone ligand leading to the formation of a hydrazone with an enhancement of fluorescence emission*" International Journal of Current Advanced Research, 7 (2018) 11102-11107. (I.F. – 6.614)

33. S. Roy*, "*Cancer – a hopeless infection – Present scenario and where we are today*?" International Journal of Research and Analytical Reviews, 1 (2022) 944-952. (I.F. – 7.17)