

PROFORMA FOR BIO-DATA (for SERB account)

1. Name and full correspondence address: **Dr. SATYEN SAHA**
Department of Chemistry
Institute of Science
Banaras Hindu University
Varanasi 221005, U. P.
2. Email(s) and contact number(s): satyen.saha@gmail.com, ssaha@bhu.ac.in,
9935913366 (M)
3. Institution: Banaras Hindu University
4. Date of Birth: 11th February, 1972.
5. Gender (M/F/T): M
6. Category Gen/SC/ST/OBC: GEN
7. Whether differently abled (Yes/No): No
8. Academic Qualification (Undergraduate Onwards)

	Degree	Year	Subject	University/Institution	% of marks
1.	B.Sc.(H)	1994	Chemistry(H), Phys., Math.	Jadavpur University, Kolkata.	69.7
2.	M.Sc.	1996	Chemistry (Spl.: Physical Chemistry)	Jadavpur University, Kolkata.	68.3
3.	Ph.D.	2002 (April)	Physical Chemistry	University of Hyderabad, Hyderabad	NA

9. Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award:

Ph.D. thesis title: *"Influence of the amino functionality photophysical behavior of some electron donor-acceptor molecules"*. Supervisor: Prof. Anunay Samanta, School of Chemistry, University of Hyderabad, Year of Ph.D. degree award: 2002.

10. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	Post doctoral positions (including JSPS post doc.)	University of Tokyo, Tokyo, Japan	May 2002	October 2005	YPY ~390000 per month

2.	Post doc. and teaching assistant	Georgetown University, Washington DC. USA	October 2005	May 2006	\$ 40000 per annum
3.	Assistant Professor	Banaras Hindu University, Varanasi 221005	May 2006	Sept. 2017	15600-39100
4.	Associate Professor	Banaras Hindu University, Varanasi 221005	Sept. 2017	Till date	Rs 135300 (AL-12)

11. Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1.	DST (India) – DAAD (Germany) exchange programme	DST-New Delhi and DAAD-Germany	1998
2	Best Lecture award (Ph.D. presentation)	Pune University Workshop on Radiation and Photochemistry (PUWOP-2002).	2002
3.	Japan Society for the Promotion of Science (JSPS) Post doctoral fellowship	JSPS, Japan	2002
4.	Best Teacher (chemical science)	Chemical Research Society of India', Bangalore	2013
5.	Vice-Chancellor's Award for Excellence in research	Vice-Chancellor, BHU	2014
6.	Best Poster award in "International conference on "Advancements in Materials, Health and Safety towards Sustainable Energy & Environment (MHS-2014).	IJAA (India)-JSPS (Japan) and AERB, Govt India	2014
7.	JSPS Bridge fellowship	JSPS, Japan	2014

12. Publications (*List of papers published in SCI Journals, in year wise descending order*).

SN	Author(s)	Title	Name of Journal	Vol.	Page	Year
1.	S. K. Panja, S. Verma, S. Saha*	Probing phenol dimer in molecular complex: Role of nitro group and stabilizing agent"	J. Mol. Structu.	1193	103-109.	2019
2.	S. K. Panja,	Temperature sensor probe	Spectrochimica Acta Part	212	128–	2019

	S. Saha*	based on intramolecular charge transfer (ICT) & reversible solute-solvent interaction in solution	A: Mol. Biomol. Spectro.		131.	
3.	A. Verma, N. E. Prasad, J. Srivastava, S. Saha*	Probing the Heterogeneity of Ionic Liquids in Solution through Phenol-Water Phase Behavior.	ChemistrySelect	4	49–58	2019
4.	S. Mondal, A. Verma, S. Saha*	Conformationally Restricted Triarylmethanes: Synthesis, Photophysical Studies and Applications.	Eur. J. Org. Chem	2019	864-894	2018
5.	N. Dwivedi, S. S. Sunkari*, A. Verma, S. Saha*	Molecular Packing Dependent Solid State Fluorescence Response of Supramolecular Metal-Organic Frameworks: Phenoxo-bridged Trinuclear Zn (II) Centered Schiff Base Complexes With Halides and Pseudohalides.	Cryst. Growth Des	18	5628 - 5637	2018
6.	S. K. Panja, S. Saha*	Efficient Synthetic Protocol and Mechanistic Study of Quinazoline Analogues and their Biological Importance.	Spectrochimica Acta A: Mol. Biomol	26	121-146	2018
7.	N. Dwivedi, S. Panja, A. Verma, T. Takaya, K. Iwata, S. Sunkari, Satyen Saha*	NIR Luminescent Heterodinuclear [ZnII LnIII] Complexes: Synthesis, Crystal Structures and Photophysical properties	J. Luminescence	192	156-165	2017
8.	S. K. Panja and Satyen Saha* .	Micro-heterogeneity in imidazolium and piperidinium cation based ionic liquids: 1D and 2D NMR studies	Magn. Reson. Chem. (DOI: 10.1002/mrc.4610) In press.	56	95-102	2017
9.	Satyen Saha , H Okajima, O Homma, and H Hamaguchi	Microscopic Solvation Environments in a Prototype Room-temperature Ionic Liquid as Elucidated by Resonance Raman Spectroscopy of Iodine and	Spectrochimica Acta: Part A (appeared on cover page)	176	79-82	2017

		Bromine				
10.	S K Panja, N Dwivedi, and Satyen Saha* .	Tuning the Intramolecular Charge Transfer (ICT) Process in Push-Pull Systems: Effect of Nitro group	RSC Advances	6	105786-105794	2016
11.	S K Panja, N Dwivedi, and Satyen Saha* .	Manipulating Proton Transfer Process in Molecular Complexes: Synthesis and Spectroscopic Studies	Phys Chem Chem Phys	18	21600-21609	2016
12.	N Dwivedi, S K Panja, Monika, S. S. Sunkari, Satyen Saha,*	Anion Directed Structural Diversity in Zinc Complexes with conformationally Flexible Quinazoline Ligand: Structural, Spectral and Theoretical Studies	Dalton Transactions	45	12053-12068	2016
13.	S K Panja, N Dwivedi and Satyen Saha*	Highly Stable Naphthalene Core Based Novel Cleft-shaped Strain Molecule: Influence of Intermolecular H- Bonding Architectures	RSC Advances	6	59574-59581	2016
14.	H K Chen, N Srivastava, Satyen Saha and S Shigeto	Complementing Crystallography with Ultralow-Frequency Raman Spectroscopy: Structural Insights into Nitrile-Functionalized Ionic Liquids	Chem Phys Chem	17	93-97	2016
15.	S K Panja, N Dwivedi and Satyen Saha*	First Report of Application of Simple Molecular Complexes as Organo-Catalyst for Knoevenagel Condensation	RSC Advances	5	65526 – 65531	2015
16.	S K Panja, N Dwivedi, H Noothalapati, S Shigeto, A. K. Sikder, A Saha, S S. Sunkari and Satyen Saha*	Significance of Weak Interactions in Imidazolium picrate Ionic Liquids: Spectroscopic and Theoretical Studies for Molecular Level Understanding	Phys Chem Chem Phys	17	18167-18177	2015
17.	S Mishra, V Tirkey, A Ghosh, H R Dash, S	Ferrocenyl–cymantrenyl hetero-bimetallic chalcones: Synthesis, structure and biological properties	J. Mol. Structure	1085	162–172	2015

	Das, M Shukla, Satyen Saha , S M Mobin, S Chatterjee					
18.	M. Shukla, H. Noothalapati, S. Shigeto, Satyen Saha*	Importance of weak interactions and conformational equilibrium in N-butyl-N-methylpiperidinium bis(trifluoromethanesulfonyl) imide room temperature ionic liquids: Vibrational and theoretical studies	Vibrational Spectroscopy	75	107-117	2014
19.	N Tripathi and Satyen Saha*	Unravelling the heterogeneity in N Butyl-N-methylpiperidinium Trifluoromethanesulfonimide ionic liquid by 1D and 2D NMR Spectroscopy	Chem. Phys. Lett	607	57-63	2014
20.	S. S. Sunkari, B Kharediya, Satyen Saha , Bahjat Elrez, J-P Sutter	Chain of dimers to assembly of trimers: Temperature and ligand influenced formation of novel supramolecular assemblies of Cu(II) with isomeric (aminomethyl) pyridines and azide	New J Chemistry	38	3529 - 3539	2014
21.	S. Nahar, D. Bose S. K. Panja, Satyen Saha* and S. Maiti*	Anticancer therapeutic potential of quinazoline based small molecules via global upregulation of miRNAs	Chem. Commun.	50	4639	2014
22.	B. Kharediya, Madhulata Shukla, Satyen Saha , and S Sunkari	Influence of Metal to Ligand Molar Ratios on the Supramolecular Structure Formation of Cu(II) with diaminopropane and Iodide: Synthesis, Structure, Spectroscopic and DFT Studies	J. Mol. Structure	1062	158-166	2014
23.	S. K. Patel, V. Tirkey, S. Mishra,	Synthesis of mono- and bi-metallic dithiocarboxylate-alkyne complexes from	J. Organometallic Chemistry	749	75-82	2014

	H. R. Dash, S. Das, Madhulata Shukla, Satyen Saha , S. M. Mobin, S. Chatterjee	sunlight driven insertion reaction and their antibacterial activity				
24.	S. K. Panja and Satyen Saha*	Recyclable, Magnetic Ionic Liquid bmim[FeCl ₄] catalyzed Multicomponent, Solvent-free, Green Synthesis of Quinazolines	RSC Advances	3	1449 5- 1450 0	2013
25.	M. Shukla, Satyen Saha*	Relationship between stabilization energy and thermophysical properties of different imidazolium ionic liquids: DFT studies	Computational and Theoretical Chemistry	1015	27– 33	2013
26.	V.P.Singh, K. Tiwari, M. Mishra, N. Srivastava, Satyen Saha*	1. 5-[(2- Hydroxynaphthalen- 1- yl)methylene]amino]p yrimidine-2,4(1H,3H)- dione as Al ³⁺ selective colorimetric and fluorescent chemosensor	Sensors and Actuators B	182	546– 554	2013
27.	M. Shukla, B. Kharediya, N. Srivastava, Satyen Saha and S. Sunkari	Water Square (uudd) in Novel CuII Framework Structures Built from Isomeric (Aminomethyl)pyridines and Oxalate: Synthesis, Structure, Spectral and DFT Studies	Polyhedron	54	164- 172	2013
28.	Sumit Kumar Panja, Nidhi Dwivedi, Satyen Saha*	I ₂ - Catalyzed three- component protocol for the synthesis of quinazolines	Tetrahedron Letters	53	6167 - 6172	2012
29.	R. K. Gupta, R. Pandey, R. Singh, N.Srivastava , B. Maiti, Satyen	Heteroleptic Dipyrinato Complexes Containing 5-Ferrocenyldipyrromethene and Dithiocarbamates as Coligands: Selective Chromogenic and Redox	Inorg. Chem	51	8916 – 8930	(201 2

	Saha, P. Li, Q. Xu, D. S. Pandey	Probes				
30.	M.Shukla, N.Srivastava , Satyen Saha*	Investigation of Ground State Charge Transfer Complex between Paracetamol and p-Chloranil through DFT and UV-visible studies	J. Molecular Structure	1021	153-157	2012
31.	Biswas, Chandra Sekhar; Vishwakarma, Niraj; Patel, Vijay; Mishra, Avnish; Saha, Satyen; Ray, Biswajit	Synthesis and Study of the Properties of Stereocontrolled Poly(N-isopropylacrylamide) Gel and Its Linear Homopolymer Prepared in the Presence of Y(OTf) ₃ Lewis Acid: Effect of the Composition of Methanol-Water Mixtures as Synthesis Medium	Langmuir	28	7014 - 7022	2012
32.	K. Samanta, N. Srivastava, Satyen Saha and G. Panda	Inter- and intramolecular Mitsunobu reaction and metal complexation study: synthesis of S-amino acids derived chiral 1,2,3,4-tetrahydroquinoxaline, benzo-annulated [9]-N ₃ peraza, [12]-N ₄ peraza-macrocycles	Org. Biomol. Chem.	10	1553 - 1564	2012
33.	S. Mukherjee, S. Kumar, Satyen Saha , S. Basu, S. Chatterjee and A. K. Ghosh	Tailoring of optical and electrical properties of transition metal ions-doped ZnO-based diluted magnetic semiconductor nanoparticles	Asian J Chem.	23	5553 - 5556	2011
34.	N. Srivastava, M. Shukla and Satyen Saha* ,	An unusual way to synthesize 1-nitronaphthalene from 1-amino-5-nitronaphthalene. N. Srivastava, M. Shukla and Satyen Saha	African J Pharmacy and Pharmacology	5	542-546	2011
35.	M. Shukla, N. Srivastava, Satyen	Synthesis, structure, UV-visible-IR spectra, magnetism and theoretical studies on CuII[(2-	Polyhedron	30	754	2011

	Saha, T. R. Rao, and S. S. Sunkari	aminomethyl)pyridine](thiocyanate) ₂ and comparisons with an analogous CuII complex				
36.	M. Shukla, N. Srivastava and Satyen Saha*	Theoretical and spectroscopic studies of 1-butyl-3-methylimidazolium iodide room temperature ionic liquid: Its differences with chloride and bromide derivatives	<i>J. Mol. Struct</i>	975	349-356	2010
37.	N. Srivastava, M. Shukla and Satyen Saha*	An unusual effect of charcoal on the purification of alkylimidazolium iodide room temperature ionic liquids	<i>Ind. J. Chem.: Section A</i>	49A	757 - 761	2010
38.	C. Biswas, V. K. Patel, N. K. Vishwakarma, A. K. Mishra, Satyen Saha , and B. Ray	Synthesis and Characterization of Stereocontrolled Poly-(N-isopropylacrylamide) Hydrogel Prepared in the Presence of Y(OTf) ₃ Lewis Acid	<i>Langmuir</i>	26	6775 – 6782	2010
39.	S. Saha	Structural studies of alkylimidazolium based ionic liquids: Are they microheterogeneous liquids	<i>Bull. Ind. Soc. Rad. Photochem. Sci.</i>	21	34-42	2009
40.	Iwata, K; Okajima, H; Satyen Saha , Hamaguchi, HO	Local structure formation in alkyl-imidazolium-based ionic liquids as revealed by linear and nonlinear Raman spectroscopy	<i>Acc. Chem. Res. (ACS)</i>	40	1174 - 1181	2007
41.	T. Takaya, Satyen Saha , H. Hamaguchi, M. Sarkar, A. Samanta, and K. Iwata	Charge Resonance Character in Charge Transfer State of Bianthryls: Effect of Symmetry Breaking on Time-Resolved Near-IR Absorption Spectra	<i>J. Phys. Chem., B. (letters)</i>	110	4291	2006
42.	Satyen Saha and Hiro-o Hamaguchi	Effect of Water on the Molecular Structure and Arrangement of Nitrile-Functionalized Ionic Liquids	<i>J. Phys. Chem., B</i>	110	2777	2006
43.	P. K. Mandal,	Solvation dynamics in room temperature ionic liquids:	<i>Current Science</i>	90	301	2006

	Satyen Saha , R. Karmakar and A. Samanta	Dynamic Stokes shift studies of fluorescence of dipolar molecules				
44.	S. Hayashi, Satyen Saha and H. Hamaguchi	A New Class of Magnetic Fluids: bmim[FeCl ₄] and nbmim[FeCl ₄] Ionic Liquids	<i>IEEE Transactions on Magnetics</i>	42	12	2006
45.	S. Saha , P. K. Mandal and A. Samanta	Solvation Dynamics of Nile Red in a Room Temperature ionic liquid using streak camera	<i>Phys. Chem. Chem. Phys</i>	6	3106	2004
46.	R. Ozawa, S. Hayashi, S. Saha , A. Kobayashi and H. Hamaguchi	Rotational Isomerism and Structure of the 1-Butyl-3-methylimidazolium Cation in the Ionic Liquid State	<i>Chem. Lett.</i>	32	948	2003
47.	S. Saha , S. Hayashi, A. Kobayashi, and H. Hamaguchi	Crystal Structure of 1-Butyl-3-methylimidazolium Chloride. A Clue to the Elucidation of the Ionic Liquid Structure	<i>Chem. Lett.</i>	32	740	2003
48.	T. Yoshihara, V. A. Galievsky, S. I. Druzhinin, S. Saha and K. A. Zachariasse	Singlet Excited State Dipole Moments of Dual Fluorescent <i>N</i> -Phenylpyrroles and 4-(Dimethylamino)Benzonitrile from Solvatochromic and Thermochromic Spectral Shifts	<i>Photochem. Photobiol. Sci.</i>	2	342	2003
49.	S. Saha and A. Samanta	Influence of the Structure of the Amino Group and Polarity of the Medium on The Photophysical Behavior of 4-Amino-1,8-Naphthalimide Derivatives	<i>J. Phys. Chem. A</i>	106	4763	2002
50.	S. Saha	4-Amino Derivatives of 7-Nitrobenz-2-oxa-1,3-diazole (NBD): Effect of Amino Moiety on the Structure of Fluorophore	<i>Acta Cryst. C</i>	58	174	2002
51.	A. Samanta, S. Saha and	Excited State Structure of N-(4-Cyanophenyl)carbazole by	<i>Chem. Lett.</i>	NA	340	2002

	H. Ishikawa, Hiro-o Hamaguchi	Time-Resolved Infrared Absorption Spectroscopy				
52.	A. Samanta, S. Saha and R.W. Fessenden	Nature of the Fluorescent State of N-Arylcarbazole Derivatives as Derived from Directly Measured Values of the Excited State Dipole Moment	<i>J. Phys. Chem. A</i>	105	5438	2001
53.	K. Mani Bushan, G.V. Rao, T. Soujanya and V. J. Rao, S. Saha and A. Samanta	Photochemical E (<i>Trans</i>) → Z (<i>Cis</i>) Isomerization In Substituted 1-Naphthyl Acrylates	<i>J. Org. Chem.</i>	66	681	2001
54.	B. Ramachandr am, N. B. Sankaran, R. Karmakar, S. Saha and A. Samanta,	Fluorescence Signalling of Transition Metal Ions by Multi-Component Systems Comprising 4-Chloro-1,8- Naphthalimide as Fluorophore	<i>Tetrahedron</i>	56	7041	2000
55.	S. Saha and A. Samanta	The Twisted Structure of 9- (4-Cyanophenyl)carbazole	<i>Acta Cryst. C</i>	55	1299	1999
56.	P. K. Das, A. Chaudhuri, S. Saha and A. Samanta,	First Simultaneous Estimates of the Water Pool Core Size and the Interfacial Thickness of a Cationic Water in Oil Microemulsion by Combined Use of the Chemical Trapping and the Time-Resolved Fluorescence Quenching	<i>Langmuir</i>	15	4765	1999
57.	G. Saroja, B. Ramachandr am, S. Saha and A. Samanta	The Fluorescence Response of a Structurally modified 4- Aminophthalimide Derivative Covalently Attached to a Fatty Acid in Homogeneous and Micellar Environment	<i>J. Phys. Chem. B</i>	103	2906	1999
58.	S. Saha and A. Samanta	4-Heptamethyleneimino-7- nitrobenzo-2-oxa-1,3-diazole	<i>Acta Cryst. C</i>	55	252	1999
59.	S. Saha and A. Samanta	Photophysical and Dynamic NMR Studies on 4-Amino-7- nitrobenz-2-oxa-1,3-diazole Derivatives : Elucidation of The	<i>J. Phys. Chem. A</i>	102	7903	1998

		Nonradiative Deactivation Pathway				
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13. Detail of patents.

S.No.	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1.	Discovery of magnetic ionic liquids	Hiro-o Hamaguchi, S. Hayashi and S. Saha	NA	2004	Japan Patent Office	Unknown

14. Book Chapters/General articles etc.

S.No	Title	Author's Name	Publisher	Year of Publication
1.	Photophysics and Photochemistry of Conformationally Restricted Triarylmethanes: Application as Photoredox Catalysts.	S. Mondal, S. Saha*	book Chapter DOI: 10.5772/intechopen.76351	2018
2.	“Raman spectroscopy and heterogeneous liquid structure in ionic liquids”, edited by Ken Seddon and Robin Rogers, in “Tonic Liquids (Further) COILed”	Satyen Saha, T. Hiroi, H. Hamaguchi	Wiley Interscience, Germany, ISBN-10: 1118438639	2016
3.	“A comparative study of Piperidinium and Imidazolium based Ionic Liquids: Thermal, Spectroscopic and Theoretical Studies” edited by Jun-ichi Kadokawa in “Tonic Liquids - New Aspects for the Future”	M K Shukla and Satyen Saha*	INTECH, University Campus, Rijeka, Croatia. ISBN: 980-953-307-626-8	2012
4.	“Interactions and Transitions in Imidazolium Cation Based Ionic Liquids”,	M K Shukla, Nitin Srivastava and Satyen Saha*	InTech open access publisher. ISBN: 978-953-307-634-8	2011

	edited by Scott T Handy in “Ionic Liquids - Classes and Properties”			
5.	“Raman and X-Ray Studies on the Structure Of [bmim]X (X= Cl, Br, I, [BF ₄], [PF ₆]): Rotational Isomerism of the [Bmim] Cation”, in “Ionic Liquids IIIA: Fundamentals, Progress, Challenges, and Opportunities” edited by K R Seddon	H. Hamaguchi, Satyen Saha, R. Ozawa	American Chemical Society. ISBN: 9780841238930	2005

15. Any other Information (maximum 500 words):

- Have established an independent research group. Four Ph.D. students have been awarded Ph.D. degree under my supervision. At present four Ph.D. students are working in my group.
- Have directly guided more than 16 M.Sc. project students of our own department. Four outside students (summer project, Inspire summer fellowship etc) have also worked under my direct guidance.
- Teach theoretical and practical classes in undergraduate courses (physical chemistry) and final year Master course paper on “Molecular Spectroscopy” (a core paper). Teaching duty is extensive.
- Sincerely and dedicatedly help students to decide topics, writing short projects for their endeavours like abroad admission, INSA summer fellowship etc..
- So far helped six students (completely) to take admission in abroad with full fellowships.
- Actively involved in encouraging 10, 10+2 students to take Science/Chemistry as their future career by delivering lectures and demonstration of chemical experiments in nearby schools.
- Organized with full enthusiasm two Science Academies lecture workshop for students and collage teachers.
- Active member of Indian JSPS alumni association and executive member from north India region.