

Arindom Bikash Neog

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**Education**

2015-2017 Master of Science in Chemistry, Tezpur University, Assam
Specialization: Organic Chemistry
Project Supervisor: Dr. Utpal Bora, Associate Professor, Department of Chemical Sciences, Tezpur University, Assam, India.
2012-2015 Bachelor of Science in Chemistry, D.K.D. College under Dibrugarh University
2010-2012 Higher Secondary in Science, D.K.D. College, Assam, India.
1998-2010 Don Bosco High School, Dergaon, Assam

Research

2017 – till present Part-time Research Scholar at the Department of Chemistry, Indian Institute of Technology, Guwahati.
PhD Supervisor Dr. Kalyan Raidongia, Associate Professor, Department of Chemistry, Indian Institute of Technology, Guwahati, Assam, India.
Research Interest Smart Materials, Nanomaterials, Nanofluidics, Water Treatment and Energy Harvesting.

Qualifications

- NET Chemical Sciences (2016 and 2017)
- GATE Chemistry (2017)
- SLET Chemical Science (2018)
- IIT-JAM Chemistry (2015)

Awards

- Gold Medal in Master of Science (Chemistry), Tezpur University, 2017
- First class First with Distinction in Bachelor of Science (Chemistry) under Dibrugarh University, 2015
- Post-Graduate Merit Scholarship for University Rank Holder, 2015-16
- 20th rank in HSLC examination, SEBA, 2010

Experiences

- Operator of Atomic Force Microscope (AFM) at Central Instruments Facility, Indian Institute of Technology for the period from August 2018-August 2021
- Experience of operating UV-Visible Spectrophotometer, Fluorescence Spectrophotometer, FTIR Spectrophotometer, Digital Sourcimeter, Bench-Top Powder X-ray Diffractometer, Zetasizer, Microwave Reactor, High Performance Liquid Chromatography, Universal Testing Machine.

Seminars/Conferences attended

1. Oral presentation in the International Conference on “Materials Chemistry And Catalysis” (Virtual Mode) organized by Department of Chemical Sciences, Tezpur University, Assam, India during 4th & 5th of March **2021**.
Title of Presentation: *Electrical Actuation of Hydrophobic Bilayer Membranes of Reduced Graphene Oxide and Agar for Inducing Chemical Reactions in Microdroplets*
2. Oral presentation in the National Level Seminar titled “Sustainability, Medicine and Clean Energy” Organized by Department of Chemical Sciences in collaboration with InSCIgnis, Tezpur University on 1st of March, **2022**.
Title of the Presentation: *Tailor-cut Nanofluidic Characteristics of Vanadium Pentoxide Ion-Channels*
3. Poster presentation entitled “*Hydrophobic reduced graphene oxide and agar based bilayer membrane*” in the International e-Poster Conference on Current Outlook in Material Science and Engineering (COMSE-2k20) from 15-16th of May **2020** Organized by Bodoland University in Association with Tripura University, ADP College, Nagaon & MIT Aurangabad on Facebook.
4. Poster Presentation entitled “*Multi responsive actuator based on reduced graphene oxide and agar*” in Emerging Trends in Chemical Sciences (ETCS-2020) conference from 13-15th of February 2020 organised by Department of Chemistry, Gauhati University.
5. Poster presentation entitled “*Stimuli responsive bilayer membrane of reduced graphene oxide and agar*” in the National Conference on 'Recent Advances in Chemistry 2019' (RAC-2019) organised by Department of Chemistry, NIT Meghalaya.
6. Poster presentation entitled “*Two-dimensional Ion- pump of Vanadium Pentoxide Nanofluidic Membrane*” in the International Conference "Chemistry and Physics of Materials: Glorious Past and Exciting Future", scheduled during February 20 to 22, **2019** organised by Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru.
7. Poster presentation entitled “*Tailor-cut Nanofluidic Characteristics of Vanadium Pentoxide Ion-Channels*” in the International conference on Frontiers in Chemical Sciences (FICS-2018) organised by Indian Institute of Technology, Guwahati.
8. Poster presentation entitled “*Hydrophobic Reduced Graphene Oxide and Agar based Electrical Arms to Perform Chemical Reactions in Microdroplets*” in the International Conference on “Recent Advances in Materials Chemistry and Catalysis” during 1-3 March, **2023** organised by Department of Chemistry, Dibrugarh University.

Workshops/others

1. Attended a workshop on “Science, Society and Innovation” organised by Joya Gogoi College Teachers' Unit and IQAC in collaboration with Golaghat Zonal Committee (ACTA) on 22nd of October, 2022.
2. Attended a UGC sponsored online 'Faculty Induction Program' organized by Human Resource Development Centre, Aligarh Muslim University, Aligarh from 04 July 2022 to 06 August 2022.
3. Attended a Seven-Day Virtual Faculty Development Programme on “Recent Advances in Chemistry” held from Dec 27, 2021 to Jan 04, 2022 organised by Department of Chemistry, School of Sciences, RK University, Rajkot, Gujarat.

Publications

1. Sarmah, M., **Neog, A. B.**, Boruah, P. K., Das, M. R., Bharali, P., & Bora, U. (2019). Effect of substrates on catalytic activity of biogenic palladium nanoparticles in C–C cross-coupling reactions. *ACS omega*, 4(2), 3329-3340.
Link: <https://pubs.acs.org/doi/10.1021/acsomega.8b02697>
2. Gogoi, R. K., **Neog, A. B.**, Konch, T. J., Sarmah, N., & Raidongia, K. (2019). A two-dimensional ion-pump of a vanadium pentoxide nanofluidic membrane. *Journal of Materials Chemistry A*, 7(17), 10552-10560.

- Link: <https://pubs.rsc.org/en/content/articlelanding/2019/ta/c8ta11233a>
3. Deka, P., Verma, V. K., Yurembam, B., **Neog, A. B.**, Raidongia, K., & Subbiah, S. (2021). Performance evaluation of reduced graphene oxide membrane doped with polystyrene sulfonic acid for forward osmosis process. *Sustainable Energy Technologies and Assessments*, 44, 101093.
Link: <https://www.sciencedirect.com/science/article/abs/pii/S221313882100103X>
 4. Konch, T. J., Dutta, T., **Neog, A. B.**, Gogoi, R., & Raidongia, K. (2021). Uphill Anion Pumping through Triangular Nanofluidic Device of Reconstructed Layered Double Hydroxide. *The Journal of Physical Chemistry C*, 125(32), 17939-17949.
Link: <https://pubs.acs.org/doi/10.1021/acs.jpcc.1c03118>
 5. **Neog, A. B.**, Gogoi, R. K., Dutta, T., & Raidongia, K. (2020). Electrical Actuation of Hydrophobic Bilayer Membranes of Reduced Graphene Oxide and Agar for Inducing Chemical Reactions in Microdroplets. *ACS Applied Nano Materials*, 3(7), 6629-6635.
Link: <https://pubs.acs.org/doi/10.1021/acsanm.0c01063>
 6. Gogoi, R. K., **Neog, A. B.**, Sarmah, N., & Raidongia, K. (2019). Preparation of responsive bilayer membrane through morphological tuning of nano-scale building blocks. *Journal of Materials Chemistry A*, 7(37), 21157-21167.
Link: <https://pubs.rsc.org/en/content/articlelanding/2019/ta/c9ta06957g/unauth>
 7. **Neog, A. B.**, Gogoi, R. K., Deka, P., Konch, T. J., Bora, B. R., & Raidongia, K. (2021). Application of reduced graphene oxide-based actuators for real-time chemical sensing of liquid and vapour phase contaminants. *New Journal of Chemistry*, 45(36), 16883-16891.
Link: <https://pubs.rsc.org/en/content/articlelanding/2021/nj/d1nj02988f>
 8. Deka, P., Verma, V. K., Chandrasekaran, A., **Neog, A. B.**, Bardhan, A., Raidongia, K., & Subbiah, S. (2022). Performance of novel sericin doped reduced graphene oxide membrane for FO based membrane crystallization application. *Journal of Membrane Science*, 660, 120884.
Link: <https://www.sciencedirect.com/science/article/abs/pii/S0376738822006299>

Book Chapters

1. **Neog, A. B.**; Goswami, R.; Gogoi, M.; Borah, A.; Konch, T. J.; Sarkar, R.; Gogoi, R. Current Trends In Polymeric And Novel 2D Material Based Membrane Systems For Waste Water Treatment And Green Energy Harvesting. Purbayon Publication. ISBN 978-93-90589-43-2
Chapter Title: *Introduction to 2D Nano-Materials: An Overview*
2. **Neog, A. B.**; Garg, A.; Sarmah, B. K.; Talukdar, K.; Sharma, R.; Bora, B.; Dutta, T.; Deka, P. Modern Research Trends In Chemical Sciences And Technology. Purbayon Publication. ISBN 978-93-90589-89-0
Chapter Title: *A Review on Smart Materials: Current research and future outlook*

