

### Total Publication of the Department in last Five years

1. Kalyanmoy Jana, **Tithi Maity**, Subhas Chandra Debnath, Bidhan Chandra Samanta\* and Saikat Kumar Seth\*, Octahedral Ni(II) complex with new NNO donor Schiff base ligand: Synthesis, structure and Hirshfeld surface, *Journal of Molecular Structure*, 1130, 844-854,(2017)
2. Kalyanmoy Jana, **Tithi Maity**, Tufan Singha Mahapatra, Pradeep Kumar Das Mohapatra, Subhas Chandra Debnath, Somnath Das, Maidul Hossain\*, Bidhan Chandra Samanta\* Square pyramidal copper(II) complex with Schiff base ligand: synthesis, crystal structure, antibacterial and DNA interaction studies, *Transition Metal Chemistry*, 42,69-78,(2017)
3. Kalyanmoy Jana, **Tithi Maity**, Somnath Das, Maidul Hossain, Subhas Chandra Debnath, Bidhan Chandra Samanta\*, Saikat Kumar Seth\*, Synthesis, structure and biological properties of a Co(II) complex with tridentate Schiff base ligand., *Journal of co-ordination Chemistry*, (Accepted for publication)
4. **Tithi Maity**, Haridas Mandal, Antonio Bauza, Bidhan Chandra Samanta\*, Antonio Frontera\*, Saikat Kumar Seth\*, Quantifying conventional C-H.. $\pi$  (aryl) and unconventional C-H.. $\pi$  (chelate) interactions in dinuclear Cu(II) complexes: Experimental observations, Hirshfeld surface and theoretical DFT study, *New Journal of Chemistry*, (Accepted for publication)
5. Manik Dasa , Paola Brandaob , Soumya Sundar Matic , Saikat Royd , Anakuthil Anoopd , Anjima Jamese , Susmita Dee , Uttam Kumar Dasf , Soumik Lahag , Jisu Mondalg , Bidhan Chandra Samantah and **Tithi Maitya**, *Journal of Biomolecular Structure and Dynamics*, Published online: 29 Nov 2021, <http://dx.doi.org/10.1080/07391102.2021.2001377>
6. 2. Kalyanmoy Jana, Ushasi Pramanik, Kapil S Ingle, Ribhu Maity, Saptarshi Mukherjee, Susanta K Nayak, Subhas Chandra Debnath, **Tithi Maity**, Swapan Maity, Bidhan Chandra Samanta, *Journal of Photochemistry Photobiology A: Chemistry*, 2022, 402, 113565
7. Dibyendu Satapathi, Manik Das, Karunamoy Rajak, Soumik Laha, Md. Maidul Islam, Indranil Choudhuri, Nandan Bhattacharyya, Sinjan Das, Bidhan Chandra Samanta, Tithi Maity, *Applied Organometallic Chemistry*, Published in 7<sup>th</sup> October, 2021 <https://doi.org/10.1002/aoc.6473>
8. Ribhu Maity, Nayim Sepay, Ushasi Pramanik, Kalyanmoy Jana, Saptarshi Mukherjee, Swapan Maity, Dasarath Mal, **Tithi Maity**, Bidhan Chandra Samanta, *The Journal of Physical Chemistry B*, 2021, 125, 41, 11364–11373
9. Manik Das, Biplab Koley, Uttam Kumar Das, Arijit Bag, Soumik Laha, Bidhan Chandra Samanta, Indranil Choudhuri, Nandan Bhattacharyya, **Tithi Maity**, *Journal of Photochemistry Photobiology: A Chemistry*, 2021, 415, 113302
10. Manik Das, Somali Mukherjee, Paula Brandao, Saikat Kumar Seth, Santanab Giri, Soumya Sundar Mati, Bidhan Chandra Samanta, Soumik Laha, **Tithi Maity**, *ACS*

OMEGA, 2021, 6, 3659-3674

11. Kalyanmoy Jana, Ribhu Maity, Horst Puschmann, Anindita Mitra, Rita Ghosh, Subhas Chandra Debnath, Aparna Shukla, Arun Kumar Mahanta, **Tithi Maity**, Bidhan Chandra Samanta, *Inorganica Chimica Acta*, 2021, 515, 120067.
12. Manik Das, Somali Mukherjee, Biplab Koley, Indranil Choudhuri, Nandan Bhattacharyya, Pritam Roy, Bidhan Chandra Samanta, Manas Barai, **Tithi Maity**, *New Journal of Chemistry*, 2020, 40, 18347-18361
13. K. Jana, S. Das, H. Puschman, S. C. Debnath, A. Shukla, A. K. Mohanta, H. Hosen, B. C. Samanta, **T. Maity**, *inorganica Chimica Acta*, 487, 2019, 128-137.
14. Prasun Acharya, Ribhu Maity, Arun Kuila, **Tithi Maity**, Swapan Maity, Nayim Sepay, Bidhan Chandra Samanta, *Applied Organometallic Chemistry*, 2022, 36, e6640
15. Arun Kuila, Ribhu Maity, Prasun Acharya, Paula Brandão, **Tithi Maity**, Nayim Sepay, Bidhan Chandra Samanta, *New Journal of Chemistry*, 2022
16. Shobhraj Halder, Gonela Vijaykumar, Alope Kumar Ghosh, Luca Carrella, Manindranath Bera 'Linking  $\text{PO}_4^{3-}$  and  $\text{HAsO}_4^{2-}$  anions with a dinuclear  $[\text{Zn}^{\text{II}}_2]$  complex: formation and stabilization of novel decanuclear metallomacrocyclic  $[\text{Zn}^{\text{II}}_{10}]$  and tetranuclear  $[\text{Zn}^{\text{II}}_4]$  clusters', **Polyhedron**. 2017, 121, 130–141.
17. Gopal C. Giri, Shobhraj Halder, **Alope Kumar Ghosh**, Priyanka Chowdhury, Luca Carrella, Utpal Ghosh, Manindranath Bera, 'New cyclic tetranuclear copper(II) complexes containing quadrilateral cores: Synthesis, structure, spectroscopy and their interactions with DNA in aqueous solution', **J. Mol. Str.** 2017, 1142, 175-184.
18. Bijan Roy, Rupak Saha, **Alope Kumar Ghosh**, Yogesh Patil and Partha Sarathi Mukherjee, 'Versatility of Two Diimidazole Building Blocks in Coordination Driven Self-Assembly', **Inorg. Chem.** 2017, 56, 3579–3588.
19. Bijaneswar Mondal, **Alope Kumar Ghosh** and Partha Sarathi Mukherjee, 'Reversible Multistimuli Switching of a Spiropyran-Functionalized Organic Cage in Solid and Solution', **J. Org. Chem.** 2017, 82, 7783–7790.
20. M. Das, A. K. Ghosh, R. Clérac, C. Mathonière, D. Ray, Ligand exchange reaction in open-face  $[\text{Cu}_4(\mu_3\text{-OH})_2]$  cubane aggregates: Synthesis, structural change and difference in magnetic interactions, **Polyhedron**, 2018, 146, 136–144.
21. R. Saha, A.K.Ghosh, R. N. Samajdar and P. S. Mukherjee, Self-Assembled  $\text{Pd}^{\text{II}}$  Molecular Spheroids and Their Proton Conduction Property, *Inorganic Chemistry*, 2018, 57, 11, 6540-6548.
22. N. Mukerjee, A. K. Ghosh and M. Dolai, Treatments Discover so far on SARS COVID-19: A Brief Report., 2021, 10, 6, . DOI: 10.20959/wjpr20216-20568.
23. **Alope Kumar Ghosh**, Urmila Saha, Surajit Biswas, Zeid A. AlOthman, Md Ataul Islam, and Malay Dolai "Anthracene-triazole-dicarboxylate-Based  $\text{Zn}(\text{II})$  2D Metal Organic Frameworks for Efficient Catalytic Carbon Dioxide Fixation into Cyclic Carbonates under a Solvent-Free Condition and Theoretical Study for the Reaction Mechanism" **Ind. Eng. Chem. Res.**, 2022, 61,1, 175–186
24. Hemanta Kumar Datta, Debsankar Das, Andreas Koschella, Tapoti Das, Thomas Heinze, Subrata Biswas, Sujata Chaudhuri, Structural elucidation of a

- heteropolysaccharide from the wild mushroom *Marasmiellus palmivoru* and its immune-assisted anticancer activity, *Carbohydrate Polymers*, 211, 272-280-352, 2019
25. M. Dolai, E Moreno-Pineda, W Wernsdorfer, M Ali, A Ghosh, "Exchange-Bias Quantum Tunneling of the Magnetization in a Dysprosium Dimer" *The J phys. Chem A*, 2021, **125**, 8230-8237.
  26. B Das, M Dolai, A Dhara, A Ghosh, S Mabhai, A Misra, S Dey, A Jana, "Solvent-Regulated Fluorimetric Differentiation of Al<sup>3+</sup> and Zn<sup>2+</sup> Using an AIE-Active Single Sensor" *The J phys. Chem A*, 2021, **125**, 1490-1504.
  27. AK Ghosh, U Saha, S Biswas, ZA ALOthman, MA Islam, M Dolai\*, "Anthracene-triazole-dicarboxylate-Based Zn (II) 2D Metal Organic Frameworks for Efficient Catalytic Carbon Dioxide Fixation into Cyclic Carbonates under Solvent-Free Condition" *Indus. Eng. Chem. Res.* 2022, **61**, 175–186.
  28. U Saha, S Mabhai, B Das, GS Kumar, P Brandão, M Dolai\*, "Combined theoretical and experimental investigation of a DNA interactive poly-hydroxyl enamine tautomer exhibiting "turn on" sensing for Zn<sup>2+</sup> in pseudo-aqueous medium" *New J. Chem.* 2021, **45**, 20806-20817.
  29. B Das, M Dolai, A Ghosh, A Dhara, A Das Mahapatra, D Chattopadhyay, S Mabhai, A Jana, S Dey, A Misra, "A bio-compatible pyridine–pyrazole hydrazide based compartmental receptor for Al<sup>3+</sup> sensing and its application in cell imaging" *Analytical Methods*, 2021, **13**, 4266-4279.
  30. R Khatun, M Dolai, M Sasmal, N Sepay, M Ali, "Bovine serum albumin interactive one dimensional hexanuclear manganese (III) complex: synthesis, structure, binding and molecular docking studies" *New J. Chem.* 2021, **45**, 12678-12687.
  31. S. Mabhai, M. Dolai, S. K. Dey, S. M. Choudhury, B. Das, S. Dey, A. Jana, D. R. Banerjee, "A naphthalene-based azo armed molecular framework for selective sensing of Al<sup>3+</sup>" *New J. Chem.* 2022, **46**, 6885-6898
  32. B. Das, A. Ghosh, D. P. Dorairaj, M. Dolai, R. Karvembu, S. Mabhai, H. Im, S. Dey, A. Jana, A. Misra, "Multiple ion (Al<sup>3+</sup>, Cr<sup>3+</sup>, Fe<sup>3+</sup>, and Cu<sup>2+</sup>) sensing using a cell-compatible rhodamine-phenolphthalein-derived Schiff-base probe" *J. Mol. Liquids*, 2022, **354**, 118824.
  33. B. Das, A. Ghosh, S. Yesmin, S. J. Abbas, M. Dolai, S. Mabhai, A. Jana, S. Dey, A. Misra, "A cell-compatible phenolphthalein-aminophenol scaffold for Al<sup>3+</sup> sensing assisted by CHEF phenomenon" *J. Mol. Struc.* 2022, **1253**, 132295
  34. P Chakraborty, S Biswas, A Das, M. Dolai, SM Islam, "Di-formylphloroglucinol derived imine based covalent organic frameworks (PHTA) as efficient organocatalyst for conversion of isocyanates to urea derivatives" *Molecular Catalysis*, 2022, **522**, 112213.
  35. B Das, M Dolai, A Dhara, S Mabhai, A Jana, S Dey, A Misra, "Acetate ion augmented fluorescence sensing of Zn<sup>2+</sup> by Salen-based probe, AIE character, and application for picric acid detection" *Analytical Science Advances*, 2021, **2**, 447-463.
  36. K Das, M Dolai, S Chatterjee, S Konar, "Synthesis, X-ray crystal structure and BVS calculation of Co (II) complex of pyrimidine derived Schiff base ligand: Approached by Hirshfeld surface analysis and TDDFT calculation" *J. Mol. Struc.* 2021, **1236**, 130269.
  37. S. Mabhai, M. Dolai, S. K. Dey, S. M. Choudhury, B. Das, S. Dey, A. Jana, D. R. Banerjee, "A cell-compatible red light-emitting multianalyte chemosensor via three birds, one stone strategy" *J. Photochem. and Photobiol. A*, 2021, **404**, 112889.

38. S. Mabhai, **M. Dolai**, S. K. Dey, S. M. Choudhury, B. Das, S. Dey, A. Jana, D. R. Banerjee, "A naphthalene-based azo armed molecular framework for selective sensing of  $Al^{3+}$ " **New J. Chem.** 2022, **46**, 6885-6898
39. U. Saha, S. Chatterjee, **M. Dolai\*** and G.S. Kumar, "Biophysical and Thermodynamic Investigations on the Differentiation of Fluorescence Response towards Interaction of DNA: A Pyrene-Based Receptor versus Its Fe(III) Complex" **ACS Appl. Bio Mater.** 2020, **3**, 7810–7820.
40. U. Saha, **M. Dolai\***, G.S. Kumar, R. J. Butcher, and S. Konar, "New DNA-Interactive Manganese(II) Complex of Amidooxime: Crystal Structure, DFT Calculation, Biophysical and Molecular Docking Studies" **J. Chem. Eng. Data**, 2020, **65**, 5393–5404.
41. **M. Dolai\***, U. Saha, S. Biswas, S. Chatterjee and G.S. Kumar, "DNA intercalative trinuclear Cu(II) complex with new trans axial nitrato ligation as an efficient catalyst for atmospheric  $CO_2$  fixation to epoxides" **CrystEngComm**, 2020, **22**, 8374-8386.
42. U. Saha, **M. Dolai** and G.S. Kumar, "Targeting nucleic acid with a bioactive fluorophore: Insights from spectroscopic and calorimetric studies" **J. Mol. Struct.**, 2020, **1220**, 128690-128696.
43. **M. Dolai\***, U. Saha, "A simple Cu(II) complex of phenolic oxime: synthesis, crystal structure, supramolecular interactions, DFT calculation and catecholase activity study" **Heliyon**, 2020, **6**, e04942.
44. U. Saha, B. Das, **M. Dolai\***, R. J. Butcher and G. S. Kumar, "Adaptable DNA interactive probe proficient of selective turn on sensor for  $Al^{3+}$ : insight from crystal structure, photo-physical studies and molecular logic gate" **ACS Omega**, 2020, **5**, 18411-18423.
45. D. Dutta, **Malay Dolai**, S. Biswas, A. Dutta and M. Ali, "Multidimensional  $Cu^{II}$  incorporated POMs  $[K'_2Cu^{II}(en)_2(\beta-Mo_8O_{26})]_n$  and  $[K'_2Cu^{II}_3(H_2O)_{10}(W_{12}O_{40})_0.2(H_2O)]_n$ : Syntheses, structures and catalytic epoxidation" **Polyhedron**, 2020, **176**, 114204.
46. S. Biswas, R. Khatun, **Malay Dolai**, I. H. Biswas, N. Haque, M. Sengupta, M. S. Islam and S. M. Islam, "Catalytic formation of N3-substituted quinazoline-2, 4 (1 H, 3 H)-diones by Pd (ii) EN@GO composite and its mechanistic investigations through DFT calculations" **New J. Chem.**, 2020, **44**, 141-151.
47. S. Pramanik, S. Konar, K. Chakraborty, T. Pal, S. Das, S. Chatterjee, **Malay Dolai** and S. Pathak, "Investigation of electrical conductance properties, non-covalent interactions and TDDFT calculation of a newly synthesized copper (II) metal complex" **J. Mol. Struct.**, 2020, **1206**, 127663.
48. **Malay Dolai**, M. Ali, C.Rajnak, J. Titiš and R. Boča, "Slow magnetic relaxation in Cu(II)-Eu(III) and Cu(II)-La(III) complexes" **New J. Chem.**, 2019, **43**, 12698-12701.
49. U. Saha, **Malay Dolai**, S. Konar, A. Das, R. J. Butcher, G. S. Kumar and S. Mukhopadhyay, "Design and synthesis of a sulphur containing Schiff base drug: DNA binding studies and theoretical calculations" **J. Biomole. Struct. and Dynamics**, 2020, **21**, 1-9.
50. U. Saha, **Malay Dolai** and G.S. Kumar, "Adaptable sensor for employing fluorometric detection of methanol molecules: theoretical aspects and DNA binding studies" **New J. Chem.**, 2019, **43**, 8982-8992.
51. A. K. Das, S. Goswami, and **Malay Dolai**, "Design, synthesis and structural optimization of two click modified butterfly molecules: Aggregation induced ratiometric fluorescence change and

*ICT associated hydrogen bonding effect in solvatochromic analysis*” *Journal of Molecular Structure*, 2019, **1181**, 329-337.

52. S. Mabhai, **Malay Dolai**, S. K. Dey, A. Dhara, S. Maiti Choudhury, B. Das, S. Dey and A. Jana, “*Rhodamine-azobenzene based single molecular probe for multiple ions sensing: Cu<sup>2+</sup>, Al<sup>3+</sup>, Cr<sup>3+</sup> and its imaging in human lymphocyte cells*” *Spectrochimica Acta Part A: Mole. and Biomole. Spectro.*, 2019, **219**, 319–332.
53. S. Konar, S. K. Datta, **Malay Dolai**, A. Das, S. Pathak, S. Chatterjee and K. Das “*Synthetic and structural investigations of Cd(II) complexes of tetradentate pyrimidine based Schiff base ligand: Insight through non-covalent interactions, TDDFT calculation and Hirshfeld surface analysis*”, *Journal of Molecular Structure*, 2019, **1178**, 682-691.
54. **Malay Dolai**, U. Saha, G. S. Kumar, E. Zangrando and M. Ali, “*Synthesis, structure and DNA binding studies of oxime based [Mn<sub>3</sub>(μ<sub>3</sub>-O)]<sup>7+</sup> complex*” *Inorganica Chimica Acta*, 2018, **483**, 211-217.
55. **Malay Dolai\***, U. Saha, A. K. Das and G. S. Kumar, “*Single sensors for multiple analytes employing fluorometric differentiation for Cr<sup>3+</sup> and Al<sup>3+</sup> in semi-aqueous medium with bio-activity and theoretical aspects*” *Anal. Methods* 2018, **10**, 4063-4072.
56. **Malay Dolai**, U. Saha, G. S. Kumar and M. Ali, “*Amidooxime-Based Mononuclear Mn(II) Complexes: Synthesis, Characterization, and Studies on DNA Binding and Nuclease Activity*” *ChemistrySelect*, 2018, **3**, 6935 – 6941.