



Dr. Shrabanti Banerjee **Principal**

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➤ **A. Academic career:**

M.Sc., The University of Burdwan, Burdwan (West Bengal) in 1998;
B. Ed. The University of Burdwan, Burdwan (West Bengal) in 1999;
Ph.D. The University of Burdwan, Burdwan (West Bengal) in 2004;

➤ **B. Professional Experience:**

Teaching Position/s held

Sl. No.	Designation	Institution	Date	
			From	To
1.	Lecturer in Chemistry	Raja Rammohun Roy Mahavidyalaya	01-07-2002	31-12-2005
2.	Assistant Professor in Chemistry (Stage-I)	Raja Rammohun Roy Mahavidyalaya	01-01-2006	30-06-2006
3.	Assistant Professor in Chemistry (Stage-II)	Raja Rammohun Roy Mahavidyalaya	01-07-2006	30-06-2011
4.	Assistant Professor in Chemistry (Stage-III)	Raja Rammohun Roy Mahavidyalaya	01-07-2011	30-10-2014
5.	Associate Professor in Chemistry	Raja Rammohun Roy Mahavidyalaya	31-10-2014	04-07-2023
6.	Principal	Jamalpur Mahavidyalaya	05-07-2023	Till date

➤ **C. Award/Honours Received:**

<i>Sl. No.</i>	<i>Award/Fellowship: International/National</i>	<i>Name of Award/ Fellowship received</i>	<i>Year</i>	<i>Name of the Organization/Agency From where the award is received</i>
1.	National	1 st Best Paper Presentation in NUCAR-2003	2003	IANCAS, Radiochemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085

➤ **D. Delivered Invited Talk at International/National Level Seminar/Conference/Refresher Course: > 5.**

➤ **E. List of completed and ongoing projects:**

Completed Project: **02**

List of ongoing and completed projects giving the following details:

<i>Sl. No.</i>	<i>Title of the Project with Reference No.</i>	<i>Grant(s)/ Amount Sanctioned in Rs. (Lakhs)</i>	<i>Agency (Funding, Commissioning and/or Collaborating)</i>	<i>Period</i>	<i>Grant(s)/ Amount Mobilized In Rs. (Lakhs)</i>	<i>Principal Investigator/ Co-Investigator</i>
1.	Comparative studies in terms of effective and selective complexation of fullerenes C ₆₀ and C ₇₀ with mono, di and triporphyrins employing absorption spectrophotometric, fluorescence and NMR spectroscopic investigations in solution with Ref. No. F.No. 41-307/2012 (SR) dated 13 JUL 2012	7,27,000/-	UGC, New Delhi	2012-2016	7,27,000/-	Principal Investigator
2.	Study of synergism in d and f block metal extraction in presene of crown ethers with Ref. No. F.PSW-010/07-08 (ERO) dated 21-Feb-2008 & F. PSW-010/07-08 Dt. 14-Jul-09	57,000/-	UGC	2008-2010	60,036.50/-	Principal Investigator

➤ **F. Serving Administrative Body**

Dr. Shrabanti Banerjee served/serving as an university nominee in the Governing Body of following colleges under The University of Burdwan:

- (1) Arambag Girl's College, Arambag, Hooghly, West Bengal (2012-2015).
- (2) Kabi Kankan Mukunduram Mahavidyalaya, Kesabpur, Hooghly, West Bengal (2012-2015).
- (3) B. N. Mahavidyalaya, Balagar, Hooghly, West Bengal (2018 to till date).

➤ G. Research Career:

➤ No. of papers published in International/National journals: 38 (Kindly see ANNEXURE-I).

(In International journal: 32; in National journal: 06)

Published papers in journals like *Chemical Physics Letter*, *Chemical Physics*, *Journal of Molecular Liquids*, *Spectrochimica Acta Part A*, *Solvent Extraction and Ion Exchange*, *Radiochimica Acta*, *Annali di Chimica*, *Journal of Radioanalytical and Nuclear Chemistry*, *Journal of Solution Chemistry*, *Indian Journal of Chemistry*, *Journal of Indian Chemical Society*, *Science Letters* & Others.

Scopus ID: 57212204796.

➤ H. Research Interests:

- (i) Synergistic extraction of metal ions in solution;
- (ii) Supramolecular Photochemistry of Carbon Nanomaterials;
- (iii) Electron Transfer and/ Energy Transfer Phenomenon on Electron Donor Acceptor (EDA) Complexes in Solution; &
- (iv) Host-Guest Chemistry of Different Macrocyclic Host Molecules like Calixarenes, Crown Ethers and Cryptands in solution.

➤ I. Other relevant information

Human Resource Development Centre (HRDC)/Academic Staff College Orientation/Refresher Course/Others attended

Sl. No.	Name of the Course/Summer School	Place	Duration	Sponsoring Agency
1.	Workshop on NAAC Accreditation	HRDC, The University of Burdwan	Two Days (28 th December 2021 to 29 th December 2021)	UGC
2.	Refresher Course in Biological Sciences	HRDC, The University of Burdwan	10-10-2014 to 30-10-2014	UGC
3.	Refresher Course in Environmental Science	HRDC, The University of Burdwan	20-11-2010 to 10-12-2010	UGC
4.	Refresher Course in Environmental Science	HRDC, The University of Burdwan	20-12-2008 to 12-01-2009	UGC
5.	Orientation Programme	HRDC, The University of Burdwan	10-10-2003 to 06-11-2003	UGC

ANNEXURE-I: LIST OF RESEARCH PUBLICATIONS

Sl. No.	Title with author Name(s) in order as published	Journal Name, Vol. with page number, Year	Publisher & ISSN, DOI (if any)
1.	Exploring the chemical physics in tetraphenylporphyrin-N-methylfulleropyrrolidine supramolecular complex by spectroscopic investigations and quantum chemical calculations, S. S. Saha, S. Nayak, S. Bhattacharya,	Chem. Phys. 582, 2024 , 112280	Elsevier, https://doi.org/10.1016/j.chemphys.2024.112280
2.	Spectroscopic and quantum chemical insights on supramolecular interaction between N-methylfulleropyrrolidine and designed porphyrins in solution, S. S. Saha, S. Nayak, S. Bhattacharya, <u>S. Banerjee</u> , S. Bhattacharya	Chem. Phys. Lett. 843, 2024 , 141166	Elsevier, DOI: https://doi.org/10.1016/j.cplett.2024.141166
3.	Photophysical insights on quantum dots-zinc porphyrazine system studied in solution, a. Ray, S. Bhattacharya, <u>S. Banerjee</u>	J. Ind. Chem. Soc. 98, 2021 , 100068	Elsevier, DOI: https://doi.org/10.1016/j.jics.2021.100068
4.	Photophysical insights on a new supramolecular recognition element comprising PyC ₆₀ and a bisporphyrin studied in solution, S. Nayak, A. Ray, S. Bhattacharya, A. Bauri, <u>S. Banerjee</u>	Mol. Liq. 290, 2019 , 110842	Elsevier, DOI: https://doi.org/10.1016/j.molliq.2019.04.119
5.	Chemical physics behind formation of effective and selective non-covalent interaction between fullerenes (C ₆₀ and C ₇₀) and a designed chiral monoporphyrin in solution, A. Ray, <u>S. Banerjee</u> , A. K. Bauri, S. Bhattacharya	Chemical Physics letters, 646, 119-124, 2016	Elsevier, DOI: 10.1016/j.cplett.2015.12.053
6.	Photophysical insights on effect of gold nanoparticles over fullerene-porphyrin interaction in solution, R. Mitra, A. K. Bauri, <u>S. Banerjee</u> , S. Bhattacharya	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 132, 2014 , 61-69	Elsevier, DOI: 10.1016/j.saa.2014.03.014
7.	Photophysical investigations on effective and selective complexation of a designed monoporphyrin with C ₆₀ and C ₇₀ in solution, B. K. Ghosh, A. Bauri, S. Bhattacharya, <u>S. Banerjee</u>	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 125, 2014 , 90-98	Elsevier, DOI: 10.1016/j.saa.2013.11.059
8.	Radio-tracer study of synergistic effects of neutral donors on the extraction of gold with N-(Thioacetyl)benzamide in chloroform, P. Dey, <u>S. Banerjee</u> , S. Basu	Radiochemistry, 54, 2012 , 153-158	Springer, DOI: 10.1134/S1066362212020105
9.	Synergistic effects of phosphine oxides on the extraction of nickel(II) with 2-hydroxy-N-phenylbenzamide into n-butanol, P. Dey, <u>S. Banerjee</u> , S. Basu	Journal of the Indian Chemical Society, 89, 2012 , 35-40	Indian Chemical Society, ISSN: 00194522
10.	Synergistic effects of neutral donors on the extraction of uranium(VI) by N-acetyl benzamide in chloroform, P. Dey, <u>S. Banerjee</u> , S. Basu	Journal of the Indian Chemical Society, 89, 2012 , 653-660	Indian Chemical Society, ISSN: 00194522
11.	Synthesis, photophysical investigations and molecular structure of the supramolecular complexes of a newly designed diporphyrin receptor with fullerenes C ₆₀ and C ₇₀ in solution, S. Mukherjee, <u>S. Banerjee</u> , A. K. Bauri, S. Bhattacharya	Journal of Molecular Structure, 1004, 2011 , 13-25	Elsevier, DOI: 10.1016/j.molstruc.2011.06.039
12.	Electronic structures of the electron donor-acceptor complexes of fullerenes C ₆₀ and C ₇₀ with azulene and some of its derivatives employing ab initio and DFT methods, T. manna, <u>S. Banerjee</u> , S. Bhattacharya	Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry, 49, 2010 , 1461-1467	CSIR, New Delhi, ISSN: 03764710
13.	Antagonism in extraction of cesium with 18-crown-6 and phosphine oxides from aqueous perchlorate solution, <u>S. Banerjee</u> , P. Dey, S. Basu	Radiochemistry, 52, 2010 , 189-192	Springer, DOI: 10.1134/S1066362210020128
14.	Supramolecular fullerene/porphyrin charge transfer interaction studied by absorption spectrophotometric method, P. Mukherjee, <u>S. Bhattacharya (Banerjee)</u> , S. K. Nayak, S. Chattopadhyay, S. Bhattacharya	Chemical Physics, 360, 2009 , 116-122	Elsevier, DOI: 10.1016/j.chemphys.2009.04.018
15.	UV-vis spectrophotometric and theoretical investigations on charge transfer complexes of a designed	Journal of Molecular Structure, 889, 2008 , 352-	Elsevier, DOI: 10.1016/j.molstruc.2008.02.026

	mesotetraphenylporphyrin with C ₆₀ and C ₇₀ , P. Mukherjee, S. K. Nayak, S. Banerjee (Bhattacharya), S. Chattopadhyay, S. Bhattacharya	360	
16.	Determination of gallium by displacement substoichiometric extraction with labeled indium-oxinate in chloroform, M. Mandal, S. Banerjee, S. Basu	Applied Radiation and Isotopes, 66, 2008, 317-319	Elsevier, DOI: 10.1016/j.apradiso.2007.09.013
17.	Photophysical investigations on non-covalently linked fullerene/tetraarylporphyrin supramolecular complexes, S. Bhattacharya, S. Chattopadhyay, S. K. Nayak, S. Bhattacharya (Banerjee), M. Banerjee	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 68, 2007, 427-431	Elsevier, DOI:10.1016/j.saa.2006.11.047
18.	Spectrophotometric study of the supramolecular complexes of [60]- and [70]Fullerene with bis(calix[6]arene and crown[4]calix[6]arene, K. Ghosh, A. Semwal, S. K. Nayak, S. Bhattacharya (Banerjee), M. Banerjee	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 66, 2007, 1122-1125	Elsevier, DOI:10.1016/j.saa.2006.05.022
19.	Extraction of neptunium(IV) by a mixture of 3-phenyl-4-acetyl-5-isoxazolone and tri-n-octyl phosphine oxide, S. Banerjee, P. K. Mohapatra, A. Bhattacharyya, S. Basu, V. K. Manchanda	Radiochimica Acta, 94, 2006, 313-317	Walter de Gruyter GmbH, DOI: 10.1524/ract.2006.94.6.313
20.	Energies of charge transfer and formation equilibria of the complexes of [70]fullerene with some interesting polyaromatic molecules, S. Bhattacharya, K. Ghosh, S. Banerjee, M. Banerjee	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 64, 2006, 47-53	Elsevier, DOI:10.1016/j.saa.2005.06.036
21.	Study of electron donor-acceptor complex formation of o-chloranil with a series of phosphine oxides and tri-n-butyl phosphate by the absorption spectrometric method, S. Bhattacharya, S. Bhattacharya Banerjee, K. Ghosh, S. Basu, M. Banerjee	Journal of Solution Chemistry, 35, 2006, 519-539	Springer, DOI: 10.1007/s10953-005-9013-x
22.	Study of charge transfer complexes of [70]fullerene with phenol and substituted phenols, S. Bhattacharya, S. Banerjee, M. Banerjee	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 61, 2005, 2065-2071	Elsevier, DOI:10.1016/j.saa.2004.08.006
23.	Absorption spectroscopic study of synergistic extraction of praseodymium with benzoyl acetone in presence of crown ether, S. Banerjee, S. Bhattacharya, S. Basu	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 61, 2005, 1039-1044	Elsevier, DOI:10.1016/j.saa.2004.06.015
24.	Synergistic extraction of uranium(VI) in presence of 2,2'-dipyridyl and neutral donors by absorption spectrophotometric method, S. Banerjee, S. Basu	Journal of the Indian Chemical Society, 82, 2005, 1035-1037	Indian Chemical Society, ISSN: 00194522
25.	Synergistic effect of neutral donors on the extraction of zirconium(IV) by salicylaldehyde in dichloromethane, S. Banerjee, S. Basu	Journal of Radioanalytical and Nuclear Chemistry, 262, 2004, 733-737	Springer, DOI: 10.1007/s10967-004-0501-z
26.	Spectrophotometric study of complexation of benzoyl acetone with [60]- and [70]fullerenes and some other electron acceptors, S. Bhattacharya, S. Banerjee, S. Chattopadhyay, M. Banerjee	Chemical Physics Letters, 393, 2004, 504-510	Elsevier, DOI: 10.1016/j.cplett.2004.06.073
27.	Extraction of tetravalent neptunium isoxazonates as their TOPO adduct, S. Banerjee, P. K. Mohapatra, A. Bhattacharyya, S. Basu, V. K. Manchanda	Radiochimica Acta, 92, 2004, 95-99	Walter de Gruyter GmbH, DOI: 10.1524/ract.92.2.95.27458
28.	NMR spectrometric study of molecular complex formation of [60]- and [70]fullerenes with a number of phosphine oxides, S. Bhattacharya, S. Banerjee, S. Nayak, S. Chattopadhyay, A. K. Mukherjee	Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 60, 2004, 1099-1104	Elsevier, DOI:10.1016/S1386-1425(03)00343-3
29.	Synergistic extraction of Cobalt (II) by β hydroxy naphthaldoxime and neutral donors, S. Banerjee, S. Basu	Annali di Chimica, 94, 2004, 581-590	Wiley, DOI: 10.1002/adic.200490071
30.	Role of ligand structure and basicity on the extraction of uranyl isoxazonate adducts, A. Bhattacharyya, P. K. Mohapatra, S. Banerjee, S. Basu, V. K. Manchanda	Solvent Extraction and Ion Exchange, 22, 2004, 13-29	Marcel Dekker Inc., DOI: 10.1081/SEI-120027571
31.	Extraction of the uranyl ion with 3-phenyl-4-benzoyl-5-isoxazolone (HPBI) and neutral donors from dilute nitric acid medium, S. Banerjee, A. Bhattacharyya, P. K. Mohapatra, S. Basu, V. K. Manchanda	Radiochimica Acta, 91, 2003, 729-736	Walter de Gruyter GmbH, DOI: 10.1524/ract.91.12.729.23427
32.	Synergistic extraction of uranium(VI) by 2-hydroxy-1-naphthaldehyde thiosemicarbazone and several neutral donors, S. Banerjee, M. Bhar, S. Basu	Radiochimica Acta, 91, 2003, 593-598	Walter de Gruyter GmbH, DOI: 10.1524/ract.91.10.593.22473
33.	Extraction of ternary beta-diketonates of uranyl ion using some substituted monoamides, A. Bhattacharyya, S. Banerjee, P. K. Mohapatra, S. Basu, V. K. Manchanda	Solvent Extraction and Ion Exchange, 21, 2003, 687-705	Marcel Dekker Inc., DOI: 10.1081/SEI-120024551
34.	Studies on synergistic extraction of Pd (II) using thiosemicarbazone derivative of 2-OH' naphthaldehyde and	Indian Journal of Chemistry - Section A Inorganic,	CSIR, New Delhi, ISSN: 03764710

	neutral donors, <u>S. Banerjee</u> , S. Basu	Physical, Theoretical and Analytical Chemistry, 42, 2003 , 1914-1917	
35.	Synergistic extraction of Th(IV) by 2-hydroxy-1-naphthaldehyde thiosemicarbazone and neutral donors, <u>S. Banerjee</u> , S. Basu	Radiochimica Acta, 91, 2003 , 97-103	<u>Walter de Gruyter GmbH</u> , DOI: 10.1524/ract.91.2.97.19990
36.	Synthesis of thiosemicarbazone derivative of 2-OH naphthaldehyde and its application in synergistic extraction of gold (III), <u>S. Banerjee</u> , S. Basu	Indian Journal of Chemistry - Section A Inorganic, Physical, Theoretical and Analytical Chemistry, 42, 2003 , 1914-1917	CSIR, New Delhi, ISSN: 03764710
37.	Synergistic extraction of thorium by B-hydroxy naphthaldoxime, in presence of neutral donors, <u>S. Banerjee</u> , S. Biswas, S. Basu	Journal of Radioanalytical and Nuclear Chemistry, 250, 2001 , 399-403	Springer, DOI: 10.1023/A:1017992927572
38.	Synergistic extraction of cerium(III) by dipyrityl - Donor combination, <u>S. B Banerjee</u> , S. Basu	Indian Journal of Chemistry - Section A , 40, 2001 , 848-851	CSIR, New Delhi, ISSN: 03764710