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Dr. Abhik Chatterjee



Designation: *Professor*

Department of Chemistry, Raiganj University, Raiganj, Uttar Dinajpur,
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ORCID: <https://orcid.org/0000-0003-3552-2944>

Google Scholar: <https://scholar.google.com/citations?user=35JcDVkAAAAJ&hl=en>

Nationality: Indian

Education:

Doctor of Philosophy (Ph.D.): 2011, Visva-Bharati University (A Central University). West Bengal, India

(Thesis Supervisors: Prof. I. N. Basumallick, Department of Chemistry and Prof. Susanta Ghosh, Integrated Science Education & Research Centre, Visva Bharati)

National Eligibility Test (NET): 2002.

Master of Science (M.Sc): 2002, (1st Class) The University of Burdwan.

Bachelor of Science (B.Sc): 2000, (1st Class) Suri Vidyasagar College (The University of Burdwan)

Present & Previous Employment:

Professor, **Raiganj University**, 10th May 2022 to till date

Associate Professor, **Raiganj University**, 10th May 2019 to 9th May 2022

Assistant Professor, **Raiganj University**, 3rd February 2015 to 9th May 2019.

Assistant Professor, **Raiganj College (University College)** 8th November 2005 to 2nd February 2015.

Membership and Awards:

1. Indian Science Congress Association (L17206).
2. International Science Community Association (FC-119).



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3. Associated with *Drug Discovery Hackathon 2020 (DDH2020)*, DDH2020 is a joint initiative of AICTE, CSIR and supported by Office of Principal Scientific Advisor, Govt. of India, NIC and MyGov. Act as Evaluator.
4. Arun Sen Memorial award (Suri Vidyasagar College, The University of Burdwan)
5. National merit scholarship (Govt. of India)

Administrative and other experiences:

1. Act as Head of the Department: 2010-2012, 2018-2020 (Head of the Department /Coordinator), 2021 - 2023.
2. Chairman (2018-2020, 2021 - 2023), Board of Undergraduate and Postgraduate studies, Raiganj University
3. Member, Board of Research Studies (BRS), Board of Undergraduate and Postgraduate studies Raiganj University
4. Member ,IQAC, Raiganj University
5. Member, Ph.D. Committee
6. Convener of Research Advisory Committees.
7. Member of different Research Advisory Committees of the Chemistry Department
8. Acts as a Board observer: West Bengal Joint Entrance Examination; 2019, 2023.
9. Acts as a Board observer: West Bengal Joint Entrance Examination (ANM(R) &GNM), 2021, 2022,2023.
10. Centre-in-Charge (2018-2020, 2021 - 2023), PG examination, Department of Chemistry
11. Member, UG-Examination Committee (Under The University of North Bengal), 2013-2015
12. Member, Board of Undergraduate studies, University of North Bengal (2012-2015).
13. Act as a Judge of Children science congress, 25/09/2016
14. Act as judge, W.B. Govt. Youth science fair. 2016 ,2018,2024(Government of West Bengal, Youth Service Development)
15. Act as an Observer, Netaji Subhas Open University, Examination,
16. Subject expert in selection committee (2018), Dr. Meghnad Saha College, Itahar, Uttar Dinajpur.
17. Act as a Judge of Children science congress, 2018
18. Act as Judge, Uttar Dinajpur district level Student youth science fair, W.B. September 2018
19. Act as subject expert, Kendriya Vidyalaya, Raiganj, BSF, Gobindapur

RESEARCH PROFILE:

Editorial Board Member:

1. Research Journal of Chemical sciences (www.isca.in/rjcs/editorialboard.php)
2. International Journal of Green and Herbal Chemistry (www.ijghc.com)
3. Review Editor in Environmental Chemical Engineering (specialty section of Frontiers in Chemical Engineering).

Reviewer:

Act as Reviewers of journals of Taylor & Francis and Elsevier, Springer publishers.
Journal of aquatic biology and Fisheries



Publications:

1. S. K. Das, J.Ghosh, A. K. Pramanik,, D Majumdar, M Hossain, and **A Chatterjee***. *Groundwater Hydrochemistry and Probabilistic Health Risk Assessment of Fluoride and Iron in Hili Panchayat Block at Indo-Bangladesh Border*, <https://doi.org/10.1007/s10653-023-01824-0>, 46, 33 (2024), **Environmental Geochemistry and Health**. IF: 4.23
2. Sujoy Karmakar, Hriday Kumar Basak, Uttam Paswan, Soumen Saha, Samir Kumar Mandal, **Abhik Chatterjee***. *Design, In Silico Screening, Synthesis, Characterisation and DFT-based Electronic Properties of Dihydropyridine-based Molecule as L-type Calcium Channel Blocker*. **Current Computer-Aided Drug Design**. DOI: [10.2174/0115734099273719231005062524](https://doi.org/10.2174/0115734099273719231005062524) Published on 19th Nov 2023. [IF-1.7; Scopus cite score-2.9].
3. Barnan K. Saha, Vivek Roy, Jayanti Saha, **Abhik Chatterjee**, Ayon Pal*. *Study of mercury resistance and Fourier transform infrared spectroscopy-based metabolic profiling of a potent Bacillus tropicus strain from forest soil*. **Journal of Basic Microbiology**. (IF-3.1). <https://doi.org/10.1002/jobm.202300351>.
4. Jayanti Saha, Madhumita G Chaki, Sujoy Karmakar, **Abhik Chatterjee** & Ayon Pal*. *Effect of different heavy metals on lipase production by a multiple heavy metal-resistant Pseudomonas aeruginosa strain isolated from arable land*. **Biologia** (2023). <https://doi.org/10.1007/s11756-023-01465-9>. [IF 1.653; Scopus index- CiteScore 2.8]
5. Dilli Ram Pokhrel, Manish Kumar Sah, Bibaran Gautam, Hriday Kumar Basak, Ajaya Bhattarai*, **Abhik Chatterjee***. *A recent overview of surfactant-drug interactions and their importance*. **RSC Advances**, 2023, 13, 17685. [IF 3.9 ; Scopus indexed - CiteScore 5.9]
6. Soma Sarkar, **Abhik Chatterjee***, Kinkar Biswas*. *A Recent Update on Rhodamine Dye Based Sensor Molecules: A Review*. **Critical Reviews in Analytical Chemistry**, 2023. <https://doi.org/10.1080/10408347.2023.2169598>. [IF: 5.3; Citescore: 10.8]
7. S. K. Das, A. K. Pramanik,, D Majumdar, M Hossain, T Ghosh and **A Chatterjee***. *Hydrochemical investigation of groundwater and probabilistic health risk assessment from fluoride and iron intake in a ferruginous Barind tract*. **International Journal of Environmental Analytical Chemistry**, 2022. <https://doi.org/10.1080/03067319.2022.2140044> [IF: 2.826; CiteScore 3.2]



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8. S. K. Das, A. K. Pramanik, R. K. Das, A Chatterjee*. *An evolving perspective on the fluoride mitigation techniques*. **International Journal of Environmental Science and Technology**, 2022. <https://doi.org/10.1007/s13762-022-04576-z> [IF: 3.52; CiteScore 6.4]
9. Subhankar Deb Barman, D Pokhrel, A Chatterjee*. *Anticorrosive efficiency study of Barringtonia acutangula leaves extract on iron metal in HCl medium*. **Science and technology journal**, 2022. {UGC-Carelisted}. <https://doi.org/10.22232/stj.2022.10.02.01>
10. AK Pramanik, D Majumdar and A Chatterjee*. *Groundwater hydrochemistry and consumption patterns in Chandwara community development block of Jharkhand state in India*. **Applied Water Science**, 2022. <https://doi.org/10.1007/s13201-022-01587-6>. [IF: 6.1; CiteScore 8.9]
11. S Karmakar, HK Basak, U Paswan, AK Pramanik and A Chatterjee*. *Designing of next-generation dihydropyridine-based calcium channel blockers: An in silico study*, **Journal of Applied Pharmaceutical Science**, 2022. DOI: 10.7324/JAPS.2022.120414 (Scopus Indexed, CiteScore 2.4).
12. HK Basak, S Saha, J Ghosh, U Paswan, S Karmakar, A Pal and A Chatterjee*. *Sequence Analysis, Structure Prediction of Receptor Proteins and In Silico Study of Potential Inhibitors for Management of Life Threatening COVID-19*. **Letters in Drug Design & Discovery**, 2022. DOI: [10.2174/1570180818666210804141613](https://doi.org/10.2174/1570180818666210804141613) [IF: 1.15; Citescore: 1.9]
13. HK Basak, U Paswan, S Karmakar and A Chatterjee*. *In-silico screening of flavonoids as AgrA inhibitors*, **Rasayan Journal of Chemistry**, 2022. <http://doi.org/10.31788/RJC.2022.1526696> (Scopus indexed, Citescore 2.0)
14. HK Basak, U Paswan and A Chatterjee*. *A computational approach to explore the binding mechanism of secondary metabolites of Hamigerangelheimensis with AgrA quorum sensing proteins*. **Vietnam Journal of Chemistry**, 2022. <https://doi.org/10.1002/vjch.202100046> (Wiley) [IF: 0.9; CiteScore 1.4].
15. HK Basak, U Paswan, J Ghosh, S Saha and A Chatterjee*. *In silico Evaluation of Savirin Derivatives As Inhibitors of the agr Quorum Sensing system of Staphylococcus aureus*. **Analytical Chemistry Letters**, 2021. (Taylor & Francis) (UGC-Care listed, Scopus indexed CiteScore 1.9).
16. AK Pramanik, SK Das and A Chatterjee*. *A Study on Groundwater Quality Based on Major Ion Chemistry of Jharkhand State in India: (A Review)*. **Oriental Journal of Chemistry**, Vol.-37, Issue-3, Page no - 962-971 (2021). [Web of Science (WOS) Emerging Sources Citation Index – ESCI, National Academy of Agricultural Sciences, India, NAAS Score-5.25]
17. HK Basak, U Paswan, A Pal and A Chatterjee*. *In silico study of some natural quorum sensing inhibitors with AgrA proteins: molecular docking study and normal mode analysis*. **Journal of Scientific Research [Institute of Science, The Banaras Hindu University]** Vol.-65, Issue-5, Page no - 62-71 (2021).



18. J Saha, S Bhattacharjee, MP Sarkar, BK Saha, HK Basak, S Adhikary, V Roy, P Mandal, **A Chatterjee** and A Pal. *A comparative genomics-based study of positive strand RNA viruses emphasizing on SARS-CoV-2 utilizing dinucleotide signature, codon usage and codon context analyses.* **Gene Reports**, Vol.-23, Article no- 101055 (2021).(Elsevier). [IF-1.3Scopus Indexed, CiteScore 2.4,]. <https://doi.org/10.1016/j.genrep.2021.101055>
19. AK Pramanik, D Majumdar and **A Chatterjee***. *Evaluation of Hydrochemical Facies and Suitability of Water in Tilaiya Dam Reservoir of the Jharkhand State in India.* **Analytical Chemistry Letters**, Vol.-10, Issue - 5, Page no - 684-702, (2020).(Taylor & Francis) [UGC Care listed, Scopus indexed-2.2]
20. AK Pramanik, D Majumdar and **A Chatterjee***. *Factors affecting lean, wet-season water quality of Tilaiya reservoir in Koderma District, India during 2013–2017.* **Water Science**, Vol.-34, Issue-1, Page no- 85-97 (2020) (Taylor & Francis). [Scopus Indexed, CiteScore 3.6].
21. HK. Basak, **A Chatterjee** and A Pal. *Relative Structural Analysis of LytTR domain of AgrA protein involved in bacterial quorum sensing,* **International Journal of Pharmaceutical Sciences and Research**, Vol.-11, Issue-6, Page no – 2828-2839 (2020).
22. **A Chatterjee**. *Electrodes for Estimation of Nimesulide Drug using Voltammetry Technique: A Revisit,* **Science and Technology Journal**. Vol.-7, Issue-2, Page no- 67-71 (2019). [UGC Care listed].
23. **A Chatterjee**. *Fuel Cell: A source of clean energy,* **Recent Innovation in Chemical Engineering.** (Bentham Publisher) Vol.-11, Issue-2, Page no-120-131 (2018). [Scopus Indexed, CiteScore 2.1]
24. **A Chatterjee**, U. Mandal, P. Ghosh and B. Das, *Molecular dynamics simulation of rennin in aqueous environment,* **International journal of Green and Herbal Chemistry**, Vol.-7, Issue-4, Page no-938-943 (2018).
25. **A Chatterjee**, *Different electrodes for paracetamol estimation using cyclic voltammetry technique: A review,* **Research Journal of Pharmacology and Pharmacodynamics**, Vol.- 9, Issue- 2, Page no- 88-92, (2017).
26. **A Chatterjee**, *Effect of scan rate on isopropanol electrooxidation onto PtSn electrode.* **International Journal of Chemtech research**, Vol.- 10, Issue-4, Page no- 097-102 (2017). [Scopus indexed, CiteScore 0.6, 2015-16].
27. B Bagchi, S Sharma, **A Chatterjee**, P Ghosh and A Bothra. *QSAR Study and Molecular Docking of 23- hydroxybetulinic Acid Derivatives as RMGPa and HeLa Cells Inhibitors;* **Commun. Comput. Chem.**, Vol.- 3, Issue- 3, Page no- 75 (2015). doi: 10.4208/cicc.2015.v3.n3.2



28. **A Chatterjee**. *Cyclic voltammetry study of isopropanol electrooxidations onto PtNi electrode*, **Research and reviews in electrochemistry**, Vol.- 5, Issue- 5, Page no- 109-114 (2014)
29. **A Chatterjee**. *Ethanol Electro-Oxidation In Presence of Surfactant Environment*, **International Journal of Chemtech research**, Vol.- 5, Issue- 1, Pge no- 28-33 (2013). [Scopus indexed, **CiteScore 0.6**, 2015-16]
30. **A Chatterjee***, M Chatterjee, S Ghosh, and I Basumallick, *Electro-oxidation of isopropanol on to Pt loaded carbon felt surface modified by polyaniline*, **International Journal of Emerging Sciences**, Vol.- 2, Issue- 1, Page no-123-133 (2012).
31. B Bagchi, **A Chatterjee**, P Ghosh, and A Bothra, *A theoretical investigation of cytotoxic activity of halogenated monoterpenoids from plocamium cartilagineum*, **J. Chem. Pharm. Res.**, Vol.- 4, Issue- 12, Page no- 5076 (2012).
32. **A Chatterjee***, M Chatterjee S Ghosh and I Basumallick. *Electro-oxidation of ethanol and isopropanol onto Pt-Sn and Pt-Ni surfaces*. **International Journal of Current Research and Review**, Vol.- 4, Issue- 2, Page no-13 (2012) [Scopus indexed, **CiteScore 0.2**, 2020].
33. **A Chatterjee**. *Molecular Dynamics Simulation of a NaK channel protein*. **J. Chem. Pharm. Res.**, Vol.-3, Issue- 6, Page no- 66-72 (2011)
34. **A Chatterjee***, Moitrayee Chatterjee, Susanta Ghosh, I. Basumallick. *Electro-oxidation of ethanol and isopropanol onto ternary Pt-Sn-Ni surface*. **Chemical Technology-An Indian Journal**, Vol.- 6, Issue- 4, Page no- 197-201 (2011)
35. **A Chatterjee**, A Bothra, *Molecular Dynamics Simulation of Angiotensin I: precursor of AngiotensinII*. **International journal of Integrative Biology**, Vol.-9, Page no- 21(2010), Scopus index 0.3(2015).
36. M Chatterjee, **A Chatterjee**, S Ghosh, I Basumallick. '*Electro-oxidation of ethanol and ethylene glycol on carbon supported nano Pt and PtRu catalyst in acid solution*'. **Electrochimica Acta**, Vol.- 54, Page no- 7299 (2009) [**Imp factor:7.336**, Elsevier, Clarivate Analytics, 2022, Scopus **CiteScore:12.8**]
37. **A Chatterjee**, S Ghosh, I Basumallick. *Polyaniline modified spongy carbon felt as anode material for ethanol fuel cell*. **Research and Reviews in Electrochemistry**, Vol.- 1, Issue- 1, Page no- 04 (2008).
38. I Basumallick, P Roy, **A Chatterjee**, A Bhattacharya, S Chatterjee, S Ghosh. *Organic gel polymer electrolyte for lithium battery*. **Journal of Power Sources**, Vol.- 162, Issue-1, Page no-797 (2006). [**Imp factor: 9.794**; Elsevier, Scopus **CiteScore 15.9**]

Books/Chapters:



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1. Application of some Carbonaceous Materials: An Emerging Trend, Edited by Abhik Chatterjee and Kinkar Biswas, LAP, LAMBERT academic publishing. ISBN: 9786206161332. 2023
2. Ion Exchange Resins for Selective Separation of Toxic Metals, , Materials Research Foundations 137 (2023) 55-74, Ion Exchange Resins: Biomedical and Environmental Applications, Materials Research Forum LLC DOI: <https://doi.org/10.21741/9781644902219-4>
Print ISBN 978-1-64490-220-2 (release date January 2023)
ePDF ISBN 978-1-64490-221-9
By Arun Kumar Pramanik, Nirmala Tamang , **Abhik Chatterjee***, Ajaya Bhattarai* and Bidyut Saha*
3. Molecular docking: A potential tool for rational drug design. Page: 56-62. Frontier Aspect of Natural science. ISBN- 978-81-86359-83-4.
By HK Basak and A Chatterjee
Editors. Dr. Soma Mitra (Banerjee) (Gourbanga University) & Dr. Subrata Sarkar (Gourbanga University). **Publisher:** Banaras Marcantile Company, 2020
4. Rocking Chair Battery (Lithium ion Battery) and its working principle. Page: 88-99. A Book on "Fascinating Science" ISBN 978-93-82549-92-5
Editors. Dr. Niranjana Kumar Mridha
Publisher: Readers Service, 2021
5. Biological applications of some Rhodamine B and Rhodamine 6G derivatives: A concise review
Page : 112-126 Recent Development of Chemical Research being Implemented in Biology and Medicine
S Sarkar, A Chatterjee, K Biswas.
Editors. Dr Bidhan Chandra Samanta
Publisher: Walnut Publication (an imprint of Vyusta Ventures LLP) 2022
Paperback ISBN: 978-93-5574-019-9 eBook ISBN: 978-93-5574-029-8
6. Battery: A potential threat to environment. Page: 13-18
Environmental Concern: An Overview.
Editors. P. Mahala, I Chattopadhyay, A Chatterjee, MR Islam.
Publisher: Banaras Marcantile Company, 2018. ISBN-9788186359656
7. Water Pollution and its monitoring parameters.
AK Pramanik and A Chatterjee
Page: 19-24 Environmental Concern: An Overview.
Editors. P. Mahala, I. Chattopadhyay, A. Chatterjee, Md. R. Islam.
Publisher: Banaras Marcantile Company, 2018. ISBN-9788186359656
8. Municipal Solid Waste Management. Page: 35-44 Information Technology, Biological Sciences and Society: A Handbook.
Editors: P. K. Paul and B. K. Santra
Publishers: New Delhi Publishers, 2018.
ISBN: 9789386453402
9. Visualization Software and its Importance in Chemistry.



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Page: 55-72 Information Technology, Biological Sciences and Society: A Handbook.

Editors: P. K. Paul and B. K. Santra

Publishers: New Delhi Publishers, 2018. ISBN: 9789386453402

10. Celebration of Festivals and Environment Pollution.

Page: 120-122, Philosophy, Religion and Culture.

Editors: I. Chattopadhyay, S. Bhattacharya, B. Barman

Publishers: Sanskrit Pustak Bhandar, Kolkata, 2017. ISBN: 9789387800052

11. Suregada Multiflora Leaves Extract as a Green Corrosion Inhibitor

Authors: A Chatterjee, J Saha, S Debbarmann, D Pokhrel

Publication date: 2022/3/30

Publisher: GRIN Verlag

Books:

1. Oxygen Reduction Reaction: An electrode Reaction, LAMBERT Academy Publishing, Germany. 2021, ISBN: 978-620-4-21211-1.
https://www.lap-publishing.com/catalog/details/store/gb/book/978-620-4-21211-1/oxygen-reduction-reaction:-an-electrode-reaction?search=ABhik&_gl=1*1mu8gua*_ga*NDg2NjE1MDQ0LjE2NjM0MTk4MTU.*_ga_BVHZPJT3FG*MTY2MzQxOTgxNC4xLjEuMTY2MzQxOTgzNS4wLjAuMA.
2. Electrooxidation Mechanism of Organic Molecules, Blue Hill Publications Pvt. Ltd. India April, 2022, ISBN: 978-93-94741-16-4
3. A Quick Look at Corrosion Inhibitors, Eliva Press, Moldova, Europe 2022, ISBN: 978-1-636648-645-1
<https://www.elivapress.com/en/authors/author-1393339280/>
4. **FUEL CELL: A BEGINNER'S GUIDE**
PUBLISHERS: UKIYOTO PUBLISHING, 2022,
Canada-India-Philippines, ISBN: 9789355970916.
<https://www.ukiyotoindia.com/product-page/fuel-cell>

Ph.D. Scholars (Awarded and Submitted):

1. **Dr. Arun Kumar Pramanik** (Awarded, 2021)

Thesis title: *Spatiotemporal Variation in the Water Quality of Tilaiya Dam and Groundwater in Chandwara Block of Jharkhand in India*

Present Position: Assistant Chemist

Koderma Thermal Power Station, DVC (A Central Govt. Organisation), Koderma, Jharkhand, PIN 825421.

E-mail ID: akp.chem82@gmail.com



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2. **Dr. Hriday Kumar Basak** (Awarded, 2022) [Co-supervisor Dr Ayon Pal, Department of Botany, Raiganj University]

Thesis title: *Characterisation of the inhibitors related to quorum sensing by quantum chemical methods and study of their interactions with their receptor proteins.*

M. Sc. in Chemistry (University of North Bengal)

NET (UGC JRF)



Present Position: Assistant Professor of Chemistry,
Govt. General Degree College at Kushmandi,
Dakshin Dinajpur- 733121, WB, India
Email ID: hridaybsk715@gmail.com

3. **Sandip kumar Das** (submitted)

Thesis title: Appraisal of hydrochemical characteristics of groundwater with special emphasis on fluoride contamination of South Dinapur District in West Bengal, India

4. **Sujoy Karmakar** (submitted)

Thesis title: Synthesis of Functionalized Heterocycles and Studies towards Diverse Properties with Theoretical Interpretations



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<https://raiganjuniiversity.ac.in/>

<https://raiganjuniiversity.ac.in/chemistry/>