

**DEPARTMENT OF Chemistry**  
**PROFILE OF TEACHING STAFFS ON 30-06-2025**  
**Dr. PARTHA SARATHI GUIN**

- Total Teaching Experience in this College: 18 Years 04 months
- Special Paper/Specialization in M.Sc.: **Inorganic Chemistry**

- (a) Full Name: PARTHA SARATHI GUIN  
 (b) Present Designation: Associate Professor in Chemistry  
 (c) Areas of Specialization: Inorganic Chemistry  
 (d) E-mail ID: parthasg@gmail.com  
 (e) WhatsApp Number: 9330083036

(f) Academic Qualifications (From UG Onwards):

Sl. No.	University/College/Institution from which the Degree was obtained	Name of the Degree e.g., M.A.	Year of Obtaining Degree
1	University of Calcutta	B. Sc.	2001
2	University of Calcutta	M. Sc.	2003

(g) Teaching Experiences:

Sl. No.	Name of the University/College/Institution	Period (i.e., From.....to .....
1	Shibpur Dinobundhoo Institution (College)	1 <sup>st</sup> March 2007 - till date

(h) Research Experiences:

Sl. No.	Academic Session	Name of the University/College/Institution	Period (i.e., From.....to .....
1	2004-2010	Saha Institute of Nuclear Physics and Jadavpur University	2004-2010

(i) RC/OP/FIP/STC Attended:

Sl. No.	Academic Session	RC/OP/FIP/STC etc.	University/Institution	Period (i.e., From.....to .....	Online/Offline
1	2009-2010	UGC Sponsored Refresher Course in Chemistry	Jadavpur University	02/01/2010 to 22/01/2010	Offline
2	2010-2011	UGC Sponsored Orientation Programme	Jadavpur University	14/02/2011 to 14/03/2011	Offline
3	2015-2016	UGC Sponsored Refresher Course on Environmental Science	University of Burdwan	08/01/2016 to 28/01/2016	Offline
4	2017-2018	Winter School on Environmental and Earth Science	University of Burdwan	30/01/2018 to 19/02/2018	Offline

(j) Projects (Completed):

Sl. No.	Academic Session	Funding Agency (e.g., UGC-MRP, ICSSR, WBBB etc.)	Project Title	Grant Received (Rs.)	Date of Completion	UC Submitted on
1	2012 - 2015	UGC Major Research Project	"Synthesis, characterization, electrochemical behavior, DNA interaction and anticancer activity of transition metal complexes of amino hydroxyl-9,10-anthraquinones"	7,56,000/-	December, 2015	10.02.2016

**NUMBER OF PUBLICATIONS & CONFERENCE/ SEMINARS**

Sl. No.	Academic Session	Published Papers in National Journals (Number)	Published Papers in International Journals (Number)	Book Publications (Number)	Book Publications as Author (Number)	Book Publications as Editor (Number)	Articles/Chapters Published in Books (Number)	Conference/Seminar/Volumes (Number)	Papers accepted/ Presented in Conferences, Seminars, Workshops, Symposia (Number)	Invited Lectures and Chairmanships at National or International Conference/Seminar (Number)	News Paper Publications (Number)	Books Reviewed (Number)
	2008-09		2									
	2009-10		2									
	2010-11		4									
	2011-12		3									
	2012-13		1									
	2013-14		2									
	2014-15		5									
	2015-16		7									
	2016-17		10	1								
	2017-18		4	1								
	2018-19		5									
	2019-20		4									
	2020-21		3									
	2021-22		2									
	2022-23		1									
	2023-24		1									

**DETAILED LIST OF PUBLICATIONS**

TITLE	YEAR
Analyzing of L-tryptophan thermodynamics and its solubility in aqueous acetonitrile blends at diverse temperatures A Saha, S Ghosh, S Ganai, P Mukherjee, K Mahali, B Saha, AMA Henaish, PS Guin, Perwez Alam, Sanjay Roy Biophysical Chemistry 307, 107195	2024
Correction to “Electrolytic Effect on the Solubility and Solvation Thermodynamics of L-Serine and L-Isoleucine in Aqueous Media” S Chowdhury, P Mandal, A Hossain, PS Guin, S Roy, K Mahali Journal of Chemical & Engineering Data 68 (12), 3526-3526	2023
Recently Reported Ru-Metal Organic Coordination Complexes and Their Application (A Review) PS Guin, S Roy Russian Journal of General Chemistry 92 (8), 1546-1561	2022
Solubility and solvation thermodynamics of glycine, dl-alanine and l-threonine in pure aqueous and aqueous (NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> solution PS Guin, B Ghosh, SC Debnath, S Baskey, S Roy, K Mahali Chemical Physics Letters 788, 139284	2022
A Co (III) Complex of 1-Amino-4-hydroxy-9, 10-anthraquinone Exhibits Apoptotic Action against MCF-7 Human Breast Cancer Cells S Banerjee, S Roy, D Dharumadurai, B Perumalsamy, R Thirumurugan, PS Guin ACS omega 7 (1), 1428-1436	2021
Solubilization of sodium 3-amino-2-hydroxyanthraquinone-1-sulphonate in sodium dodecyl sulfate micelles explains its permeation in A549 human lung cancer cell S Banerjee, S Roy, A Datta, P Mondal, M Mishra, B Perumalsamy, PS Guin Journal of the Chinese Chemical Society 68 (2), 250-262	2021
AJ Csian OURNALOF HEMISTRY AJ Csian OURNALOF HEMISTRY M HASSAN, SM AL-HAZMI, IA ALHAGRI, AN ALHAKIMI, A DAHADHA, PS Guin Asian Journal of Chemistry 33 (7), 1471-1480	2021
Electrolytic effects on solubility and Gibbs free energies of 1, 4-dihydroxy-9, 10-anthraquinone in aqueous methanol media via UV–Vis spectroscopic and theoretical studies PS Guin, S Roy Chemical Physics Letters 746, 137292	2020
Solubility and peculiar thermodynamicalbehaviour of 2-aminobenzoic acid in aqueous binary solvent mixtures at 288.15 to 308.15 K SK Imran, A Hossain, K Mahali, PS Guin, A Datta, S Roy Journal of Molecular Liquids 302, 112566	2020
An overview of La <sub>2</sub> NiMnO <sub>6</sub> double perovskites: synthesis, structure, properties, and applications A Hossain, AKM AtiqueUllah, P S Guin, S Roy Journal of Sol-Gel Science and Technology 93 (3), 479-494	2020
Solubility data of glycine in water and justification of literature results: A review A Datta, A Hossain, PS Guin, S Roy Asian Publication Corporation 7 (32), 1525-1533	2020
Electrolytic Effect on the Solubility and Solvation Thermodynamics of L-Serine and L-Isoleucine in Aqueous Media S Chowdhury, P Mandal, A Hossain, PS Guin, S Roy, K Mahali Journal of Chemical & Engineering Data 64 (10), 4286-4297	2019
Solubility analysis of homologous series of amino acids and solvation energetics in aqueous potassium	2019

TITLE	YEAR
sulfate solution A Hossain, K Mahali, BK Dolui, PS Guin, S Roy Heliyon 5 (8)	
Role of solubility and solvation thermodynamics on the stability of l-phenylalanine in aqueous methanol and ethanol solutions S Imran, A Hossain, K Mahali, AS Roy, PS Guin, S Roy Journal of Molecular Liquids 265, 693-700	2018
Solubility and transfer solvation thermodynamics of l-isoleucine and l-serine in water to aqueous solution of Na <sub>2</sub> SO <sub>4</sub> and K <sub>2</sub> SO <sub>4</sub> from 288.15 K to 303.15 K S Chowdhury, P Mandal, MS Islam, A Hossain, PS Guin, S Roy, K Mahali Chemical Physics Letters 706, 432-439	2018
Electrochemical and UV–Vis spectroscopic studies on the interaction of sodium 1, 4-dihydroxy-9, 10-anthraquinone-2-sulphonate with cetyltrimethylammonium bromide micelles S Roy, PS Sengupta, PS Guin Chemical Physics Letters 694, 7-13	2018
Solubility and thermodynamics of solute–solvent interactions of some amino acids in aqueous sodium bromide and potassium bromide solutions PS Guin, K Mahali, BK Dolui, S Roy Journal of Chemical & Engineering Data 63 (3), 534-541	2018
amino acid solubility under the influence of NaCl at 298.15 K (vol 218, pg 316, 2016) S Roy, PS Guin, K Mahali, BK Dolui JOURNAL OF MOLECULAR LIQUIDS 252, 144-144	2018
Correction to amino acid solubility under the influence of NaCl at 298.15 K S Roy, PS Guin, K Mahali, BK Dolui J. Mol. Liq. 252, 144	2018
Effect of electrolytes on the solubility and solution thermodynamics of 1-amino-4-hydroxy-9, 10-anthraquinone, an analogue of anthracycline anticancer drugs, in aqueous ethanol ... S Imran, A Hossain, S Parui, PS Sengupta, S Roy, PS Guin Journal of Molecular Liquids 252, 151-157	2018
Solvation thermodynamics of L-cystine, L-tyrosine, and L-leucine in aqueous-electrolyte media S Roy, PS Guin, K Mahali, BK Dolui Russian Journal of Physical Chemistry A 91 (12), 2397-2403	2017
The importance of advance biomaterials in modern technology: a review A Hossain, S Roy, PS Guin Asian Journal of Research in Chemistry 10 (4), 441-453	2017
A Soluble Cu (II) Complex of Sodium 1, 4-Dihydroxy-9, 10-Anthraquinone-2-Sulphonate Electrocatalyzes Water Oxidation with a Large Turn over Frequency S Roy, PS Guin Electrochemical Society Transactions 231 77 (9), 39-60	2017
Evaluation and correlation of solubility and solvation thermodynamics of glycine, dl-alanine and dl-valine in aqueous sodium sulphate solutions at two different temperatures S Roy, PS Guin, K Mahali, A Hossain, BK Dolui Journal of Molecular Liquids 234, 124-128	2017
Solubility and transfer Gibbs free energetics of glycine, DL-alanine, DL-nor-valine and DL-serine in aqueous sodium fluoride and potassium fluoride solutions at 298.15 K S Roy, PS Guin, K Mahali, BK Dolui Indian J. Chem. A 56, 399-406	2017

TITLE	YEAR
Solubility and solute–solvent interaction phenomenon of succinic acid in aqueous ethanol mixtures K Mahali, PS Guin, S Roy, BK Dolui Journal of Molecular Liquids 229, 172-177	2017
Recent developed different structural nanomaterials and their performance for supercapacitor application A Hossain, P Bandyopadhyay, PS Guin, S Roy Applied Materials Today	2017
Model studies on the interactions of a Cu(II)- quinone complex with surfactant micelles and DNA explore its induction of apoptosis in human MDA-MB-231 breast adenocarcinoma cells GPS Sanjay Roy, Gayathri Loganathan, Dhanasekaran Dharumadurai, Mohammad A, PS Guin Journal of Coordination Chemistry	2017
Role of electrolytes in the solubility of L-proline and its transfer free energetics S Roy, PS Guin, K Mahali, BK Dolui Journal of Molecular Liquids 223, 927-933	2016
Solubility of glycine and DL-nor-valine in aqueous solutions of NaNO <sub>3</sub> and KNO <sub>3</sub> and measurements of transfer thermodynamics S Roy, PS Guin, S Mondal, S Ghosh, BK Dolui Journal of Molecular Liquids 222, 313-319	2016
An oxido-bridged diiron (II) complex as functional model of catechol dioxygenase D Dey, A De, HR Yadav, PS Guin, AR Choudhury, N Kole, B Biswas ChemistrySelect 1 (9), 1910-1916	2016
Amino acid solubility under the influence of NaCl at 298.15 K S Roy, PS Guin, K Mahali, BK Dolui Journal of Molecular Liquids 218, 316-318	2016
Electrochemical Reduction of Nickel (II)—Dihydroxyanthraquinone Sulfonate: How Complex Formation Affects Biochemical Behavior? PS Guin, S Das Russian Journal of Physical Chemistry A 90 (4), 876-881	2016
A Co (ii) complex of a vitamer of vitamin B <sub>6</sub> acts as a sensor for Hg <sup>2+</sup> and pH in aqueous media N Sing, S Roy, PS Guin, K Mahali, P Majee, SK Mondal, P Mahata, ... New Journal of Chemistry 40 (7), 6396-6404	2016
Spectroscopic, computational and electrochemical studies on 2-(4- nitrophenyl)-1H-benzo[d]imidazole and its interaction with cationic surfactant cetyltrimethylammonium bromide PS Guin, Arup Datta, Sanjay Roy, Palash Mondal Journal of Molecular Liquids 219, 1058 - 1064	2016
Studies on the interaction of 2-amino-3-hydroxy-anthraquinone with surfactant micelles reveal its nucleation in human MDA-MB-231 breast adenocarcinoma cells A Das, S Roy, P Mondal, A Datta, K Mahali, G Loganathan, PS Guin RSC advances 6 (34), 28200-28212	2016
Design of a mononuclear copper(II)-phenanthroline complex: Catechol oxidation, DNA cleavage and antitumor properties BB Dhananjay Dey, Subrata Das, Hare Ram Yadav, Anandan Ranjani, Loganathan, PS Guin Polyhedron	2016
1-Amino-4-hydroxy-9, 10-anthraquinone—An analogue of anthracycline anticancer drugs, interacts with DNA and induces apoptosis in human MDA-MB-231 breast adenocarcinoma cells ... P Mondal, S Roy, G Loganathan, B Mandal, D Dharumadurai, ..., PS Guin Biochemistry and Biophysics Reports 4, 312-323	2015

TITLE	YEAR
Investigation on the interaction of 1-amino-4-hydroxy-9, 10-anthraquinone with calf thymus DNA and CTAB micelles S Roy, PS Guin Journal of Molecular Liquids 211, 846-853	2015
Solubility and solvation thermodynamics of DL-nor-valine in aqueous solutions of NaCl and KCl S Roy, PS Guin, BK Dolui Journal of Molecular Liquids 211, 294-300	2015
Spectroscopic, computational and electrochemical studies on the formation of the copper complex of 1-amino-4-hydroxy-9, 10-anthraquinone and effect of it on superoxide ... S Roy, P Mondal, PS Sengupta, D Dhak, RC Santra, S Das, PS Guin Dalton Transactions 44 (12), 5428-5440	2015
Solvation of 1-amino-4-Hydroxy-9, 10-anthraquinone governs its electrochemical behavior in non-aqueous and aqueous media: A cyclic voltammetry study S Roy, PS Guin Journal of The Electrochemical Society 162 (3), H124-H131	2015
X-ray crystal structure of a Cu (II) complex with the antiparasitic drug tinidazole, interaction with calf thymus DNA and evidence for antibacterial activity RC Santra, K Sengupta, R Dey, T Shireen, P Das, PS Guin, ... Journal of Coordination Chemistry 67 (2), 265-285	2014
Exploration of electrochemical intermediates of the anticancer drug doxorubicin hydrochloride using cyclic voltammetry and simulation studies with an evaluation for its ... PS Guin, S Das International journal of electrochemistry 2014 (1), 517371	2014
Aspects of $\gamma$ -radiation induced modification of calf thymus DNA in the presence of sodium 1, 4-dihydroxy-9, 10-anthraquinone-2-sulfonate and its transition metal complexes with ... PS Guin, PC Mandal, S Das Radiation Physics and Chemistry 89, 38-42	2013
The Binding of a Hydroxy-9,10-anthraquinone Cu <sup>II</sup> Complex to Calf Thymus DNA: Electrochemistry and UV/Vis Spectroscopy PS Guin, PC Mandal, S Das ChemPlusChem 77 (5), 361-369	2012
A comparative study on the interaction with calf thymus DNA of a Ni (II) complex of the anticancer drug adriamycin and a Ni (II) complex of sodium 1, 4-dihydroxy-9, 10 ... PS Guin, PC Mandal, S Das Journal of Coordination Chemistry 65 (4), 705-721	2012
Interaction of Calf Thymus DNA with the Ni (II) Complex of Sodium 1, 4-Dihydroxy-9, 10-Anthraquinone-2-Sulphonate: A Novel Method of Analysis Using Cyclic Voltammetry PS Guin, P Das, S Das, PC Mandal International Journal of Electrochemistry 2012 (1), 183745	2012
Cyclic voltammetric studies of 1, 2, 4-trihydroxy-9, 10-anthraquinone, its interaction with calf thymus DNA and anti-leukemic activity on MOLT-4 cell lines: a comparison with ... P Das, PS Guin, PC Mandal, M Paul, S Paul, S Das Journal of Physical Organic Chemistry 24 (9), 774-785	2011
Interaction of 1, 4-dihydroxy-9, 10-anthraquinone with calf thymus DNA: a comparison with anthracycline anticancer drugs PS Guin, S Das, PC Mandal Journal of solution chemistry 40 (3), 492-501	2011

TITLE	YEAR
A complex of Co (II) with 2-hydroxyphenyl-azo-2'-naphthol (HPAN) is far less cytotoxic than the parent compound on A549-lung carcinoma and peripheral blood mononuclear cells ... T Deb, D Choudhury, PS Guin, MB Saha, G Chakrabarti, S Das Chemico-biological interactions 189 (3), 206-214	2011
Electrochemical reduction of quinones in different media: a review PS Guin, S Das, PC Mandal International Journal of Electrochemistry 2011 (1), 816202	2011
Sodium 1, 4-dihydroxy-9, 10-anthraquinone-2-sulphonate interacts with calf thymus DNA in a way that mimics anthracycline antibiotics: an electrochemical and spectroscopic study PS Guin, S Das, PC Mandal Journal of Physical Organic Chemistry 23 (6), 477-482	2010
Studies on the formation of a complex of Cu (II) with sodium 1, 4-dihydroxy-9, 10-anthraquinone-2-sulphonate—An analogue of the core unit of anthracycline anticancer drugs and ... PS Guin, S Das, PC Mandal Journal of Inorganic Biochemistry 103 (12), 1702-1710	2009
Electrochemical reduction of sodium 1, 4-dihydroxy-9, 10-anthraquinone-2-sulphonate in aqueous and aqueous dimethyl formamide mixed solvent: a cyclic voltammetric study PS Guin, S Das, PC Mandal International Journal of Electrochemical Science 3 (9), 1016-1028	2008
<u>Formation and characterization of Ni (II) complex of sodium 1, 4-dihydroxy-9, 10-anthraquinone-2-sulphonate, an analogue of the core unit of anthracycline antibiotics, by ...</u> PS Guin, S Das, PC Mandal Int. J. Pure Appl. Chem 3, 283-290.	2008

#### Books Published:

1. **“Chemistry of Water: Cradle of Life”**, Author: Sanjay Roy, Partha SarathiGuin, AslamHossain, Publisher : LAP LAMBERT Academic Publishing, Publication date: March 15, 2017, ISBN-10 : 3330058293, ISBN-13 : 978-3330058293
2. **“Chemistry in Everyday’s Life”**, Author:Sanjay Roy, Partha SarathiGuin, Publisher: LAP LAMBERT Academic Publishing, Publication date: December 2016, ISBN-13: 978-3-330-01994-2, ISBN-10:3330019948.

#### **MEMBERSHIP OF ACADEMIC/PROFESSIONAL BODIES/SOCIETIES**

Sl.No.	Name of the Society/Association/Professional Bodies etc.
1	Life member of Indian Society for Radiation and Photochemical Sciences, Mumbai