

**Objective:** I am a PhD student at the University of Houston where I always try to solve challenges that are of worldwide concern.

### Education:

2017-2018 **MS (by research) in Chemistry**  
University of Dhaka, Dhaka, Bangladesh  
**Thesis:** Investigation of reaction mechanism of the reaction between homophthalic anhydrides and Schiff bases by computational method.  
**CGPA:** 3.70/4.00

2012-2016 **BS in Chemistry**  
Department of Chemistry  
University of Dhaka, Dhaka, Bangladesh  
**Project:** Analysis of preservatives in food by UV-Visible spectrophotometric method  
**CGPA:** 3.52/4.00

### Research Interest:

Computational chemistry  
Materials sciences

### Journal Articles:

1. **Md. Saiful Islam**, Nusrat Mousume, Mohammed A. Aziz, M. Saiful Islam\* "*Theoretical Investigation of Non-linear Optical (NLO) Properties and UV-Visible spectra of N-(3,5-dichlorobenzylidene)aniline and N-(3,5-dichlorobenzylidene)4-nitroaniline*", Dhaka Univ. J. Sci. 66(2): 139-143, 2018 (July)
2. Kabir M. Uddin, **Md. Saiful Islam**, Shahidul M. Islam, Raymond A. Poirier "*New insight into the substituent effects on the hydrolytic deamination of saturated and unsaturated cytosine*" Journal of Quantum Chemistry, doi: 10.1002/qua.27014
3. Md. Jashim Uddin, Mohammad Anwar-Ul Azim, Sanchoy Chandra Biswasarma, **Md. Saiful Islam**, Sanjida Islam, Md. Alamgir Kabir Raju, Mustafa Mamun "*Cyclotron facility at National Institute of Nuclear Medicine and Allied Sciences*", Bangladesh Journal of Nuclear Medicine, Vol. 26(1), (2023), pp. 44-50.
4. **Md. Saiful Islam**, Mohammad Anwar-Ul Azim, Md. Jashim Uddin, Sanchoy Chandra Biswasarma, Sanjida Islam, Most. Layla Saroware Banu "*Routine Radiochemical Quality Control of <sup>99m</sup>Tc eluate and <sup>99m</sup>Tc-Labeled Radiopharmaceuticals*", Bangladesh Journal of Nuclear Medicine. 2023; 26(2): pp. 193-197
5. Md. Jashim Uddin, Mohammad Anwar-Ul Azim, Sanchoy Chandra Biswasarma, **Md. Saiful Islam**, Sanjida Islam, Mustafa Mamun, Ferdoushi Begum, Md. Nahid Hossain, Md. Shohag Mia, Hasan Mehdi, Nur-E-Alam Siddique, Muhtasim Kadir "*Radiosynthesis and Quality Control of (<sup>18</sup>F) PSMA-1007 at the Cyclotron Facility of National Institute of Nuclear Medicine and Allied Sciences (NINMAS) for Diagnosis of Prostate Cancer*" Bangladesh Journal of Nuclear Medicine. 2023; 26(2): pp. 198-200.
6. Sanjida Islam, Mohammad Anwar-Ul Azim, Md. Jashim Uddin, Sanchoy Chandra Biswasarma, **Md. Saiful Islam**, Tapati Mandal, Mustafa Mamun, Shakera Khatun, Md. Saiful Islam, Most. Layla Saroware Banu "*Evaluation of the Lyophilized MIBI Kit Fraction for <sup>99m</sup>Tc Labeling: A Cost-Effective Approach for Labeling Cold Kits in Nuclear Medicine Practice*" Bangladesh Journal of Nuclear Medicine. 2023; 26(2): pp. 188-192
7. Biswasarma, S. C., Azim, M. A. U., Podder, P., Uddin, M. J., Islam, S., **Islam, M. S.**, Mamun, M., & Khatun, S. (2024). *Prevalence and Determinants of Vitamin D Deficiency: A Comprehensive Analysis from the measured vitamin D level at Chemiluminescence Immunoassay (CLIA) laboratory of National Institute of Nuclear Medicine and Allied Sciences (NINMAS), Dhaka*. Bangladesh Journal of Nuclear Medicine, 27(1), 89–94.
8. Azim, M. A. U., Biswasarma, S. C., Islam, M. A., Uddin, M. J., Islam, S., **Islam, M. S.**, Begum, F, Mamun, M, Khatun, S., Kabir, M. A., Akand, M. S. I., Hossain, N., Ferdous, J., begum, F., Begum, S. M. F. ., Jabin, Z. ., Haque, J. A. ., Rahman, H. A. ., Rima, S. . Z. ., Nahar, K. ., Ali, M. ., Das, J., Jahan, N., Ahsan, M. S., Dey, S. K. ., Awal, M. A., Bose, B. K., Nasreen, F., Sultana, S., Alam, F., Hasan, M., Nahar, N., Hossain, G. A., Islam, M. R., Alam, M. S., Hoque, M. R., Paul, A. K., Hossain, S., & Moslem, F.(2024). *Newborn Screening for the Early Detection of Congenital Hypothyroidism: A Countrywide Comprehensive Program of Bangladesh Atomic Energy Commission*. Bangladesh Journal of Nuclear Medicine, 27(1), 81–88.

## Seminar:

1. International Conference on Chemical Science and Technology, KUET, Khulna on the 24-25 February, 2018. **Title of presentation:** *Investigation of reaction mechanism of the reaction between homophthalic anhydrides and Schiff bases by computational method.*
2. 4th Conference of Bangladesh Crystallographic Association held on January 20, 2018 at University of Dhaka. **Title of Presentation:** *Computational investigation of the Cr(III)-alizarin complex.*
3. Bangladesh Chemical Congress 2018 (BCC 2018), held on 17-19 October, 2018. **Title of presentation:** *Investigation of reaction mechanism of the reaction between substituted homophthalic anhydrides and substituted Schiff bases by computational method.*
4. National Conference of Society of Nuclear Medicine, Bangladesh, held on 10<sup>th</sup> march 2023. **Title of presentation:** *Reaction Mechanism Study of <sup>18</sup>F labeled 2-Fluoro-2-deoxy-D-glucose, [<sup>18</sup>F]FDG as well as Theoretical Study*

## Professional/Computer/Software Skills:

GaussView05	ChemDraw Ultra	MS Power Point
Pyrex, Pymol	Gaussian09 and Gaussian16	VASP

## Job Experience:

1. Worked at Bangladesh-China Power Company Limited (BCPCL), Under the Ministry of Power Energy and Mineral Resources, Bangladesh about 9 months (07 February 2021 – 15 November 2021)
  - Controlled the operation and production performance by using the DCS (Distributed control system) system.
  - Attended several workshops, seminar on coal processing plant operation, production optimization, and EHS
  - Treatment of the river water and making the Demineralized water for the boiler.
  - Treatment the water coming from the turbine and making suitable for the boiler.
  - Different types of tests are done for water (pH, Conductivity, Hardness, BOD, COD, Salinity, Chloride test, DO etc.)
2. Worked at Bangladesh Council of Scientific and Industrial Research (BCSIR) as a Scientific Officer. In this organization I worked for Computational Chemistry using different software (materials studio, Gaussian09) in the Hydrogen Energy Laboratory (15 November 2021-17 March 2022).
3. I also worked as Executive Trainee at Nuclear Power Plant Company Bangladesh Limited (NPCBL), the first nuclear power plant in the Bangladesh and it is about to go operation in the next year (20 March-2022-21 September 2022)
4. I have worked at the Bangladesh Atomic Energy Commission (BAEC) as a Scientific Officer. Here, my responsibility was to synthesis of <sup>18</sup>F<sub>2</sub>FDG, and I worked in the radiopharmaceutical laboratory as well using the Gaussian09 software and I investigated the coordination chemistry between the radioisotope (mainly Tc-99m) and pharmaceutical (MDP, DTPA, DMSA, MIBI etc.) (22 September 2022 – 01 August 2024)

## Extra-Curricular Activities:

- Volunteering 7th Bangladesh Chemistry Olympiad on 13th January 2017 at the premises of Curzon Hall, University of Dhaka, Dhaka-1000, Bangladesh.
- Student organization: 'BADHAN' (A Voluntary Blood Donors Organization), Dr. Muhammad Shahidullah Hall Unit, Dhaka University Zone.
- Member at Bangladesh Thyroid Society
- Member of Society of Nuclear Medicine, Bangladesh

- Member of NAHAR, humanitarian organization.

### **Accomplished Trainings and Workshops:**

#### **In-house Training course on Atomic Absorption Spectroscopy**

Bangladesh Council of Scientific and Industrial Research, Chattogram, Duration: 5 days, year 2022.

#### **In-house training course on Radio-HPLC**

National Institute of Nuclear Medicine and Allied Sciences (NINMAS), Duration: 3 days, year 2023.

#### **In-house training course on HPGe Detector**

National Institute of Nuclear Medicine and Allied Sciences (NINMAS), Duration: 3 days, year 2023

#### **In-house training course on IBA Cyclotron Operation, maintenance and troubleshooting, HVAC and Chiller operation and maintenance, Electrical system.**

National Institute of Nuclear Medicine and Allied Sciences (NINMAS), Duration: fourteen days, year 2023

#### **Nuclear and radiological emergency preparedness**

Training Institute, AERE, BAEC, Savar, Dhaka-1349, Duration: 10 day

