



KAZI NAZRUL UNIVERSITY ASANSOL

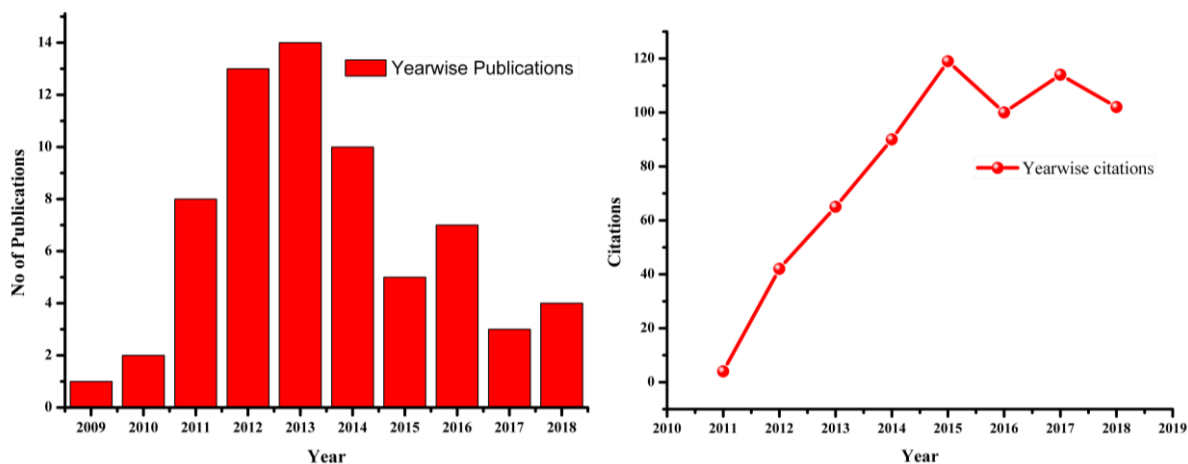
Faculty Profile

1. Name (Block Letter): Dr RAJAT SAHA
2. Department: CHEMISTRY
3. Current Designation: Assistant Professor
4. Contact Number: 08116599474
5. Contact Mail (Personal and Institutional): rajatinorg1@gmail.com;
6. Address for Communication (Present): Department of Chemistry, Kazi Nazrul University Kalla, Asansol-713340, West Bengal, India.
7. Address for Communication (Permanent): Village + Post: Chanderghat, Dist: Nadia, Pin: 714460, West Bengal, India.
8. Research Degree:

Degree	Name of the University	Date of Award
Ph.D.	Jadavpur University	25 th November, 2013

Publications: 68 Articles in Peer reviewed Journals (65 international and 3 national,)

Total Citations: 649 *h*-Index: 15 *i*-10 index: 29



(Website: <https://scholar.google.co.in/citations?user=dIK6tf0AAAAJ&hl=en>)

9. Published Papers in Journals:

Sl. No	Name of Article	Journal with page no	ISSN/ISBN No	Referred/Non-Referred	No of Co-author	Whether you are the main author	Date of Publication
1	A Bi-nuclear Cu (II)-Complex for Selective Epoxidation of Alkenes: Crystal Structure, Thermal, Photoluminescence and Cyclic Voltammetry	Inorganica Chimica Acta, 486, 352 - 360	Elsevier, 0020-1693	Referred	5	No	2019
2	Synthesis, crystal structure and antimicrobial activity of a series of cobalt (III) Schiff base complexes	Journal of Coordination Chemistry, 1-21	Taylor and Francis, 1029-0389	Referred	5	No	2018
3	Cobalt (II), nickel (II) and copper (II) complexes of N-{(2-pyridyl) methyliden}-6-coumarin: Characterization, DNA interaction, catecholase activity and theoretical interpretation	Inorganica Chimica Acta, 482, 659-668	Elsevier, 0020-1693	Referred	4	No	2018
4	Structure, spectra and electrical conductivity of copper(I) and silver(I) phosphino bridging mixed ligand complexes with coumarinyl Schiff base	Inorganica Chimica Acta, 469, 523-535	Elsevier, 0020-1693	Referred	4	No	2018
5	A Metal–Organic Framework to CuO Nanospheres of Uniform Morphology for the Synthesis of α -Aminonitriles under Solvent-Free Condition along with Crystal Structure of the Framework	<i>Cryst. Growth Des.</i> , 18, 189–199	American Chemical Society, 1528-7505	Referred	8	Yes	2018
6	Synthesis, crystal	Inorganica	Elsevier,	Referred	4	No	2017

	structure and antibacterial activity of azido complexes of cobalt(III) containing heteroaromatic Schiff bases	ca Chimica Acta, 461, 174-182	0020-1693				
7	<i>In situ</i> reduction of Cu(II) forming a double-stranded dinuclear copper(I) helicate of a <i>bis</i> azinopyridyl ligand	Inorganica Chimica Acta, 455, 235-240	Elsevier, 0020-1693	Referred	4	No	2017
8	A magnesium-based bifunctional MOF: Studies on proton conductivity, gas and water adsorption	Inorganica Chimica Acta, 453, 321-329	Elsevier, 0020-1693	Referred	4	Yes	2017
9	Synthesis, structure, photo-physical properties and catalytic activities of Zn(II), Cd(II) and Hg(II) complexes of an azinopyridyl ligand	Inorganica Chimica Acta, 448, 70-77	Elsevier, 0020-1693	Referred	5	Yes	2016
10	Pre-designed synthesis of dinuclear to unusual hexanuclear to 1D coordination polymer of Cu(I)-halides and their and photo-physical properties	Inorganica Chimica Acta, 447, 77-86	Elsevier, 0020-1693	Referred	6	Yes	2016
11	Synthesis, crystal structure, spectral characterization and photoluminescence property of three Cd(II) complexes with a pyrazole based Schiff-base ligand	Journal of Molecular Structure, 1110, 11-18	Science Direct, 0022-2860	Referred	5	Yes	2016
12	Synthesis, structure, photophysical and catalytic properties of Cu ^I -Iodide complexes of di-imine ligands	Journal of Molecular Structure, 1108, 315-324	Science Direct, 0022-2860	Referred	4	No	2016
13	Selective picomolar level fluorometric sensing of the Cr (vi)-	RSC Advances, 6,	Royal Society of Chemistry,	Referred	5	No	2016

	oxoanion in a water medium by a novel metal–organic complex	61966 - 61973	2046-2069				
14	A highly sensitive reversible fluorescent-colorimetric azino bis-Schiff base sensor for rapid detection of Pb ²⁺ in aqueous media	Analytical Methods, 8, 2032-2040	Royal Society of Chemistry, 1759-9679	Referred	4	No	2016
15	A new multicomponent salt of imidazole and tetrabromoterephthalic acid: Structural, optical, thermal, electrical transport properties and antibacterial activity along with Hirshfeld surface analysis	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 144, 43-52	Science Direct, 1386-1425	Referred	8	No	2015
16	Synthesis, structure, redox properties and theoretical calculation of copper(I)-triphenylphosphine halide complexes of arylazopyridines, and their reaction with H ₂ O ₂	Polyhedron, 87, 63-70	Pergamon, 0277-5387	Referred	6	No	2015
17	Synthesis, crystal structure and antibacterial activities of mixed ligand copper(II) and cobalt(II) complexes of a NNS Schiff base	Polyhedron, 85, 312-319	Pergamon, 0277-5387	Referred	4	No	2015
18	Conformation-selective coordination-driven self-assembly of a ditopic donor with Pd ^{II} acceptors	Dalton Transactions, 44, 20493-20501	Royal Society of Chemistry, 1477-9234	Referred	3	No	2015
19	Ionophoric azoaromatics: Synthesis, isolation and complex formation with alkali metal ions	Inorganica Chimica Acta, 424, 260-266	Elsevier, 0020-1693	Referred	5	No	2015
20	A dynamic metal–	Inorganic	Elsevier,	Referred	6	Yes	2014

	organic supramolecular host based on weak π -stacking interactions incorporating 2D water-chloride-methanolic supramolecular sheet	a Chimica Acta, 423, 123-132	0020-1693				
21	Palladium(II) and platinum(II) complexes of N-{(2-pyridyl)methyliden}-6-coumarin and N-{(2-hydroxy)benzyliden}-6-coumarin	Inorganic a Chimica Acta, 423, 52-61	Elsevier, 0020-1693	Referred	3	No	2014
22	Synthesis, crystal structure, and antibacterial activity of two new mononuclear nickel(II) complexes of a NNS Schiff base	Journal of Coordination Chemistry, 67, 3371-3379	Taylor and Francis, 1029-0389	Referred	4	No	2014
23	Thermally induced single crystal to single crystal transformation leading to polymorphism	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 130, 526-533	Science Direct, 1386-1425	Referred	8	Yes	2014
24	Reactions of the dirhenium(III) complex $\text{Re}_2(\mu\text{-O}_2\text{CCH}_3)_4\text{Cl}_2$ with triphenylguanidine: Dirhenium paddlewheel complex versus the mononuclear quadruple bond cleavage product	Polyhedron, 71, 104-110	Pergamon, 0277-5387	Referred	4	No	2014
25	An unusual $\mu\text{-}_{1,2,3}$ -squarato-bridged two dimensional coordination polymer: Crystal structure,	Inorganica Chimica Acta, 410,	Elsevier, 0020-1693	Referred	5	No	2014

	thermal, photoluminescence and magnetic studies	111-117					
26	Structure, fluorescence, redox properties and theoretical interpretation of heteroleptic copper(I) and silver(I) complexes of N-[(2-pyridyl)methylidene]-6-coumarin and triphenylphosphine	Inorganica Chimica Acta, 410, 202-213	Elsevier, 0020-1693	Referred	4	No	2014
27	Synthesis, characterization, X-ray crystallography and antimicrobial activities of new Co(III) and Cu(II) complexes with a pyrazole based Schiff base ligand	Polyhedron, 68, 122-130	Pergamon, 0277-5387		8	No	2014
28	A pharmaceutical cocrystal with potential anticancer activity	RSC Advances, 4, 49070-49078	Royal Society of Chemistry, 2046-2069		6	Yes	2014
29	Synthesis, crystal structure, DNA interaction and <i>in vitro</i> anticancer activity of a Cu(II) complex of purpurin: dual poison for human DNA topoisomerase I and II	RSC Advances, 4, 59344-59357	Royal Society of Chemistry, 2046-2069		9	No	2014
30	Synthesis, crystal structure and spectroscopic studies of a cobalt (III) Schiff base complex and its use as a heterogeneous catalyst for the oxidation reaction under mild condition	Journal of Molecular Catalysis A: Chemical, 380, 94-103	Elsevier, 1381-1169	Referred	9	No	2013
31	Tetrabromoterephthalic Acid in Designing Co-crystals and Salts: Modification of Optical Properties and	Crystal Growth and Design, 14, 207-	American Chemical Society, 1528-7505	Referred	8	Yes	2013

	Schottky Barrier Effect	221					
32	Simultaneous Presence of Both Open Metal Sites and Free Functional Organic Sites in a Noncentrosymmetric Dynamic Metal–Organic Framework with Bimodal Catalytic and Sensing Activities	Chemistry – A European Journal, 19, 16607 - 16614	Wiley VCH, 1521-3765	Referred	4	Yes	2013
33	Synthetic aspects, crystal structures and antibacterial activities of manganese(III) and cobalt(III) complexes containing a tetradentate Schiff base	Transition Metal Chemistry, 38, 715-724	Springer, 1572-901X	Referred	4	No	2013
34	Co-crystals of 2,3-Dimethylquinoxaline (DMQ) and Dimethylglyoxime (DMG) in 1:1 and 1:2 Ratios and Hirshfeld Surface Analysis	Journal of Chemical Crystallography, 43, 493-501	Springer, 1572-8854	Referred	4	No	2013
35	{[Mn-2 (L-tartrate)(2)(H ₂ O)] center dot 3H ₂ O}(n)-A chiral MOF: Adsorption and guest dependent magnetism	Journal of the Indian Chemical Society, 90, 1043-1052	Scientific Publisher India,	Referred	4	Yes	2013
36	1-Alkyl-2-((O-Thioalkyl)Phenylazo)Imidazole Complexes of Pb ^{II} and Their Photochromic Property	Zeitschrift für anorganische und allgemeine Chemie, 639, 1861 - 1870	WILEY-VCH Verlag, 1521-3749	Referred	4	No	2013
37	The C–H activation of pendant naphthyl group of 1-alkyl-2-	Journal of Organom	Elsevier	Referred	4	No	2013

	(naphthyl- α -azo) imidazole by rhodium (III). Spectral, structural characterization and, DFT computation	etallic Chemistry, 732, 109-115					
38	Intercalated iodobismuthate in the layers of azoimidazoles. Structure, photochromism and DFT computation	Polyhedron, 54, 147 – 157	Pergamon, 0277-5387	Referred	4	No	2013
39	Structure, photophysics, electrochemistry and DFT calculations of [RuH(CO)(PPh ₃) ₂ (coumarinyl-azo-imidazole)]	Polyhedron, 53, 193 – 201	Pergamon, 0277-5387	Referred	4	No	2013
40	2D Ferromagnetic sheet of antiferromagnetic trimeric metal cores	Polyhedron, 53, 258 – 263	Pergamon, 0277-5387	Referred	4	No	2013
41	Transformation of a mother crystal to a daughter crystal through amorphous phase: de-assembly of coordination helices upon heating and re-assembly through aquation	Crystal Growth and Design, 13, 2135 - 2142	American Chemical Society, 1528-7505	Referred	4	Yes	2013
42	Stabilization of 2D water sheets in a supramolecular metal–organic Schiff base complex: Reversible structural transformation upon dehydration–rehydration	Inorganica Chimica Acta, 399, 200 – 207	Elsevier, 0020-1693	Referred	5	Yes	2013
43	Synthesis and crystal structure of a group of phenoxo-bridged heterodinuclear [Ni ^{II} Hg ^{II}] Schiff base complexes	Polyhedron, 49, 93-99	Pergamon, 0277-5387	Referred	5	No	2013
44	A luminescent-water soluble inorganic co-	Chemical	Royal Society of	Referred	2	No	2013

	crystal for a selective pico-molar range arsenic (III) sensor in water medium	Communications, 49, 7064 - 7066	Chemistry, 1359-7345				
45	An efficient one-pot organocatalytic synthesis of 9-(1 <i>H</i> -indol-3-yl)-xanthen-4-(9 <i>H</i>)-ones under mild aqueous micellar conditions	Tetrahedron Letters, 53, 7067 - 7071	Elsevier, 0040-4039	Referred	3	No	2012
46	A multifunctional porous organic Schottky barrier diode	Angewandte Chemie, 124, 12702 - 12705	Wiley VCH, 1521-3757	Referred	6	No	2012
47	Reusable Amine-Based Structural Motifs for Green House Gas (CO ₂) Fixation	Organic letters, 14, 3244 - 3247	American Chemical Society, 1523-7052	Referred	4	No	2012
48	Synthesis, characterization and pseudopolymorphism of a phenoxo-bridged binuclear manganese (III) Schiff base complex	Inorganica Chimica Acta, 387, 1 - 7	Elsevier, 0020-1693	Referred	4	No	2012
49	Copper (II)–Mercury (II) Heterometallic Complexes Derived from a Salen-Type Ligand: A New Coordination Mode of the Old Schiff Base Ligand	Organometallics, 31, 3844 - 3850	American Chemical Society, 1520-6041	Referred	2	No	2012
50	Synthetic aspects, crystal structure and antibacterial activity of two new Schiff base cobalt (III) complexes	Polyhedron, 34, 157-162	Pergamon, 0277-5387		5	No	2012
51	Reusable anion detection kit: An aqueous medium anion detection	Sensors and Actuators B: Chemical, 162, 57-62	Elsevier, 0925-4005	Referred	4	No	2012
52	A Molecular Lock and	ChemPlus	WILEY-V	Referred	5	No	2012

	Key: "Unlocked–Locked" Conformational Switching of a Receptor by Anions	sChem, 77, 93 - 97	CH, 2192-6506				
53	Synthesis and crystal structure of three new copper (II) complexes with a tridentate amine and its Schiff bases	Polyhedron, 31, 82-88	Pergamon, 0277-5387	Referred	4	No	2012
54	Synthesis and characterisation of arylazoimidazolium iodide and tetraiodocadmium (II) compounds	Journal of the Indian Chemical Society,	NISCAIR - CSIR	Referred	4	No	2012
55	An efficient size-selective anion binding cleft-shaped receptor: A novel [F ₂ (H ₂ O) ₃] ²⁻ cluster with pseudo-encapsulated F ⁻ ion	CrystEng Comm, 14, 1527-1530	Royal Society of Chemistry, 1466-8033	Referred	4	No	2012
56	Synthesis, structural, magnetic, DFT calculations and CShM studies of three new pentanuclear Mn (II) clusters	Dalton Transactions, 41, 413-423	Royal Society of Chemistry, 1477-9234	Referred	8	No	2012
57	{[Co ₂ (ndc) ₂ (bpee) ₂](bpee)}: a 3D multifunctional MOF	CrystEng Comm, 14, 4980 - 4988	Royal Society of Chemistry, 1466-8033	Referred	1	Yes	2012
58	Synthesis, spectral characterization and single crystal X-ray diffraction study of arylazoimidazolium tetraiodobismuthate (III) compounds	Journal of the Indian Chemical Society, 88, 1817-1825	SCIENTIFIC PUBL-INDIA	Referred	3	No	2011
59	A 1D Cu(II) coordination polymer exhibiting ferromagnetic interactions and a mononuclear Cu(II) complex of substituted pyrazole carboxylic acids: Synthesis,	Polyhedron, 30, 1571-1578	Pergamon, 0277-5387	Referred	8	No	2011

	characterization and crystal structure						
60	Planar tetrameric metal cluster formation at room temperature induced by $\pi \cdots \pi$ interactions: 3D supramolecular host containing 1D channel filled with solvent methanol	Inorganica Chimica Acta, 368, 216 - 222	Elsevier, 0020-1693	Referred	3	No	2011
61	Synthesis, structure, photochromism and DFT calculations of copper (I)-triphenylphosphine halide complexes of thioalkylazoimidazoles	Polyhedron, 30, 614 – 623	Pergamon, 0277-5387	Referred	5	No	2011
62	pH-Triggered construction of NLO active CMOFs: change in supramolecular assembly, water clusters, helical architectures and their properties	CrystEng Comm, 13, 1018-1028	Royal Society of Chemistry, 1466-8033	Referred	2	Yes	2011
63	Self assembled tetranuclear Cu ₄ (ii), Ni ₄ (ii)[2× 2] square grids and a dicopper (ii) complex of heterocycle based polytopic ligands- Magnetic studies	Dalton Transactions, 40, 11866-11875	Royal Society of Chemistry, 1477-9234	Referred	10	No	2011
64	Two unusual mixed-valent trinuclear Cu ^{II} ₂ Cu ^I complexes containing copper(I) tribromide dianion as bridging ligand: Identification of an unprecedented doubly hydrogen-bonded waterdimer	CrystEng Comm, 13, 5342-5347	Royal Society of Chemistry, 1466-8033	Referred	2	No	2011
65	A supramolecular spin crossover Fe (iii) complex and its Cr (iii) isomer: stabilization of water–	Dalton Transactions, 40, 3166 - 3175	Royal Society of Chemistry, 1477-9234	Referred	4	Yes	2011

	chloride cluster within supramolecular host						
66	Synthesis, crystal structure and characterization of a new mixed ligand cationic–anionic nickel (II) complex containing 1, 4-diazepane	Journal of Molecular Structure, 984, 350 - 353	Science Direct, 0022-2860	Referred	3	No	2010
67	Acyclic water pentamer induces novel supramolecular ribbed sheet: Cooperativity and competitiveness of weak and covalent forces?	Journal of Molecular Structure, 966, 64 – 68	Science Direct, 0022-2860	Referred	2	No	2010
68	Role of weak interactions in controlling the topology of coordination polymeric chains in [Pt(CN) ₄] ²⁻ bridged Cu(II) complexes: Syntheses, crystal structure and magnetic studies	Polyhedron, 28, 3065 - 3077	Pergamon, 0277-5387	Referred	6	No	2009

10. Articles/Chapters Published in Edited Volume: **NA**

Sl. No	Name of Article/chapter	Name of Edited Volume, Editor and Publisher	ISBN No	No of Co-author	Whether you are the main author	Date of Publication

11. Full Papers in Conference Proceedings: **NA**

Sl. No	Title with Page No	Details of Conference Publication	ISSN/ISBN No	No of Co-author	Whether you are the main author	Date of Publication
1.						

2.						
3.						
4.						
5.						

12. Published Books or Edited Volume: **NA**

Sl. No.	Title	Book or Edited Volume	Publisher & ISBN No. (I. International II. National III. Regional)	Whether Peer Reviewed	No of Co-author/s	Whether you are the main author	Date of Publication
2							

13. Papers Presented in Conferences/Seminars/Workshops/ Symposia:

Sl. No	Title of the Paper Presented	Title of the Conference/Seminar/Symposia	Organising Authority	Whether International/National/State/Regional/University/College Level	Date of presenting the Paper
1					
2					
3					
4					
5					

14. Organising Seminar/Conference/Symposia:

S l. No	Whether you are Convenor/Co-convenor	Theme of the Conference/Seminar/Symposia	Whether International/National/Regional/State/University Level	Funding Authority	Date of the Conference/Seminar/Symposia

15. Invited Lectures/Chairing the Session or Presentation for Conferences/Seminar/Symposia etc:

S l. N o	Title of the Lecture/Aca demic Session	Title of the Conference/ Seminar	Organizing Authority	Whether International/Nat ional/State/Regio nal/University/C ollege Level	Date of Conference/Semi nar/Symposia

16. Ongoing Projects/Consultancies:

Sl. No	Title	Agency	Period	Grant/Amount Mobilized (Rs.)
1	Porphyrim based Metal-organic Frameworks for the Efficient Conversion of CO ₂ to Value Added Chemicals	SERB	2018	15 lacs

17. Completed Projects/Consultancies: **NA**

Sl. No	Title	Agency	Period	Grant/Amount Mobilized (Rs.)

18. Received Research Fellowship/ Awards:

Sl. No	Title	Funding Authority	Period	Grant/Amount Mobilized (Rs.)
1	Postdoctoral Fellowship	Science Foundation of Ireland	2014-2015	36000 Euro per annum
2	UGC Kothari	UGC, India	2014	Not availed
3	INDO US Postdoctoral Fellowship	SERB, India	2017	Not availed
4	UGC Faculty Recharge Programme	UGC	2017	Not availed
5				

19. Academic Staff College Organised Orientation/ Refresher Courses Attended: **NA**

Name of the Courses	Place	Duration From	Sponsoring Authority

20. Training Courses, Teaching-Learning-Evaluation Technology Programmes, Faculty Development Programme: **NA**

Sl. No	Programme/Course	Duration	Organising Authority	Period

21. Research Guidance:

Sl. No	Name of the Research Student	Title of the Thesis/Dissertation	Date of Thesis Submission	Date of Degree Awarded
1.	Manas Layek		On going	On going

22. Any other Information: **NA**