

# DR. SHYAMAPADA SHIT

Associate Professor (W.B.E.S.)

Chemistry

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**Specialization:** Inorganic Chemistry

**Major Interest Areas:** Inorganic Chemistry, Coordination Chemistry.

## Academic Credentials:

- Associate Professor in Chemistry (Aug.2016-till date): Jalpaiguri Government Engineering College, Jalpaiguri & P. R. Thakur Government College, Thakurnagar, North 24 Parganas, West Bengal, India
- Assistant Professor (Stage 3) in Chemistry (Aug. 2013-July 2016): Jalpaiguri Government Engineering College, Jalpaiguri, West Bengal, India
- Assistant Professor (Stage 2) in Chemistry (Erstwhile Senior Lecturer in Chemistry) (Aug.2008-July 20013): Krishnagar Government College, Nadia, & Jalpaiguri Government Engineering College, Jalpaiguri, West Bengal, India
- Lecturer in Chemistry (Aug. 2002-July 2008): Krishnagar Government College, Nadia, West Bengal, India
- Ph.D. (March 2003-October 2010): Jadavpur University, Kolkata, India
- M.Sc. (1997-1999): Indian Institute of Technology, Kharagpur, India

## Teaching Experience

- Krishnagar Government College (01.08.2002-17.12.2012)
- Jalpaiguri Government Engineering College (19.12.2012-02.03.2020)
- P. R. Thakur Government College (03.03.2020-till date)

## Courses taken:

- Inorganic Chemistry [B.Sc. (Honours & Generic)]

## Research Interest:

- Coordination Chemistry, Small molecule X-ray Crystallography
- Spectroscopy

## Research Grants Received:

- 2013-2015 UGC Minor Research Project (Grant: 1.885 Lakhs)

## Research Experience:

- March, 2003 to till date: At Jadavpur University and different colleges where services rendered.

- June 2011-Aug. 2011: Summer Research Fellowship Programme 2011 at Solid State and Structural Chemistry Unit, Indian Institute of Science, Bangalore, India (Sponsored by Indian Academy of Sciences).

## List of Publications:

1. "Synthesis, Characterization and Magnetic Studies of a Tetranuclear Manganese(II/IV) Compound Incorporating an Amino-Alcohol Derived Schiff Base" Nandy M, Shit S, Rosair G, Gómez-García CJ. *Magnetochemistry* 2018, 4, 57.
2. "Synthesis of 1,1'-(2,6-dihydroxy-2,6-dimethyl-3,7-dioxabicyclo [3.3.1]nonane-1,5-diyl)diethanone dihydrate: crystal structure and quantitative analysis of molecular interaction via molecular electrostatic potential and Hirshfeld surface analysis" Saha D, Ghosh S, Shit S. *Phase Transitions* 2018, 91, 681-690.
3. "Trigonal dodecahedral sodium coordination in a trinuclear copper(II)-sodium complex incorporating a salen-Type compartmental Schiff base" Nandy M, Saha D, Rizzoli C, Shit S. *Z. Naturforsch* 2017, 72b, 133-140.
4. "Synthesis, characterization, and crystal structure of a four-coordinate cobalt(II) compound incorporating bis(3,5-dimethylpyrazol-1-yl)methane and cyanate" Nandy M, Saha A, Shit S. *Inorg. Nano-Met. Chem.* 2017, 47, 1254-1259.
5. "Crystal structure, characterization, and magnetic properties of a 1D copper(II) polymer incorporating a Schiff base with carboxylate side arm" Shit S, Nandy M, Rizzoli C, Desplanches C, Mitra S. *J. Chem. Sci.* 2016, 128, 913-920.
6. "Synthesis, crystal structure and fluorescence properties of two dinuclear zinc(II) complexes incorporating tridentate (NNO) Schiff bases" Shit S, Nandy M, Saha D, Zhang L, Schmitt W, Rizzoli C, Guru Row TN. *J. Coord. Chem.* 2016, 69, 2403-2414.
7. "Synthesis, crystal structure, and Hirshfeld surface analysis of a new mixed ligand copper(II) complex" Shit S, Marschner C, Mitra S. *Acta Chim. Slov.* 2016, 63, 129-137.
8. "Temperature dependent growth of cadmium(II) oxide nanocrystals: studies on morphology based optical, electrical and dielectric properties" Shit S, Layek A. *J. Mater. Sci.: Mater. Electron.* 2016, 27, 3435-3442.
9. "Syntheses, structural variations and fluorescence studies of two dinuclear zinc(II) complexes of a Schiff base ligand with an extended carboxylate side arm" Shit S, Sasmal A, Dhal P, Rizzoli C, Mitra S. *J. Mol. Struct.* 2016, 1108, 475-481.
10. "Double azido/cyanato bridged copper(II) dimers incorporating tridentate nitrogen donors Schiff base: Structure, EPR and magnetic studies" Nandy M, Shit S, Garribba E, Gomez-Garcia CJ, Mitra S. *Polyhedron* 2015, 102, 137-146.
11. "Syntheses, characterization, and crystal structures of few dioxomolybdenum(VI) complexes incorporating tridentate hydrazones" Nandy M, Shit S, Rizzoli C, Pilet G, Mitra S. *Polyhedron* 2015, 88, 63-72.
12. "Ferromagnetic copper(II)-copper(II) interaction in a single chlorido and dicyanamido bridged mixed-valence copper (I/II) 2D polymer generated by in situ partial reduction of copper (II)" Nandy M, Shit S, Dhal P, Rizzoli C, Gómez-García CJ, Mitra S. *J. Coord. Chem.* 2015, 68, 916-927.
13. "Azide/thiocyanate incorporated cobalt(III)- Schiff base complexes: Characterizations and catalytic activity in aerobic epoxidation of olefins" Shit S, Saha D, Saha D, Guru Row TN, Rizzoli C. *Inorg. Chim. Acta* 2014, 415, 103-110.
14. "A novel chemical reduction method of growing ZnO nanocrystals and their optical property" Shit S, Kamilya T, Samanta PK. *Mater. Lett.* 2014, 118, 123-125.
15. "A dinuclear cadmium(II) Schiff base thiocyanato complex: Crystal structure and fluorescence" Shit S, Sankolli R, Guru Row T N. *Acta Chim. Slov.* 2014, 61, 59-66.
16. "A ferromagnetically coupled single hydroxido bridged tetranuclear nickel(II) Schiff base complex incorporating a Ni<sub>4</sub>O<sub>4</sub> cubane core: Crystal structure and magnetic study" Shit S, Nandy M, Rosair G, Gómez-García CJ, Borrás Almenar JJ, Mitra S.; *Polyhedron* 2013, 61, 73-79.

17. "A new 3D cadmium(II) coordination polymer having  $\mu_4$ -oxalato,  $\mu$ -aquo and  $\mu$ -chlorido bridges: Crystal structure, solid state fluorescence and thermal behaviour" Dey SK, Shit S, Sankolli R, Guru Row TN. *J. Mol. Struct.* 2013, 1048, 6-10.
18. "Sodium mediated self-assembly of two nickel(II) Schiff base complexes: crystal structure and characterizations" Das A, Shit S, Köckerling M, Batsanov AS, Mitra S. *J. Coord. Chem.* 2013, 66, 2587-2596.
19. "A hexanuclear copper(II) Schiff base complex incorporating rare "bicapped cubane" core: Structural aspects, magnetic properties and EPR study" Shit S, Nandy M, Rosair G, El Fallah MS, Ribas J, Garribba E, Mitra S. *Polyhedron* 2013, 52, 963-969.
20. "An antiferromagnetically coupled hexanuclear copper(II) Schiff base complex containing phenoxo and dicyanamido bridges: Structural aspects and magnetic properties" Talukder P, Shit S, Sasmal A, Batten SR, Moubaraki B, Murray KS, Mitra S. *Polyhedron* 2011, 30, 1767-1773.
21. "2,2'-Bipyridyl-acetylphenolato mixed ligand copper(II) complexes: syntheses, characterizations and catalytic activity in styrene epoxidation" Shit S, Yadava U, Saha D, Fröhlich R. *J. Coord. Chem.* 2013, 66, 66-76.
22. "A bimetallic cyano-bridged complex based on nickel(II) and pentacyanonitrosylferrate(II) precursors: Characterization, crystal structure, and magnetic properties" Talukder P, Shit S, Nöth H, Westerhausen M, Kneifel AN, Mitra S. *Transition Met. Chem.* 2012, 37, 71-77.
23. "Framework Solids Based on Copper(II) Halides (Cl/Br) and Methylene-Bridged Bis(1-hydroxybenzotriazole): Synthesis, Crystal Structures, Magneto-Structural Correlation, and Density Functional Theory (DFT) Studies" Sasmal A, Shit S, Rizzoli C, Wang H, Desplanches C, Mitra S. *Inorg. Chem.* 2012, 51, 10148-10157.
24. "A new tetranuclear copper(II) Schiff base complex containing  $\text{Cu}_4\text{O}_4$  cubane core: Structural and spectral characterizations" Shit S, Rosair G, Mitra S. *J. Mol. Struct.* 2011, 991, 79-83.
25. "First Report on Thermally Stable Cadmium Carbonyl Complex Containing an Interesting Chloroaryl Bridge: Isolation and Characterization" Dey SK, Shit S, Dey SP, Mitra S, Malik KMA. *Chem. Lett.* 2011, 40, 810-812.
26. "The key role of hydrogen bonding in the nuclearity of three copper(II) complexes with hydrazone-derived ligands and nitrogen donor heterocycles" Shit S, Dey SK, Rizzoli C, Zangrando E, Pilet G, Gómez-García CJ, Mitra S. *Inorg. Chim. Acta* 2011, 370, 18-26.
27. "Three new coordination complexes of cobalt(III), manganese(II), and copper(II) with N,N,O-donor hydrazone ligands: syntheses and structural characterizations" Shit S, Chakraborty J, Samanta B, Slawin AMZ, Gramlich V, Mitra S. *Struct. Chem.* 2009, 20, 633-642.
28. "Syntheses, characterization and crystal structures of two square-planar Ni(II) complexes with unsymmetrical tridentate Schiff base ligands and monodentate pseudohalides" Shit S, Sen S, Mitra S, Hughes DL. *Transition Met. Chem.* 2009, 34, 269-274.
29. "Synthesis, structure and fluorescence properties of a trinuclear Zn(II) complex with N,N,O-donor Schiff base ligands and bridging acetates" Shit S, Chakraborty J, Samanta B, Rosair GM, Mitra S. *Z. Naturforsch.* 2009, 64b, 403-408.
30. "A novel centrosymmetric dinuclear cadmium(II) Schiff base complex with unusual bridging carboxylate: Synthesis, crystal structure and luminescence properties" Shit S, Chakraborty J, Samanta B, Pilet G, Mitra S. *J. Mol. Struct.* 2009, 919, 361-365.
31. "A new mixed ligand coordination polymer of Mn(II): structural aspect and cryomagnetic study" Shit S, Chakraborty J, Howard JAK, Spencer EC, Desplanches C, Mitra S. *Struct. Chem.* 2008, 19, 553-558.
32. "Structural and spectral studies of a new copper(II) complex with a tridentate thiosemicarbazone ligand" Sen S, Shit S, Mitra S, Batten SR. *Struct. Chem.* 2008, 19, 137-142.
33. "A novel mixed ligand coordination polymer of copper(II): Synthesis, characterisation and magneto-structural correlation" Shit S, Chakraborty J, Sen S, Pilet G, Desplanches C, Mitra S. *J. Mol. Struct.* 2008, 891, 19-24.

34. "Synthesis, characterisation and crystal structure of a copper(II) dichromate complex with the N,N'-Bis(2-pyridylmethylene)butane-1,4-diamine Schiff base ligand" Samanta B, Chakraborty J, Shit S, Batten SR, Jensen P, Mitra S. Z. Naturforsch 2007, 62b, 495-500.
35. "Synthesis and magneto-structural correlation of a new maleato bridged copper(II) coordination polymer" Shit S, Chakraborty J, Das A, Yap GPA, El. Fallah MS, Mitra S. Struct. Chem. 2007, 18, 317-323.
36. "A rare ferromagnetically coupled asymmetric doubly azido bridged copper(II) dimer with an N, N, O donor Schiff base" Shit S, Talukder P, Chakraborty J, Pilet G, El Fallah MS, Ribas J, Mitra S. Polyhedron 2007, 26, 1357-1363.
37. "Synthesis, characterisation and crystal structures of a few coordination complexes of nickel(II), cobalt(III) and zinc(II) with N'-[(2-pyridyl)methylene]salicyloylhydrazone Schiff base" Samanta B, Chakraborty J, Shit S, Batten SR, Jensen P, Masuda JD, Mitra S. Inorg. Chim. Acta 2007, 360, 2471-2484.
38. "An antiferromagnetically coupled trinuclear Cu(II) complex containing  $\mu$  (O,O'),  $\mu$  (O) carboxylates and  $\mu$  (O) phenoxide bridges" Dey SK, Shit S, Mitra S, Thompson LK, Malik KMA. Inorg. Chim. Acta 2007, 360, 1915-1920.
39. "Synthesis, structure and fluorescence of two novel manganese(II) and zinc(II)-1,3,5-benzene tricarboxylate coordination polymers: Extended 3D supramolecular architectures stabilised by hydrogen bonding" Majumder A, Shit S, Choudhury CR, Batten SR, Pilet G, Luneau D, Daro N, Sutter J-P, Chattopadhyay N, Mitra S. Inorg. Chim. Acta 2005, 358, 3855-3864.

#### List of Books/Book Chapters:

- Not Applicable

#### Patents(if any):

- Not applicable

#### List of Honours/Awards:

- Not applicable

#### Membership in scientific bodies:

- Library life membership (Indian association for the Cultivation of Science, Kolkata)
- Life membership (Chemical Research Society of India)

#### Editor/or Editorial Board Member/Reviewer:

- Served as reviewers of ELSEVIER, TAYLOR & FRANCIS, SPRINGER, and SLOVENIAN CHEMICAL SOCIETY journals

#### Lecture Presentations:

- Not applicable