

Curriculum Vitae



University of Dhaka

Dr. Md. Ashaduzzaman

Professor

Department of Applied Chemistry and Chemical Engineering

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Research gate: https://www.researchgate.net/profile/Md_Ashaduzzaman

Google scholar: <https://scholar.google.com/citations?user=4pzO20QAAAAJ&hl=en&oi=ao>

AD scientific: <https://www.adscientificindex.com/scientist/md-ashaduzzaman/337034>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=57773434900>

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Permanent Address

Village: Tumchar, P.O.: Shelempur, P.S.: Muladi, Dist.: Barishal

Present Address

Flat 402, Downtown, 31 Mirpur Road, New Market, Dhaka 1205

Personal Details

Father's Name: Md. Abdul Mannan Howlader

Mother's name: Mrs Suraiya Mannan

Date of Birth: 20 March 1977

NID: 6868585594

Passport no: BY-0512744

TIN: 475510175063

Birth Certificate No.: 19770616911101361

Organizing capacity

1. Successfully organize **International Conclave on Materials, Energy & Climate** and **played role as a Chair** during 19-20 December 2022, 50th Anniversary of ACCE, Dhaka University, Bangladesh
2. Successfully completed responsibility as a **Secretary of Dhaka University Teachers Club** with appreciation during July 2018-June 2019.
3. Successfully played role for blue group as a **Joint-convener** (2014) and **Convener** (2018-2019) of the Faculty of Engineering and Technology, University of Dhaka
4. Former **President** of Volley Ball Committee, University of Dhaka, session 2018-2020. Then University Team won Champion trophy of **Bangabandhu Inter University Sports Championship**, during my tenure. Certainly, I am one of the luckiest persons who received Trophy from our **Honorable Prime Minister Sheikh Hasina**.
5. Successfully completed responsibility as an **Organizing Secretary of Bangladesh Chemistry Olympiad 2019** with appreciation Worked as a **member of System Management Sub-committee**
6. International Conference on Science and Technology for **Celebrating the Birth Centenary of Bangabandhu** (ICSTB 2021), BCSIR, Dhaka
7. **Convener** of Bangladesh Science Technology Engineering and Mathematical (bdSTEM) Association, Dhaka University unit. From 2020
8. **President**, Sweden Alumni Network in Bangladesh 2021, Former Treasurer and Executive member

Educations and Qualifications

- Postdoc** : Department of Physics, Chemistry and Biology, Biosensors and bioelectronics center, Linkoping University, Sweden
September 2014 – August 2015
- PhD** : Completion of PhD work on the topic of “*Higher-Order Architectures Produced from Controlled Polymer Structures*” under supervision of Professor Dr. Masashi Kunitake, department of Nanoscience and Technology, faculty of new Frontier Sciences, Kumamoto University, Japan
April 2008 – March 25, 2011
- Research student** : Department of Nanoscience and Technology, faculty of new Frontier Sciences, Kumamoto University, Japan
October 2007 – March 2008
- Master of Science (MSc)** : Graduation in Applied Chemistry and Chemical Technology (Diploma, eq. to MSc), University of Dhaka
Completed research work on “*Development of Production Technology of Fuels and Synthesis of Multifunctional Stabilizers*” under supervision of Professor Dr. Manoranjan Saha

Position: 1st Class 2nd
July 1997 – June 1998 (Exam held in 2001)

Bachelor of Science (BSc) : Enrollment as a regular student and successfully studied for Bachelor program in Applied Chemistry and Chemical Technology, University of Dhaka.
Position: 1st Class 2nd
July 1994 – June 1997 (Final Exam held in 1999)

HSC : Higher Secondary School Certificate/ Govt. Nazimuddin College, Madaripur, Science Group,
First Division with Star Marks
Session: July 1992 – June 1994

SSC : Secondary School Certificate United Islamia Govt. High School, Madaripur, Science Group,
First Division with Star Marks
Year: 1992

Work Experience

Treasurer : Comilla University, Cumilla 3506
5 July, 2020 – 4 July, 2024

Adjunct Faculty : Institute of Advanced Materials, Ulrika, Linkoping, Sweden
April 2021 – present

Professor : Department of Applied Chemistry and Chemical Engineering, University of Dhaka, Dhaka 1000, Bangladesh
25 May, 2016 – Till Today

Research Scientist : Swedish Institute Postdoctoral Fellowship, Linkoping University, Professor Ashutosh Tiwari, Head of Biosensors and Bioelectronics Center, Sweden
September 2014 – August 2015

Associate Professor : Department of Applied Chemistry and Chemical Engineering, University of Dhaka, Dhaka 1000, Bangladesh
March 2013 – 24 May, 2016

Assistant Professor : Department of Applied Chemistry and Chemical Engineering, University of Dhaka, Dhaka 1000, Bangladesh
27 March 2011 – February 2013

Research Assistant : Department of Polymers and Coating, College of Technology, Eastern Michigan University, Michigan 48197, USA with distinguished Professor Dr. John Texter.
November 2009 – March 2010

Lecturer : Department of Applied Chemistry and Chemical Engineering,

University of Dhaka, Dhaka 1000, Bangladesh
17 May 2005 – 26 March 2011

QA Officer : Employment as Quality Assurance Officer of Renata Ltd (Pharmaceuticals industry, formerly known as Pfizer Ltd), Mirpur, Dhaka, Bangladesh.
August 2004 – April 2005

QC Officer : Employment as Quality Control Officer of Jayson pharmaceuticals Ltd, Tajgaon, Dhaka, Bangladesh.
March 2002 – November 2003

Journal editorial board membership

1. Chief Editor - International Letters of Chemistry, Physics and Astronomy
2. Member of editorial board- Journal of Chemistry, Environmental Sciences and its Applications
3. Member of Materials Research Society (MRS), USA
4. Bangladesh Council of Scientific and Industrial Research Journal, Bangladesh

Scientific Journal Reviewers

1. Scientific reports, nature group
2. Langmuir
3. Iranian polymer journal
4. Biosensors and bioelectronics
5. Advanced materials
6. ACS applied materials and interfaces
7. Carbohydrate polymers
8. Journal of materials chemistry B
9. RSC advances

Research interests and familiar techniques and instruments

Synthesis and characterization of nanoparticles and nanocomposites, Biosensors and bioelectronics, Graphene, Organic and Inorganic Layer double hydroxide (LDH), Supramolecular chemistry, Colloidal chemistry (micelles/vesicles/nanoparticles), Solution of environmental pollution, Non-destructive treatment of textile effluents, dye Soft materials, Polymer chemistry (Block Copolymers, biopolymers), Ionic-liquids, Modification of cellulose beads, environment sensitive polymers, Atom transfer radical polymerization (ATRP), Radical addition-fragmentation Transfer (RAFT) polymerization, Microwave assisted polymerization, Nitroxide-mediated polymerization, Click reaction, Fourier energy transfer (FRET), Contact Angle Analysis, Scanning electron microscopy (SEM), Fluorescence spectroscopy, Dynamic light scattering (DLS), Thermo-gravimetric analysis (TGA), Differential scanning calorimeter (DSC), Nuclear magnetic resonance (^1H -NMR) spectrometer, Fourier transform infra-red spectroscopy (FTIR), Ultra violet – visible (UV-Vis) spectroscopy, Size exclusion chromatography (SEC), etc.

Research Project Completed

	<i>Organization Offering the Grant</i>	<i>Project Title</i>	<i>Period</i>
1.	Bangladesh University Grant Commission	Microwave-Assisted Synthesis of Starch-Stabilized Zinc Oxide Nanoparticles and Its Potential Applications	July, 2020- June, 2021
2.	Capacity Utilization Programme under Special Allocation for Science and Technology, Ministry of Science and Technology, Peoples Republic of Bangladesh	Eco-friendly Microwave Induced In-situ Nanostructured ZnO-Polymer Composites Synthesis for Advanced Applications	July, 2019- June, 2020
3.	Grant of advanced research in education (GARE), Ministry of Education, Peoples Republic of Bangladesh	Eco-friendly Synthesis of Metal Oxide Nanoparticles and Their Potential Applications	July, 2018- June, 2021
4.	Capacity Utilization Programme under Special Allocation for Science and Technology, Ministry of Science and Technology, Peoples Republic of Bangladesh	Fabrication of Kaolinite-Choline Chloride Self Standing Porous Composite Bed for Filtration of Aqueous Dye Solution	July, 2018- June, 2019
5.	Bangladesh University Grants Commission for University Teacher research allocation	Fabrication of Nanocomposite from Self-Assembled Choline Chloride Modified Kaolinite into Poly(Methylmethacrylate)	July, 2017- June, 2018
6.	Capacity Utilization Programme under Special Allocation for Science and Technology, Ministry of Science and Technology, Peoples Republic of Bangladesh	A facile approach to the synthesis of reduced graphene oxide and its biological applications	July, 2017- June, 2018
7.	Bangladesh University Grant Commission	Fabrication of Kaolinite-ZnO Nanocomposites and its Biological Applications	July, 2017- June, 2018
8.	Capacity Utilization Programme under Special Allocation for Science and Technology, Ministry of Science and Technology, Peoples Republic of Bangladesh	Mechanical Properties Exploration of Fabricated Environmental Friendly Starch-Kaolin Self-assembled Nanocomposite Films	July, 2016- June, 2017
9.	Bangladesh University Grants Commission for University Teacher research allocation	Determination of Caffeine Release Pattern in Aqueous System from Commercial Tea and its characterization	July, 2016- June, 2017
10.	Bangladesh University Grant Commission	Cephadrine Intercalated Mg-Al Layered Double Hydroxide	2013-2014
11.	The World Academy of Sciences (TWAS), Italy a program of UNESCO	Synthesis and characterization of diblock copolymers of thermo-responsive and anion responsive monomers	2012-2013
12.	Graduate School Action Scheme for Internationalization of University Students, Kumamoto University, Kumamoto, Japan	Synthesis of novel polymer beads by ATRP technique	2019-2010

Publications

There are 68 peer reviewed (international and national journals) research articles and 2 books have been published. Besides, more than 22 abstracts have been published from international conferences.

Conference Lecturers and Poster Presentations

Given more than 22 lectures including posters have been presented in national and international conferences.

Award Obtained

Best oral presentation award (**Gold Medal**) obtained from International Association of Advanced Materials (IAAM) during Advanced Materials World Congress (AMWC) 2015 held in Merella Cruise (Baltic Sea) within Sweden and Finland.

Language Proficiency

The level of English Language proficiency is very good; Bengali is excellent (mother tongue) and Japanese is moderate.

List of publications

72. Nasrin Akter, Md Reazuddin Repon, **Md Ashaduzzaman**, Mubarak Ahmad Khan and Sayed Md Shamsuddin, Modification of mercerized jute fabric through benzoyl peroxide treatment, polymer coating, and gamma irradiation for geotechnical applications, Mater. Res. Express 13 (2026) 185304, <https://doi.org/10.1088/2053-1591/aea741>
71. **Md. Ashaduzzaman**, Rassel Kabir, H.N. Mahmudul Hasan, Md. Kaium Hossain, Shaikat Chandra Dey, Ashutosh Tiwari, Microwave-assisted green synthesis of ZnO/polyacrylamide hybrids: A study on interfacial stabilization and predicted degradation pathways for cefuroxime, Materials Today Communications 56 (2026) 116133, <https://doi.org/10.1016/j.mtcomm.2026.116133>
70. Anika Tabassum Promi, Md. Kaium Hossain, Shaikat Chandra Dey, Aanshi Tiwari, Nusrat Mustary, Md. Mizanur Rahaman, Otun Saha, Ayushi Tiwari, Yogesh Shukla, Ashutosh Tiwari and **Md. Ashaduzzaman**, Programmable antimicrobial graphene oxide-silver nanoparticle-poly(acrylic acid) hydrogels for smart regenerative medicine, RSC Adv.,2026,16, 19542, DOI: 10.1039/d5ra09443g
69. Nihan Amin, Ruthba Ahmed, MD. Tanvir Anjum, A.M. Shareque, Brojo Kishor Shachib Dhali, Snahasish Bhowmik, Mithun Sarker, Md. Ashraful Islam Molla, **Md. Ashaduzzaman**, Sayed Md. Shamsuddin, Shaikat Chandra Dey, Progress in sulfur-doped photocatalysts for environmental remediation: Performance, mechanisms, and future directions, Inorganic Chemistry Communications, 2026, 188 (1), 116500, <https://doi.org/10.1016/j.inoche.2026.116500>
68. Alam S.M. Nur, Souvik Biswas Soumma, Zhumpa Rani Saha, Md. Mahfuzur Rahman, Dipta Das, Mahbub Hasan Rowanok, Marzia Sultana, Maria Rhaman Mitu, Tafsir Ahmed Nayef, Md. Tanvir Islam, Sk. Faijus Sadekin, **Ashaduzzaman Md**, Development of zinc oxide-charcoal-polyacrylic nanocomposite hydrogels for enhanced dye degradation under direct sunlight

irradiation and antibacterial applications, *Cleaner Water* 5 (2026) 100219, <https://doi.org/10.1016/j.clwat.2026.100219>

67. **Md Ashaduzzaman**, Md Abdullah Al Muhit, Shaikat Chandra Dey, Md. Mizanur Rahaman, H. N. Mahmudul Hasan, Nusrat Mustary, Md. Kaium Hossain, Malay Kumar Das, Microwave assisted starch stabilized green synthesis of zinc oxide nanoparticles for antibacterial and photocatalytic applications, *Scientific Reports, nature portfolio*, 2025 (15) 28288. <https://doi.org/10.1038/s41598-025-14193-8>
66. Muhammed Yusuf Miah, Sukanta Halder, Shassatha Paul Saikat, Sanchita Dewanjee, **Md. Ashaduzzaman** and Shukanta Bhowmik, Microwave-assisted one-step synthesis of polyacrylamide/NiO nanocomposite for biomedical Applications, *RSC Adv.*, 2025, 15, 18971–18985 | 18971, <https://doi.org/10.1039/d5ra02496j>
65. Amina Akter Elora, Tirtha Sarker, Ishmam Tahmid, Purnojyoti Paul, Mohammad Moniruzzaman, **Md. Ashaduzzaman**, Bidyut Baran Saha, Mithun Sarker, Highly efficient MnOX/TiO₂@NH₂-ZIF-8 composite for the removal of toxic textile dyes from water, *Colloids and Surfaces A: Physicochemical Engineering Aspects* 718 (2025)136882, <https://doi.org/10.1016/j.colsurfa.2025.136882>
64. Malay Kumar Das, Keya Das, Ashequl Alam Rana, **Md. Ashaduzzaman**, Complexation Of Zn²⁺, Mn²⁺, Co²⁺, Fe²⁺ Cations With Cefuroxime (Cephalosporin) And Amoxicillin Antibiotics, *Kurdish Studies*, 12(5), 1130-1134, 2024, DOI: [10.53555/ks.v12i5.3427](https://doi.org/10.53555/ks.v12i5.3427)
63. Mechanistic interactions in polystyrene-*block*-poly(*N*-hydroxyethylacrylamide) diblock copolymer-based nano-corona toward elucidation of solvation responses, **Md. Ashaduzzaman**, Shaikat Chandra Dey, Md. Kaium Hossain, Ashutosh Tiwari, *Polymer Bulletin*, <https://doi.org/10.1007/s00289-024-05424-5>
62. Interfacially self-assembled Fe₂O₃ nanoparticles decorated kaolinite for high performance anti- bacterial and anti-cancerous agents, **Md. Ashaduzzaman**, Dipti Saha, Otun Saha, Md. Mizanur Rahaman, Nusrat Mustary, (25 May 2024) *Inorganic and Nano- Metal Chemistry*, DOI: [10.1080/24701556.2024.2355500](https://doi.org/10.1080/24701556.2024.2355500)
61. Programmable electroanalysis enabling computable bioelectronics Sapna Balayan, Md Shafiul Islam, Shovon Bhattacharjee, Subrata Banik, Anshuman Mishra, **Md. Ashaduzzaman**, Ashutosh Tiwari, *Chemical Engineering Journal* 487 (2024) 150392
60. Thermally induced Fe₂O₃ spikes decorated Ag/Fe₂O₃ nanocomposite fabrication for anti-bacterial and anti-cancer activities, Md. Kaium Hossain, Anshuman Mishra, Aanshi Tiwari, Bishweshwar Pant, Shaikat Chandra Dey, Ayushi Tiwari, Otun Saha, Md. Mizanur Rahaman, Yogesh R. Shukla, Ashutosh Tiwari, **Md. Ashaduzzaman**, *SN Applied Sciences* (2023) 5:339, <https://doi.org/10.1007/s42452-023-05599-y>
59. pH regulated lactose inspired fabrication of zinc oxide nanoparticles for insulin sensing by LSPR absorption, Nasim Ahmed, Shaikat Chandra Dey, Nusrat Mustary, **Md Ashaduzzaman**, *Heliyon* 9, (2023) e18153,

58. Fabrication of charcoal-nickel (II)-poly(acrylic acid) nanocomposite hydrogels for photodegradation of rhodamine B under direct sunlight irradiation, Mahbub Hasan Rownok, Meherunnesa Sabrin, Marzia Sultana, **Ashaduzzaman Md**, Souvik Biswas Soumma, Zhumpa Rani Saha, Md. Shahedur Rahman, Alam S.M. Nur, ELSEVIER, Results in Engineering 16 (2022) 100695.
57. Temperature triggered aggregation toward nanoparticles formation from tri-arm poly(HEAAm -*b*-NIPAAm) in aqueous solutions, Rassel Kabir, Md. Kaium Hossain, Md. Shahidul Islam, **Md. Ashaduzzaman**, Springer, Polymer Bulletin, <https://doi.org/10.1007/s00289-022-04477-8>,
56. Cow milk lactose inspired fabrication of zinc oxide (ZnO) nanorods for bio-applications, Sha Tamanna Sahil, Anika Tabassum Promi, Md. Kaium Hossain, Nasim Ahmed, Md. Abdullah Al Muhit, Shaikat Chandra Dey and **Md. Ashaduzzaman**, Taylor & Francis, Inorganic and nano-metal chemistry, <https://doi.org/10.1080/24701556.2022.2034006>
55. Facile fabrication of copperoxides nanoparticles for antimicrobial activity, Md. Ashraful Haque, Md. Kaium Hossain, Md. Ashraful Islam Molla, Mithun Sarker, Shaikat Chandra Dey, **Md. Ashaduzzaman**, Journal Clean WAS (JCleanWAS) 5(1) (2021) 27-30.
54. Nanomaterials as electrocatalyst for hydrogen and oxygen evolution reaction: Exploitation of challenges and current progressions Shujit Chandra Paul, Shaikat Chandra Dey, Md. Ashraful Islam Molla, Md. Shafiul Islam, Sotan Debnath, Muhammed Yusuf Miah, **Md. Ashaduzzaman**, Mithun Sarker, Science Direct, Polyhedron 193 (2021) 114871
53. A Novel Self-Standing Porous Composite Bed of Kaolinite-Choline Chloride for Highly Efficient Removal of Anionic Azo Dye from Aqueous Solutions, Afroza Alam, Dipti Saha, Shaikat Chandra Dey, Muhammad Mominur Rahman, **Md. Ashaduzzaman**, J. Mater. Environ. Sci., 2020, Volume 11, Issue 11, Page 1828-1838
52. Drying Effect on Mechanical Properties of Bio-nanocomposite Films Fabricated from Self-assembled Cellulose Nanocrystals into Potato Starch Mohammad Mamunur Rashid, Jahidul Islam Sharif and **Md. Ashaduzzaman**, American Journal of Pure and Applied Biosciences, 2(5), 149-158, 2020
51. Green synthesis of iron oxide nanoparticle using Carica papaya leaf extract: application for photocatalytic degradation of remazol yellow RR dye and antibacterial activity, Md. Shakhawat Hossen Bhuiyan, Muhammed Yusuf Miah, Shujit Chandra Paul, Tutun Das Aka, Otun Saha, Md. Mizanur Rahaman, Md. Jahidul Islam Sharif, Ommay Habiba, **Md. Ashaduzzaman**, Heliyon 6 (2020) e04603
50. Microwave assisted synthesis of zinc oxide (ZnO) nanoparticles in a noble approach: utilization for antibacterial and photocatalytic activity, Kazi Rakib Ahammed, **Md. Ashaduzzaman**, Shujit Chandra Paul, Mithun Rani Nath, Snahasish Bhowmik, Otun Saha, Md. Mizanur Rahaman, Shukanta Bhowmik, Tutu Das Aka, SN Applied Sciences (2020) 2:955, <https://doi.org/10.1007/s42452-020-2762-8>

49. Mechanical and Thermal Properties of Self-Assembled Kaolin-Doped Starch-Based Environment-Friendly Nanocomposite Films, **Md. Ashaduzzaman**, Dipti Saha and Mohammad Mamunur Rashid, *J. Compos. Sci.* 2020, 4, 38; doi:10.3390/jcs4020038
48. A kaolinite/TiO₂/ZnO-based novel ternary composite for photocatalytic degradation of anionic azo dyes, A K M Maksudul Hasan, Shaikat Chandra Dey, Muhammad Mominur Rahman, Abdullah Muhammad Zakaria, Mithun Sarker, **Md. Ashaduzzaman** and Sayed Md. Shamsuddin, *Bull. Mater. Sci.* (2020) 43:27
47. Structural Nanocomposite Fabrication from Self-Assembled Choline Chloride Modified Kaolinite into Poly(methylmethacrylate), Dipti Saha, Mithun Kumar Majumdar, Ajoy Kumar Das, A.M. Sarwaruddin Chowdhury and **Md. Ashaduzzaman**, *J. Compos. Sci.* 2019, 3, 83; doi:10.3390/jcs3030083.
46. Fabrication of Nanostructured Kaolinite Doped Composite Films from Silicone Rubber with Enhanced Properties, Abdullah Muhammad Zakaria, Shaikat Chandra Dey, Muhammad Mominur Rahman, Mithun Sarker, **Md. Ashaduzzaman** and Sayed Md. Shamsuddin. *J. Compos. Sci.* 2019, 3, 50; doi:10.3390/jcs3020050.
45. pH-Triggered Interfacial Interaction of Kaolinite/Chitosan Nanocomposites with Anionic Azo Dye, Shaikat Chandra Dey, Mokrema Moztahida, Mithun Sarker, **Md. Ashaduzzaman** and Sayed Md. Shamsuddin, *J. Compos. Sci.* 2019, 3, 39; doi:10.3390/jcs3020039.
44. On/Off-switchable LSPR nano-immunoassay for troponin-T, **Md. Ashaduzzaman**, Swapnel R. Deshpande, N. Arul Murugan, Yogendra Kumar Mishra, Anthony P. F. Turner, Ashutosh Tiwari, *Scientific Reports*, 1-10, 2017, DOI:10.1038/srep44027, www.nature.com (**Impact Factor 4.011**)
43. pH Controlled Reversible Interaction of Remazol Orange with Chitin, Muhammad Mominur Rahman, Abdullah Muhammad Zakaria, Shaikat Chandra Dey, **Md. Ashaduzzaman**, Sayed Md. Shamsuddin, *International Letters of Chemistry, Physics and Astronomy* 75, 25-36, 2017.
42. Cephadrine Intercalated Mg-Al Layered Double Hydroxide, **Md. Ashaduzzaman**, Nashid Kaisher Riyadh, Nusrat Mustary, Sayed Md. Shamsuddin, *International Letters of Chemistry, Physics and Astronomy*, 69 (2016) 1-9.
41. Studies on Interaction of Lidocaine Drug with Natural Cellulosic Fibres, **Md. Ashaduzzaman**, Abdullah Al-Rafin, Nusrat Mustary, Sayed Md. Shamsuddin, *International Journal of Pharmacology, Phytochemistry and Ethnomedicine*, 4 (2016) 36-46.
40. pH Induced Fabrication of Kaolinite-Chitosan Biocomposite, Shaikat Chandra Dey, Mohammad Al-Amin, Taslim Ur Rashid, **Md. Ashaduzzaman**, Sayed Md. Shamsuddin, *International Letters of Chemistry, Physics and Astronomy*, 68 (2016) 1-9.
39. Stimuli-enabled zipper-like graphene interface for auto-switchable bioelectronics, Sachin Mishra, **Md. Ashaduzzaman**, Prashant Mishra, Hendrik C. Swart, Anthony P. F. Turner and Ashutosh Tiwari, *Biosensors and Bioelectronics*, 2017, **Impact Factor 9.518**

38. Solar Assisted Photocatalytic Degradation of Reactive Azo Dyes in Presence of Anatase Titanium Dioxide, Mohammad Al-Amin, Shaikat Chandra Dey, Taslim Ur Rashid, **Md. Ashaduzzaman**, Sayed Md. Shamsuddin, International Journal of Latest Research in Engineering and Technology (IJLRET), 2(3), 2016.
37. Preparation, Characterization and Performance evaluation of Chitosan as a adsorbent for Remazol Red, Shaikat Chandra Dey, Mohammad Al-Amin, Taslim Ur Rashid, Md. Zakir Sultan, **Md. Ashaduzzaman**, Mithun Sarker, Sayed Md. Shamsuddin, International Journal of Latest Research in Engineering and Technology (IJLRET), 2 (2), 52-62, 2016.
36. Studies on an on/off-switchable immunosensor for troponin T, **Md. Ashaduzzaman**, Aswathi Anto Antony, N. Arul Murugan, Swapneel R. Deshpande, Anthony P. F. Turner, Ashutosh Tiwari, Biosensors and Bioelectronics 73, 100–107, 2015, **Impact Factor 9.518**
35. Switchable Bioelectrocatalysis Controlled by Dual Stimuli-Responsive Polymeric Interface Onur Parlak, **Md. Ashaduzzaman**, Suresh B. Kollipara, Ashutosh Tiwari, and Anthony P. F. Turner. ACS Appl. Mater. Interfaces 7, 23837–23847, 2015. **Impact Factor 8.456**
34. Studies on Bacterial Proteins Corona Interaction with Saponin Imprinted ZnO Nanohoneycombs and Their Toxic Responses, Deepali Sharma, **Md. Ashaduzzaman**, Mohsen Golabi, Amritanshu Shriwastav, Krishna Bisetty, and Ashutosh Tiwari, ACS Appl. Mater. Interfaces 7, 23848–23856. 2015. **Impact Factor 8.456**
33. Di-stimuli Responsive poly(*N*-Isopropylacrylamide-co-Diethylaminoethyl methacrylate) Copolymer: Synthesis, Characterization and Investigation of Aqueous Dispersion Properties, **Md. Ashaduzzaman**, Md. Shahidul Islam. ILCPA 20(2), 136-144, 2014.
32. Synthesis of sec.-undecyl and sec.-dodecyl phenols as valuable intermediates of non-ionic Surfactants, D. Saha, **M. Ashaduzzaman**, M. Sarker, P. Saha and T. Siddiqui, *Bangladesh J. Sci. Ind. Res.* **49(2)**, 85-88, 2014.
31. Synthesis of sec.-undecylbenzene and sec.-dodecylbenzene by alkylation D. Saha, **M. Ashaduzzaman**, M. Sarker, P. Saha and T. Siddiqui, *Bangladesh J. Sci. Ind. Res.* **49(1)**, 9 12, 2014
30. Polystyrene-block-poly(*N*-isopropylacrylamide) thermo-responsive diblock copolymers: Synthesis and Characterization, **Md. Ashaduzzaman**, Masashi Kunitake, *IJMSI*, 1 (3): 124-132, 2013.
29. Chemometric Analysis for Screening the Performance of Phenol Alkylation with Cyclohexanol: An Application of Plackett-Burman Experimental Design, **Md. Ashaduzzaman**, and Dipti Saha, *IJAE*, 2(5), 2013, 1-5.

28. Poly(methylmethacrylate)-block-poly(N-hydroxyethylacrylamide) diblock copolymers: direct ATRP synthesis and characterization, **Md. Ashaduzzaman**, Masashi Kunitake, *Iran Polym*, DOI 10.1007/s13726-013-0150-6, Published online, 25 April, **2013** (Impact Factor 1.707)
27. Surface initiated ATRP: Synthesis and Characterization of Functional Polymers Grafted on Modified Cellulose Beads, **Md. Ashaduzzaman**, Kei Ishikura, Masayo Sakata, Masashi Kunitake, *International Letters of Chemistry, Physics and Astronomy*, 8(3), 243-248, **2013**
26. Investigation of Click Reaction at an Oil-Water Interface Using Hydrophobic and Hydrophilic Polymers, **Md. Ashaduzzaman**, Shuhei Kai, Masashi Kunitake, *International Letters of Chemistry, Physics and Astronomy*, 6, 31-39, **2013**
25. Effect of Additives on Maximizing Petrol Production from Crude Oil and Investigation of Properties, **Md. Ashaduzzaman**, Md. Yunus Miah, *International Letters of Chemistry, Physics and Astronomy*, 6, 6-16, **2013**
24. Construction and Characterization of Molecular Nonwoven Fabrics Consisting of Cross-Linked Poly(γ -methyl-L-glutamate), Rintaro Higuchi, Megumi Hirano, **Md. Ashaduzzaman**, Neval Yilmaz, Tatsunori Sumino, Daisuke Kodama, Sayuri Chiba, Shinobu Uemura, Katsuhiko Nishiyama, Akihiro Ohira, Michiya Fujiki, and Masashi Kunitake, dx.doi.org/10.1021/la3045576, *Langmuir*, **2013** (Impact Factor 3.683)
23. Aqueous Dispersion and Temperature Induced Reversible Fluorescence Properties of 1-Pyrenecarboxaldehyde, **Md. Ashaduzzaman**, Masashi Kunitake, *International Letters of Chemistry, Physics and Astronomy*, 1, 55-62, **2013**
22. Synthesis of 2-Cycloalkyl-4-chlorophenols, **Md. Ashaduzzaman**, Dipti Saha and Manoranjan Saha, *Dhaka Univ. J. Sci.* 60(2): 199-202, **2012** (July)
21. Synthesis of Cyclohexylcresols by Alkylation of Cresols with Cyclohexanol in the Presence of Perchloric Acid, **Md. Ashaduzzaman**, A.M. Sarwaruddin Chowdhury and Manoranjan Saha, *Dhaka Univ. J. Sci.* 60(2): 195-198, **2012** (July).
20. Mechanical and Electrical Properties: Electrospun Alginate/Carbon Nanotube Composite Nanofiber, Md. Shahidul Islam, **Md. Ashaduzzaman**, Shah Md. Masum, Jeong Huyn Yeum, *DUJASE* 60(1): 125-128, **2012**
19. A Mathematical model for the alkylation of phenol with Octanol-1, Manoranjan Saha, Md. Kabir Hossain, **Md. Ashaduzzaman**, Dipti Saha, Shams Tania Afroza Islam, A. M. Sarwaruddin Chowdhury and Mohammad kamruzzaman, *DUJASE* 60(1): 65-70, **2012**

18. Polymer dewetting via stimuli responsive structural relaxation – Contact angle analysis, Xiumin Ma, Rene Crombez, **Md. Ashaduzzaman**, Masashi Kunitake, and John Texter, *ChemComm*, **2011**, DOI: 10.1039/c1cc12656c (**Impact Factor 6.164**)
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24. **Md. Ashaduzzaman**, Principal Speaker, **Modern Life With Plastics: A Great Cause of Environmental Threats**, January 1, 2023, Comilla University, Cumilla 3506, Bangladesh
23. **Md. Ashaduzzaman**, Keynote speech, Stimuli-Responsive Polymers: Controlled structures, Applications and Challenges, 1-3 December, BCSIR Congress 2022,

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Published Books

1. **Distillation of Crude Oil**
Md. Ashaduzzaman & Md. Yunus Miah
Lambert Academic Publishing, ISBN 978-3-659-42496-0, 2013

2. Fabrication of Polymeric Composite

Md. Ashaduzzaman & Mohammad Mamunur Rashid
Lambert Academic Publishing, ISBN 978-659-39569-7, 2013

In this work attempt was taken to develop a method for improving the straight run refining process. It is established that the yield of main products petrol and diesel increases from 28.88% to 32.84% and 40.08% to 46.19% respectively when optimum quantity of additives was used. Maximum quantity of additives depends upon the type of additives that's why optimum quantities of additives used in this process of distillation are different for different additives. By TGA, 1H-NMR and GCMS analysis, it is established that the quality of products (octane number of gasoline which mainly depend upon the fractions of iso-paraffins and aromatics hydrocarbons and cetane number of diesel on straight chain paraffins etc.) also improved when optimum quantity of additives was used. This method mainly gives the opportunity to petroleum refiners to get their desirable quantity of petroleum products (petrol, diesel, lubricating oil and furnace oil) on the one hand and improve the quality of the products on the other hand.

Distillation Of Crude Oil



Md Ashaduzzaman
 Md Yunus Miah

Distillation Of Crude Oil

Effect Of Additives On Production Of Light Fractions
 and Quality investigation



Md Ashaduzzaman

Dr. Md. Ashaduzzaman born on March 20, 1977 at Barisal district of Bangladesh. He successfully finished B.Sc (Honors) and M.Sc programs from the department of Applied Chemistry & Chemical Technology, University of Dhaka, Bangladesh. He started his career from pharmaceuticals industry and later he joined the University of Dhaka in the year of 2005.



978-3-659-42496-0

Ashaduzzaman, Miah



By heat and press molding process, polymeric matrix composite has been produced by using different percentage of coir and HDPE. Various properties have been measured for the samples. It was observed that bulk density, tensile strength, elongation, Young's Modulus, ductility of the products were significantly modified by the addition of different percent of coir in the HDPE. The proposed HDPE-Coir composite is very advantageous rather than the absolute HDPE because of its low cost, consuming as a natural fibre, improved properties and quality, a very wide domestic use and also commercially it will be an attractive product. Its most widespread use is in outdoor deck, floors, but it is also used for railings, fences, landscaping timbers, cladding and siding, park benches, molding and trim, window and door frames, and indoor furniture. Specially, this composite would be crucial for production of vehicle's body such as aeroplane, car and various toys.

Fabrication Of Polymeric Composite



Md Ashaduzzaman
 Mohammad Mamunur Rashid

Fabrication Of Polymeric Composite

Role Of Coir In Composite Produced From High
 Density Polyethylene



Md Ashaduzzaman

Dr. Md. Ashaduzzaman born on 20th March 1977 in the village of Tunchar, P.O. Shalemur, P.S. Muladi, Dist. Barisal, Bangladesh. He obtained first class (2nd position) both in B.Sc (Hons.) and M.Sc in Applied Chemistry and Chemical Technology from University of Dhaka. He is interested in Polymer chemistry, Soft materials & Colloidal chemistry.



978-3-659-39569-7

Ashaduzzaman, Rashid



Recent research work

1. Fabrication of poly(ethylmethacrylate) entrapped Silver Nanocomposites by microwave irradiation and its potential applications
2. Few projects are running
 - (a) Synthesis of Metal Organic Framework (MOF) for potential applications.
 - (b) Fabrication of graphene-FeO nanocomposites
 - (c) Synthesis and characterization of Ag-Fe₂O₃ Core-shell nanocomposites, submitted for publication
 - (d) GO/nanoparticles incorporated hydrogel for treatment of textile effluents
 - (e) Synthesis and characterization of NiO and spectroscopic measurement of formaldehyde in aqueous system
 - (f) Synthesis and characterization of crystalline cellulose-polyacrylic acid super hydrogel



(Dr. Md. Ashaduzzaman)