



**Dr. Parbhej Ahamed**

Professor

**Research Area** Li-ion Battery, Hydrogel, Biodegradable Polymer, Single molecule force spectroscopy of polymer molecules, Asymmetric synthesis, Chiral catalyst, ZnO nanoparticles, Surfactants

## Education

### Master of Engineering

Toyohashi University of Technology, Japan (2009-2011)

**Thesis Title:** [Ether or thioether linked cinchona alkaloid derived main-chain chiral polymers and their application for the asymmetric synthesis of  \$\alpha\$ -amino acids](#)

### Master of Science

University of Dhaka, Bangladesh (2008-2009)

**Thesis Title:** [Effect of surfactants on the growth kinetics of ZnO nanoparticles in reverse micelle systems](#)

### Bachelor of Science (Honours)

University of Dhaka, Bangladesh (2003-2008)

## Research Interest

**Li-ion Battery, Hydrogel, Biodegradable Polymer, Single molecule force spectroscopy of polymer molecules, Asymmetric synthesis, Chiral catalyst, ZnO nanoparticles, Surfactants**

## Publication

### Books

### Journals

- Ahamed, P., Fargana Yeasmin, F., Hossain, M. I. and Yousuf, N. T. T. a. M. A. (2022), "Effect of Sodium Dodecyl Sulphate and Cetyltrimethyl Ammonium Bromide Mixed Reverse Micellar Core on the Morphology of Hydroxiapatite Nanoparticles," **Journal of Bangladesh Chemical Society**, BCS
- Khan, M. M. I., Yousuf, M. A., Ahamed, P., Alauddin, M. and Tonu, a. N. T. (2022), "Electrochemical Detection of Dihydroxybenzene Isomers at a Pencil Graphite Based Electrode," **ACS Omega**
- Hossain, N., Hossain, M. I. and Yousuf, P. A. a. M. A. (2022), "Binary Solvent System for Extraction of Cathode Material From Spent Li-ion Batteries," **Dhaka University Journal of Science**, vol69, no.3, pp.225-229
- Ahamed, P., Ghann, W. and Mo, J. U. & M. A. Y. (2022), "Role of gelatin and chitosan cross-linked aqueous template in controlling the size of lithium titanium oxide," **SN Applied Sciences**, Springer Nature, vol4, no.111
- (2020), "A novel solid state reaction route to the preparation of LiCoO<sub>2</sub> using micro porous filter paper as scaffolds," **Materials research Express**, IOP publishing, vol7, pp.065506
- (2020), "Tissue Matrices Scaffold for the Preparation of Lithium Cobalt Oxide," **Advances in materials physics and chemistry**, vol10, no.5, pp.111-124
- (2020), "Synthesis and structural evaluation of Mg, Cu, Zn tri-doped lithium titanium oxide electrode materials for use in lithium ion battery," **Journal of Engineering Science**, vol11, no.1
- Hossain, M. S., Ahamed, P. and Yousuf, M. M. a. M. A. (June 2019), "Preparation of Novel Hydrogel Composite with Enhanced Properties for Environment, Medical and Engineering Application," **Journal of Science and Technology Research**, Ministry of Science and Technology, Bangladesh, vol01, no.02, pp.39-48
- Rahman, A., Ahamed, P. and Yousuf, M. A. S. a. M. A. (2017), "Analysis of private drinking tube-wells water from Khshtia district, Bangladesh," **Journal of Engineering Science**, vol08(1), pp.87-94
- Ahamed, P., Kawakami, M. and Furukawa, H. (2016), "Single molecule force spectroscopy study of  $\beta$ -polyglutamic acid by using atomic force microscopy," **Proceedings of the SPIE**, vol9802, pp.980200-
- Haraguchi, N., Ahamed, P. and Itsuno, M. M. P. a. S. (2012), "Synthesis of Main-Chain Chiral Quaternary Ammonium Polymers Using Quaternization Polymerization for Asymmetric Catalysis," **Molecules**, vol17, pp.7569-7583
- Ahamed, P., Miran, M. S. and Mollah, M. A. B. H. S. a. M. Y. A. (2013), "Growth process of ZnO nanoparticles in presence of reverses of anionic and cationic surfactants," **Journal of Bangladesh Chemical Society**, vol26(1), pp.20-29
- Badal, M. M. R., Ali, M. E., Akter, M. and Ahamed, G. J. I. a. P. (2013), "Mahogani (Swietenia Mahogani) leaf powder: Study of adsorption properties for removal of reactive blue P3R dye from aqueous solutions," **Journal of Engineering Science**, vol04(1), pp.111-118
- Ahamed, P., Haque, M. A., Ishimoto, M., Parvez, M. M., Haraguchi, N. and Itsuno, S. (2013), "Synthesis of chiral quaternary ammonium polymers for asymmetric organocatalysis application," **Tetrahedron**, vol69, pp.3978-3983
- Islam, M. R., Ahamed, P., Haraguchi, N. and Itsuno, S. ((2014)), "Synthesis of chiral polymers containing thioetherified cinchonidinium

repeating units and their application to asymmetric catalysis," **Tetrahedron: Asymmetry**, vol25 (18-19), pp.1309-1315

1. Ahamed\*,P. and Imtiaj,M. A. Y. a. M. S. (2014) , " STUDY THE MICELLIZATION BEHAVIOR OF BOTH CATIONIC AND ANIONIC SURFACTANTS IN PRESENCE OF HEN EGG YOLK," **Journal of Engineering Science** , Khulna University of Engineering & Technology, vol(05), no. 1, pp.99-102

## Conference

23. Ira,N. M. , Tonu,N. T. , Tabassum,H. , Hasan,M. M. , Khan,F. M. H. U. and Ahamed,M. A. Y. & P. (01-03 December, 2022) , "Zinc manganese oxide nano-composites preparation in the framework filter paper for aqueous rechargeable zinc-ion batteries," **Integrated approach for adapting 4IR** , Bangladesh council of Scientific and industrial research (BCSIR), pp.304
22. Hasan,M. Z. , Tonu,N. T. , Khan,F. M. H. U. , Ira,N. M. , Hasan,M. M. and Yousuf,P. A. & M. A. (01-03 December, 2022) , "In-situ preparation of CuO materials in cellulose matrix for aqueous rechargeable zinc-ion batteries," **Integrated approach for adapting 4IR** , Bangladesh council of Scientific and industrial research (BCSIR), pp.84
21. Tabassum,H. , Hasan,M. , Khan,F. M. H. U. , Ira,N. M. , Tonu,N. T. and Ahamed,M. A. Y. & P. (01-03 December, 2022) , "Filter paper as a scaffold for the synthesis of zinc cobalt oxide nanocomposite for aqueous rechargeable zinc-ion batteries," **Integrated approach for adapting 4IR** , Bangladesh council of Scientific and industrial research (BCSIR), pp.83
20. Ira,N. M. , Tonu,N. T. , Tabassum,H. , Hasan,M. M. , Khan,F. M. H. U. and Ahamed,M. A. Y. & P. (11-12 November, 2022) , "Facile synthesis of zinc manganese oxide nanoparticles with the scaffold of filter paper for aqueous rechargeable zinc-ion batteries," **1st international conference on frontier in sciences (ICFS-2022)** , aculty of Science, BUET, Faculty of Science, pp.98
19. Hassan,M. Z. , TazeenTonu,N. , Iral,N. M. , Khan,F. M. H. U. , Hasan,M. M. and Yousuf,P. A. & M. A. (11-12 November, 2022) , "Electrochemical Performance of Whatman Filter Paper Assisted CuO as Cathode Materials for Aqueous Rechargeable Zinc-Ion Batteries," **1** , Faculty of Science, BUET, pp.100
18. Ahamed,P. , Mim,R. S. , Mollah,M. I. H. , Kundu,R. and Yousuf,N. T. T. a. M. A. (21-23 October 2022) , "Electrochemical properties of MnO<sub>2</sub>@Ag core@shell nanoparticles for aqueous rechargeable zinc-ion batteries," **International Conference of Physical Sciences-2022** , School of Physical Science, SUST, Bangladesh, pp.26
17. Mollah,M. I. H. , Mim,R. S. , Kundu,R. , Ira,N. M. , Tonu,N. T. and Ahamed,M. A. Y. & P. (21-23 October 2022) , "SnO<sub>2</sub> coated MnO<sub>2</sub> as cathode materials for aqueous rechargeable zinc-ion batteries," **International Conference of Physical Sciences-2022** , School of Physical Science, SUST, Bangladesh, pp.18
16. Swarnakar,B. , Khan,M. H. , Ahmad,R. , Ahamed,P. , Maniruzzaman,M. and Yousuf,M. M. R. B. a. M. A. (21-23 October 2022) , "Volumetric, viscometric and thermodynamic studies of (hydroxyproline+aqueous glucose) and (hydroxyproline + aqueous sucrose) solutions in the temperature range (298.15 to 323.15)K," **International Conference of Physical Sciences-2022** , School of Physical Science, SUST, Bangladesh, pp.35
15. (7-8 February, 2020) , "Preparation and characterization LiCoO<sub>2</sub> cathode materials of Li-ion battery using cellulose matrices," **International Conference on Recent Advances in Chemistry** , pp.4-5
14. (9-10 November,2019) , "Tissue assisted preparation of lithium cobalt oxide for Li-ion battery," **Bangladesh Chemical Society Conference 2019** , pp.75
13. Yousuf,M. A. and Hasan,P. A. a. M. M. (October 26-29, 2018) , "Mg, Zn and Cu doped Li<sub>4</sub>Ti<sub>5</sub>O<sub>12</sub> for high power Li-ion batteries," **Kathmandu Symposia on Advanced Materials, 2018** , KaSAM, pp.72
12. Ahamed,P. and Yousuf,F. Y. a. M. A. (October 17-18, 2018) , "GROWTH AND CHARACTERIZATION OF HYDROXYAPATITE NANOPARTICLES IN REVERSE MICELLAR CORE," **Chemistry for green living** , Bangladesh Chemical Congress, pp.PP-142
11. Hossain,M. Z. , Maniruzzaman,M. , Ahamad,P. , Yousuf,M. A. and R.Badal,M. M. R. (October 17-18, 2018) , "SYNTHESIS OF NEW HYDRAZONE SCHIFF BASE DERIVATIVES]," **Chemistry for green living** , Bangladesh Chemical Congress, pp.PP-85
10. Ahamed,P. ,Kawakami,M. and Furukawa,H. (December 13-16, 2016) , "Single Chain Behavior Study of poly- $\beta$ -glutamic Acid Using Atomic Force Microscopy," **International Polymer Conference** , The 11th SPSJ International Polymer Conference
9. Hossain,M. J. , Khan,M. M. H. , Ahamed,P. , Hasan,M. M. and Yousuf,M. M. R. B. a. M. A. (24-25 February, 2018) , "Studies on volumetric and viscometric properties of dimedone in ethanol-water mixtures," **International conference on chemical science and technology** , pp.99
8. Khan,M. M. H. and Yousuf,P. A. a. M. A. (24-25 February, 2018) , "Solution behavior of N-acetylcysteine in dimethylsulfoxide-water systems," **International conference on chemical science and technology** , pp.98
7. Ahamed,P. , Hasan,M. M. , Hossain,M. S. , Ahmed,S. and Yousuf,M. A. (11-12 May, 2018) , "Effect of Zn and Cu co-doping on Li<sub>4</sub>Ti<sub>5</sub>O<sub>12</sub> anode materials for high power Li-ion battery," **Conference on weather forecasting and advances in physics** , pp.122
6. Yousuf,M. A. ,Khan,M. I. and Jamal,P. A. a. M. (11-12 May, 2018) , "Graphite pencil electrode for simultaneous detection of dihydroxybenzene isomers," **Conference on weather forecasting and advances in physics** , pp.121
5. Ahamed,P. ,Miran,M. S. and Yousuf,M. Y. A. M. a. M. A. (17-18 may, 2012) , "Effect of surfactant on growth kinetics of ZnO nanoparticles ," **International workshop on tools, implants and biomaterials** , pp.33-34
4. Ahamed,P. ,Ishimoto,M. and Itsuno,N. H. a. S. (1-2 November, 2010) , "Synthesis of Main Chain Chiral Quaternary Ammonium Polymers as Asymmetric Alkylation Catalysts," **36th Symposium on Progress in Organic Reactions and Syntheses**
3. Ahamed,P. ,Salam,M. A. and Itsuno,N. H. a. S. (March 2011) , "Synthesis of dimeric and polymeric thioether containing cinchona ammonium salts as chiral organocatalysts," **Chemical Society conference**
2. Ahamed,P. , Salam,M. A. , Haraguchi,N. and Itsuno,a. S. (2011) , "Ether and thioether linked recyclable polymeric organocatalyst based on cinchona alkaloid for asymmetric synthesis of  $\beta$ -amino acid," **Polymer Preprints** , pp.Vol.60, N2
1. Ahamed,P. ,Salam,M. A. and Itsuno,N. H. a. S. (25th to 27th of May, 2011) , "Development and application of cinchona derived main chain polymer catalyst for asymmetric reaction," **60th SPSJ (Society of Polymer Science, Japan) Annual Meeting**