



Arya Vidyapeeth College
আর্য্য বিদ্যাপীঠ মহাবিদ্যালয়



Personal profile

Name of the Faculty: Dr. Monali Dutta Saikia

Designation: Assistant Professor (Stage III)

Personal Information Date of Birth: 04-03-1970

Gender: Female

Nationality: Indian

Address for correspondence:

Department of Chemistry,

Arya Vidyapeeth College

Guwahati – 781 016

Dist: Kamrup (M),

Permanent Address:

C/O. Prof. Anil Kumar Saikia

Qr. No. F-53, IIT Guwahati Campus

Guwahati – 781 039

Dist: Kamrup (M)

e-mail ID : monalisaikia@hotmail.com

web:

Contact no.: 09435044621

Date of joining the present service: 02-05-2008

Academic Qualification M.Sc., PhD

Teaching Experience In UG level: 12 Years

In PG level: 05 Years

Academic distinction i) State Merit Scholarship.



Research
Experience

Date of obtaining / PhD Degree: 17-02-2001, Gauhati University

Title of the PhD thesis:

“ADSORPTION OF CERTAIN β -LACTAM ANTIBIOTICS ON ACTIVATED CARBON/POLYMERIC RESINS: EQUILIBRIUM AND KINETIC STUDIES.”

Length of research experience: 19 Years

Specialization (Area of interest): Adsorption of Biomolecules and Metalions, Host-Guest Chemistry.

Research Guidance (PhD guideship): PhD Guideship

No. of student obtained PhD degree: 01

No. of student perusing PhD degree: 01

No. Of research projects:

Title of the project	Funding agency	Amount (in Rs)	Status (ongoing/completed)
Adsorptive separation of biomolecules (from natural resources): Thermodynamics and Molecular modelling studies.	University Grants Commission, New Delhi	4,00,000/-	Completed
Adsorptive Interaction of Biomolecules/ Drug molecules on Cyclodextrin Polymers: Experimental and Molecular Modelling Studies.	DST, New Delhi	13,25,731/-	Completed

Experimental and molecular modelling study on the liquid phase adsorption of biomolecules/ beta-lactam antibiotics.	DST, New Delhi	9,83,687/-	Completed
---	----------------	------------	-----------

Publications No. Of Book chapters published : 03

- i) M D Saikia, Adsorptive separation of phenolic compounds at solid-liquid interface, Chemistry of phenolic compounds State of Art (2010) 155-163. Editor: Prof. JB Baruah, Nova Publication, New York, USA. ISBN-978-1-61761-335-7.
- ii) M D Saikia, "Perspectives in biomolecular adsorption at solid-liquid interface", Current Focus on Colloids and Surfaces, 2009: 131-154. Editor: Songjun Li ISBN: 978-81-7895-438-7.
- iii) M Dutta, MM Borah, N N Dutta, "Adsorptive Separation of Beta-Lactam Antibiotics : Technological Perspectives", Adv. Biochem Engin/Biotechnol (2004) 86 : 255-278. ISBN: 3-540-40379-5.

No. Of Research paper published: 19

Published Papers:

- i) S. Gogoi, S. Chakraborty, M Dutta Saikia, "Surface modified pineapple crown leaf for adsorption of Cr(VI) and Cr(III) ions from aqueous solution", Journal of Environmental Chemical Engineering, 6 (2018) 2492-2501.
- ii) S Gogoi, M Dutta Saikia, "Studies on adsorption mechanism of Cu(II) and Ni(II) onto polymeric Resins", J. Indian Chem. Soc., 95 (2018) 1055-1065.
- iii) H. Deka, M Dutta Saikia, H Srivastava, "Adsorption of Various Monoterpenoids on the Surface of Graphene and Nitrogen-Doped Graphene: A DFT Based Study", Chemistry Select 2 (2017) 5248-5258
- iv) S. Gogoi, M Dutta Saikia, "Adsorptive interaction of 90Y and 90Sr with diglycolamide based resin: a density functional theory", J. Radioanalytical and Nuclear Chemistry. 311 (2017) 663-671
- v) H Deka, M Dutta Saikia "Structural and thermodynamic factors on adsorptive interaction of certain flavonoids onto polymeric resins and activated carbon", Colloids And Surfaces A: Physicochem. Eng. Aspects (2015) 469 51-59.

- vi) A Banik, M Dutta Saikia, "Triflumizole encapsulation by 2-hydroxypropyl and sulphated derivatives of β -cyclodextrin", J Ind Chem Soc 91 (2014) 865-870
- vii) A Banik, M Dutta Saikia "Adsorptive interaction of chiral amino acids on β -cyclodextrin bonded to silica particles", J Encapsulation and Adsorption Sciences (2013) 3: 35-47
- viii) A Banik, M Dutta Saikia, "Interaction of Ibuprofen with β -Cyclodextrins: Experimental and molecular modeling studies", J Ind Chem Soc. (2013) 90: 1163-1171.
- ix) M Dutta Saikia, A Banik, P. Gogoi, "Interaction of Naproxen with β -Cyclodextrin and its derivatives/Polymer : Experimental and Molecular modeling studies", J Incl Phenom Macrocycl Chem (2012) 72:449-458
- x) P Gogoi, M Dutta Saikia, NN Dutta, PG Rao, "Adsorption affinity of tea catechins onto polymeric resins: Interpretation from molecular orbital theory", Biochemical Engineering Journal, 52 (2010) 144-150
- xi) M Dutta Saikia, " Studies on adsorption of amino acids on β -cyclodextrin bonded to silica particles", Colloids and Surfaces A: Physicochem. Eng. Aspects, 329 (2008) 177-183.Gsdg
- xii) M Dutta Saikia, "Revisiting Adsorption of Biomolecules on Polymeric Resins", Colloids and Surfaces A: Physicochem. Eng. Aspects, 315 (2008) 196-204
- xiii) M Dutta Saikia, NN Dutta, "Adsorption affinity of certain biomolecules onto polymeric resin: Effect of solute chemical nature", Reactive and Functional Polymer, 68 (2008) 33-38.
- xiv) M Dutta Saikia, NN Dutta, "Adsorption affinity of certain biomolecules onto polymeric resins: Interpretation from molecular orbital theory", Colloids and Surfaces A: Physicochem. Eng. Aspects (2006) 280: 163-168
- xv) NN Dutta, M Dutta Saikia, "Adsorption equilibrium of 7-aminodeacetoxy cephalosporin acid-cephalexin mixture onto activated carbon and polymeric resins", Indian Journal of Chemical Technology (2005) 12: 296-303.
- xvi) M Dutta, N N Dutta, K G Bhattacharyya, "Adsorptive Interaction of Certain Beta-lactam Antibiotics in Aqueous Solution: Interpretation by Frontier Orbital Theory", Journal of Chemical Engineering of Japan, 33(2) (2000) 303-307.

xvii) M Dutta, N N Dutta, K G Bhattacharyya, "Aqueous phase Adsorption of certain Beta-lactam antibiotics onto polymeric resins and activated carbon," Separation and Purification Technology, 16 (1999) 213-224.

xviii) M Dutta, R Baruah, N N Dutta, "The Adsorption of certain semi-synthetic Cephalosporins on Activated carbon", Colloids And Surfaces A: Physicochem. Eng. Aspects, 127 (1997) 25-37.

xix) M Dutta, R Baruah, N N Dutta, "Adsorption of 6-Aminopenicillanic acid on activated carbon", Separation and Purification Technology, 12 (1997) 99-108

Papers

presented in
Seminar/
Conference

No. Of International Seminar: 02

i) "Surface modified pineapple crown leaf for adsorption of Cr(VI) and Cr(III) ions from aqueous solution.", Deptt. of Chemistry, Dibrugarh University, Assam Emerging Trends in Chemical Sciences, February 26-28, 2018, International.

ii) "Interaction of Ibuprofen, S-Ibuprofen and Naproxen with β -cyclodextrin and its derivatives/polymer: Experimental and Molecular Modeling Studies.", International Congress on Organic Chemistry, D.I. Mendeleev Russian Chemical Society, held in Kazan, Russia, September 18-23, 2011, International.

No. Of National Seminar: 04

i) "Adsorptive Separation of Biomolecules from Plant Sources: From Laboratory to Industry.", ASTU in association with AEC under TEQIP-III Project of MHRD, Govt. of India, September 04-05, 2019, National

ii) "Adsorptive Separation of Quercetin and Rutin using Ion Exchange Resins: Experimental and Molecular Modelling Study.", Department Of Applied Sciences, Gauhati University, Recent Advances in Applied Sciences, May 17-18, 2019, National

iii) "Structural and thermodynamic factors on adsorptive interaction of certain flavonoids onto polymeric resins and activated carbon.", Department of Chemistry, NEHU, Shillong under the North Eastern Chapter of Indian Society for Surface Science and Technology, Kolkata, North East Regional Seminar on Trends in Colloid and Interface Science Centre for Advanced Studies in Chemistry, November 27-28, 2014, National.

iv) "Adsorptive interaction of certain flavonoids onto polymeric resins and activated carbon.", NEIST Jorhat and Tezpur University, 8th Mid-Year Chemical Research Society of India, National Symposium in Chemistry, July 10-12, 2014, National.

Acted as Resource person/ chaired technical Session	<ul style="list-style-type: none"> i) Acted as a resource person in a workshop on Renewable Resources & Sustainable Technologies ASTU in association with AEC under TEQIP-III Project of MHRD, Govt. of India, September 04-05, 2019. ii) Acted as a resource person for five days in a workshop organised by North East Regional Institute of Education, NCERT, Barapani, January 6 -10, 2014.
Linkage with other institution (research collaboration)	<ul style="list-style-type: none"> i) Research activities with Department of Chemistry, IIT Guwahati. ii) Research activities with NEIST, Jorhat.
Membership in reputed national/ international agency	<ul style="list-style-type: none"> i) Life member of Indian Chemical Society of India (National level) ii) Life member of Association of Chemistry Teachers (National level) iii) Life member of the centre for Environment, Education and Economic Development (International)
Corporate Social responsibility	<ul style="list-style-type: none"> i) Working as a Co-ordinator of the College Environmental Cell, supported by ASTE Council. ii) Working as a Co-ordinator of the Academic and Research cell of the college iii) Working as a member of the Eco-Club of the college. iv) Worked as a member in the B.Sc admission committee of the college v) Worked as an executive member of the Institutional Biotech Hub. vi) Worked as a member of the IQAC cell of the college
Award received from Govt./ reputed national society	<ul style="list-style-type: none"> i) Senior Research Fellowship, CSIR, New Delhi, in 1997. ii) Scientist, Fast Track Scheme, DST, New Delhi, in 2003 iii) Senior Research Associate (under the Scientist's Pool Scheme), CSIR, New Delhi, in 2007.
Any other remarks	<p>Referee of the Journals:</p> <ul style="list-style-type: none"> i) Journal of Chemical Technology and Biotechnology, ii) Colloids and Surfaces A: Physicochem. Eng. Aspects, iii) Journal of Chromatography A, iv) Journal of Inclusion Phenomena and Macrocyclic Chemistry etc.