

ASADUZZAMAN

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EDUCATION

Ph.D., Fiber and Polymer Science, NC State University 2022 (expected)

Specialization in enzyme immobilization on/into non-woven web, solution blowing

M.S., Applied Chemistry & Chem. Eng., University of Dhaka, Bangladesh April 2012

(2nd position out of 38 students)

Specialization in nanocomposites and biopolymers.

B.Sc., Applied Chemistry & Chem. Eng., University of Dhaka, Bangladesh July 2010

(2nd position out of 52 students)

PROFESSIONAL/RESEARCH EXPERIENCE

Research Assistant, Wilson College of Textiles, NC State University 2019-

- Prepared nonwoven web by solution blowing
- Characterized solution blown nonwoven webs by Fourier transform infrared spectroscopy (FTIR), Differential scanning calorimetry (DSC), Thermo-gravimetric analysis (TGA), Scanning electron microscopy (SEM), X-ray diffraction (XRD)
- Immobilized enzymes on solution blowing non-woven webs
- Investigated enzymes assay by spectrophotometer

Assistant Professor, Applied Chemistry & Chem. Eng., University of Dhaka April, 2014-July, 18

- Synthesized carboxymethyl chitosan by using trichloro-acetic acid
- Prepared Gelatin-CMC composite film for biomedical application by solution casting
- Produced of polyester, nylon 6:6, phenol formaldehyde resin in a polymer lab class

Scientific Officer, BCSIR, Dhaka, Bangladesh Feb. 2013-March, 14

- Extracted protein for protein supplement from mustard cake and characterized by digestibility, amino acid analyzer
- Trained on Ion chromatography for detection of alkali earth metal ions.

Research Assistant, Applied Chemistry & Chem. Eng., University of Dhaka Sep 2012-Jan, 13

- Prepared high performance Rayon fiber-PP composite by extrusion techniques and characterized by FTIR, DSC, soil test
- Extracted chitosan from waste prawn shell
- Prepared CNTs reinforced chitosan nanocomposites and characterized by ATR, DSC, TGA, SEM, UTM
- Characterized γ -irradiated gelation by bloom strength, Oswald viscometer, FTIR, SEM, DSC-DTA

AWARDS

- Provost Doctoral Fellowship August, 2018 - July, 19
- Japan-Asia Youth Exchange Program in Science Education Exchange Award Nov. 2017
- National Science and Technology (NST) fellowship, Bangladesh July 2011-June, 12
- University of Dhaka Alumni Scholarship January 2011

CONFERENCE PRESENTATIONS, TRAINING AND ADDITIONAL EXPERIENCES

- Served as President of Applied Chemistry and Chemical Engineering students at University of Dhaka for 2010/2011
- Implant training at Urea Fertilizer Factory, Chloro-alkali Industry, Ceramic and Glass Industry

PUBLICATIONS

Articles

1. **Asaduz Zaman, Taslim Ur Rashid**, Mubarak A. Khan, and Mohammed Mizanur Rahman. *BioNanoScience*, 2015, 5 (1), 31-38. doi: 10.1007/s12668-014-0159-0.
2. Md Minhajul Islam, **Asaduz Zaman**, Md. Shahidul Islam, Mubarak A Khan, and Mohammed Mizanur Rahman. *Progress in Biomaterials*, 2014, 3 (1), 1-9, doi: 10.1007/s40204-014-0021-z.
3. Ashish Kumar Sarker, Dipti Saha, Hasina Begum, **Asaduz Zaman** and Md. Mashiar Rahman. *AMB Express*, 2015, 5 (1), 1-6. Doi: 10.1186/s13568-015-0110-y.
4. Quazi M. I. Huque, Rafiqul Islam, Md. Minhajul Islam, Taslim Ur Rashid, Sanjida Afrin, Md. **Asaduzzaman**, A. I. Mustafa, M. Mizanur Rahman, and Mubarak A. Khan. *Polymer-Plastics Technology and Engineering*, 2012, 51, 1–6. Doi: 10.1080/03602559.2011.618164.
5. Farzana Khan Rony, Swapan Kumer Ray, Amirul Hoque, **Asaduz Zaman**, Shahin Sultana, Husna Parvin Nur, and Shams Tania Afroza Islam. *Bangladesh Journal of Scientific and Industrial Research*, 2016, 51 (4), 261-270.

Book Chapters

1. **Asaduz Zaman**, Papia Haque, Taslim U. Rashid, Md. Minhajul Islam, Khandoker S. Salem, Sadia Sharmeen, M. Nuruzzaman Khan, and Mohammed Mizanur Rahman. "Chapter 11: Potential Application of Microbial Catalyst in Food Biotechnology" Microbial Catalysts, Volume 2 Publisher: *Nova Science Publisher*.
2. Khandoker Samaher Salem, Taslim Ur Rashid, **Asaduzzaman**, Md. Minhajul Islam, Md. Nuruaman Khan, Sadia Sharmeen, Mohammed Mizanur Rahman and Papia Haque. "Recent Updates on Immobilization of Microbial Cellulase." New and Future Developments in Microbial Biotechnology and Bioengineering, Page107-139, Publisher: *Elsevier*.