CURRICULUM VITAE

Name: **Dr Mohd Maniruzzaman**

Date of Birth: 1st January, 1968

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Scopus Author ID: https://www.scopus.com/authid/detail.uri?authorId=57219273363
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Permanent Address: 23/11 M M Hossain Road, Eidgah para, Kushtia 7000, Bangladesh
Nationality: Bangladeshi
Sex: Male
Marital status: Married (Wife and three daughters)

h-index: 23 (Total); i10-index: 32 (Total); Total Citations: 1775

Academic Qualification:

2001 Doctor of Engineering (D.Eng.) in Department of Functional Materials Engineering, Toyohashi University of Technology (TUT), Toyohashi, Japan
Obtained grade A

1988: Master of Science in Applied Chemistry and Chemical Technology
University of Rajshahi (RU), Rajshahi, Bangladesh
Obtained 1st Class (3rd in position)

1987: Bachelor of Science (Honours) in Applied Chemistry (RU,) Rajshahi, Bangladesh
Obtained 1st Class (3rd in position)

1984: Higher Secondary Certificate (H.S.C), Jessore, Bangladesh
Obtained 1st Division

1982: Secondary School Certificate (S.S.C), Jessore, Bangladesh
Obtained 1st Division

Work Experience:

Industrial:

1. **Process Officer:** Serving as a Product Processing Officer since March 19, 1993 to December 3, 1993. Karnaphuly Fertilizer Company Ltd. (KAFCO), Dhaka, Bangladesh

2. Research Officer: Bangladesh Tariff Commission (BTC), Dhaka, Bangladesh, The BTC is statuary body and its functions are inter alia, advising the government regarding the protection of domestic industry, formulating tariff policy suggesting trade liberation, recommendation on international trade policy to the government etc. since December 4, 1993 to March 18 1994.

Research Experiences/Award:

1. **AVH Return Fellowship** (September 1, 2010 to August 31, 2011) at Islamic University (IU), Kushtia, Bangladesh by the financial support of Alexander von Humboldt Foundation: Conducted a research after finishing post-doctoral research work in Germany on Biomaterials entitled "Development and Characterization of Antimicrobial activity of Chitosan-Synthetic

Polymer Nanocomposites from Shrimp Shell" for a period of 12 months under supervision of Professor Dierk Raabe.

2. **Max-Planck-Institut für Eisenforschung (MPIE), Düsseldorf, Germany** (February 2008 to July 2010) Post-doctoral Research fellow by the financial support of Alexander von Humboldt Foundation: Conducted a post-doctoral research on microstructure of Biomaterials entitled "Production of Chitin-Synthetic Polymer and Bio-renewable Composite from Shrimp (*Penaeus monodon*) Shell" for a period of 1 year and 6 months under supervision of Professor Dierk Raabe.

3. **Toyohashi University of Technology (TUT), Toyohashi, Japan** (June 2008 to August 2008) Post-doctoral research fellow by the financial support JASSO follow-up research fellowship Post-doctoral researcher: Conducted a post-doctoral research on Chiral Polymer Catalyst entitled "Synthesis of Novel Chiral Polymeric Catalyst through Etherification Followed by Polyquaternization" for a period of three months under the supervision of Professor Shinichi Itsuno.

4. **Toyohashi University of Technology (TUT), Toyohashi** 441-8580, Japan (January 1997 to March 2001) Ph.D. research student: Conducted Doctor of Engineering thesis entitled "Organized Polymerization of Amphiphilic Poly(Ethylene Oxide) Macromonomers" for a period of four years under the supervision of Professor Koichi Ito.

5. **University of Rajshahi, Rajshahi 6205, Bangladesh** (October, 1990 to June 1992) Student Researcher: Conducted M.Sc. Thesis entitled "Studies on Dyeing of Jute Fibre with Disperse Dyes and Their Fastness Properties" for a period of one and half a year under the supervision of Prof. F.I. Farouqui Spectroscopic methods was used in this connection.

6. **University Merit Scholarship** (01.07.1987~30.06.1988) at University of Rajshahi, Rajshahi-6205, Bangladesh, Awarded a merit scholarship on the basis of B. Sc. (Honours) results in 1987 from the University of Rajshahi, Bangladesh.

5. a. Training/workshop on teaching and learning quality assurance as participant

QA areas	Organized by	Year and duration
Hands-on Orientation for new Program Evaluators at Council Hall, IEB HQ, Ramna, Dhaka 1000, Bangladesh	Hands-on training how to evaluate of a new program, strength, weakness, opportunities and concerns in its report without expressing approval or disapproval of the program.	During 27-28 May 2022
Special Training on Teaching-Learning, Curriculum & Quality Assurance for University Teachers	Training Institute (GTI), Bangladesh Agricultural University, Mymensingh-2202, Bangladesh	During 20-30 August 2014

b. Training/workshop on quality assurance as resource person

QA areas	Organized by	Year and duration
Special Training on Teaching-Learning, Curriculum & Quality Assurance for University Teachers	Training Institute (GTI), Bangladesh Agricultural University, Mymensingh-2202, Bangladesh	During 23-28 August 2014
Nano Technology in Polymer Composites	Seminar at Department of Chemistry, University of Malaya, Kuala Lumpur, 50603, Malaysia	During January 05, 2015
Training on "Outcome Based Education (OBE) Curriculum	IQAC, Islamic University, Kushtia-7003	28.12.2021
OBE Curriculum Preparation for Science	IQAC, Islamic University, Kushtia-7003	09.01.2022
OBE Curriculum on BNQF of BAC	IQAC, Islamic University,	02.02.2022

for Business Schools	Kushtia-7003	
OBE Curriculum Preparation for Social Sciences and Law Schools	IQAC, Islamic University, Kushtia-7003	26.02.2022

c. Experience in External quality assessment/External peer Review of academic program

QA areas	Organized by	Year and duration
Outcome Based Education (OBE) Curriculum in Social Science	Department of Economic, Islamic University, Kushtia-7003	22.03.2022
Outcome Based Education (OBE) Curriculum in Question making practice according to Bloom taxonomy	Department of Applied Chemistry and Chemical engineering, Islamic University, Kushtia-7003	11-11.2023

d. Teaching mobility assignment at Cankiri Karatekin University (CAKU), Turkey under "Erasmus+ KA107 International Credit Mobility Project" for the period of 5 (five) working days from 14th to 18th of March 2022. The lectures of this academic program were focused on the study of polymers synthesis, polymer properties, polymer processing, polymer testing, polymer degradation, polymer reaction, composites and applications.

Academic Position:

1. **Lecturer-**Shahjalal University of Science & Technology (SUST), Sylhet, Bangladesh, Serving as a Lecturer, Department of Chemical Technology and Polymer Science, since March 19, 1994 to December 3, 1995.
2. **Lecturer-** Islamic University (IU), Kushtia, Bangladesh, Serving as a Lecturer, Department of Applied Chemistry and Chemical Technology, since December 4, 1995 to March 18, 1997.
3. **Assistant Professor-**Islamic University (IU), Kushtia, Bangladesh, Serving as an Assistant Professor, Department of Applied Chemistry and Chemical Technology, since March 19, 1997 to July 27, 2002.
4. **Associate Professor-**Islamic University (IU), Kushtia, Bangladesh, Serving as an Associate Professor, Department of Applied Chemistry and Chemical Technology, since July 28, 2002 to January 27, 2007.
5. **Professor-**Islamic University (IU), Kushtia, Bangladesh, Serving as a Professor, Department of Applied Chemistry and Chemical Engineering, since January 28, 2007 upto date.
6. **Chairman-**Islamic University (IU), Kushtia, Bangladesh, Serving as a Chairperson/head of Department of Applied Chemistry and Chemical Technology, since December 11, 2004 to December 10, 2007
7. **Dean-** Islamic University (IU), Kushtia, Bangladesh, Serving as a Dean, Faculty of Applied Science and Technology, since August 18, 2003 to August 17, 2005
8. **Chairman-** Islamic University (IU), Kushtia, Bangladesh, Serving as a Chairman, Department of Pharmacy, since October 04, 2017 to March 13, 2021.
9. **Director** (Institutional Quality Assurance Cell), Islamic University (IU), Kushtia, Bangladesh, Serving as an administrative and academic chairperson/head for the development Outcome Based Curriculum (OBC) in all departments under the different faculties (with special emphasis on Teaching, learning and Assessment) of Islamic University, Kushtia 7003, Bangladesh since October 04, 2021 to March 17, 2023.
10. **Faculty member**: Faculty of Engineering and Technology, Islamic University (IU), Kushtia, Bangladesh, Serving as an Academic member for the development academic curriculum and other activities according to faculty ordinances for regulation all departments under this faculties since December 04, 2021 to present date.
11. **Faculty member**: Faculty of Applied Science and Technology, Jashore University of Science and Technology (JUST), Jashore -7408, Bangladesh. Serving as an Academic member for the development academic curriculum and other activities according to faculty ordinances for regulation all departments under this faculties since July, 2021 to present date.
12. **Faculty member:** Faculty of Biological Sciences, Khulna University Khulna 9208, Bangladesh, Serving as an Academic member for the development different academic program curriculum and other activities according to faculty ordinances for regulation all

departments under this faculties since July 01, 2021 to June 30, 2023.

13. **Member of Editorial Board**, Journal of Applied Science and Technology, Vol.3 No. 1 & 2, 2003, Islamic University, Kushtia 7003, Bangladesh.
14. **Member of Editorial Board**, Journal of Islamic Education and Research Vol.7, No. 1, 2011, Islamic University, Kushtia 7003, Bangladesh.
15. **Editor,** Journal of Applied Science and Technology, Vol. 9, No. 1, 2013, Islamic University, Kushtia 7003, Bangladesh.
16. **Editor**, Journal of Applied Science and Technology, Vol. 12, No. 1, 2018, Islamic University, Kushtia 7003, Bangladesh**.**

Honours and Extracurricular:

1. Serving as a Faculty member in the Faculty of Applied Science and Engineering, Islamic University, Kushtia Since December 04, 1995 to upto date.
2. Games and sports committee, department of Applied Chemistry & Chemical Technology, Rajshahai University, Rajshahi, Organizer, 1986-92.
3. Games and sports committee, Department of Chemical Technology and Polymer Science, Shahjalal University of Science and Technology, Sylhet, Organizer, 1994-95, Research Supervisor, 1994-95.

Language and Computer Skills:

1. **English Language:** Used English as the medium of instruction & examination in graduate, postgraduate and Doctoral level.
2. **Japanese Language:** Completed Second step Japanese Language from Language Centre of Toyohashi University of Technology, Toyohashi, Japan.
3. **Japanese Language:** Completed Elementary Intensive Japanese Language from the Institute of Modern languages, University of Dhaka, Dhaka, Bangladesh. Can read and write Arabic.
4. **German Language:** Completed intensive A1 and A2 German Language course from Goethe Institute, Bonn, Germany.
5. **Computer:** Word processing (Microsoft word, Microsoft Excel and Microsoft PowerPoint Microsoft Draw) Claris work, Kaleida Graph, Chemi Draw, Delta Graph and Origin.
6. **Instruments Operation:** Can be able to operate individually, ^{1}H NMR JEOL JNM-GX-270 FT spectrometer and also ^{1}H NMR Varian OXFORD 300 MHz, ^{13}C solid state CPMAS NMR Bruker DSX-500. High resolution scanning electron microscope(SEM), ATR-FTIR measurements BIO-RAD EXCALIBUR^{TM} Spectrometer (FTS 3000), CamScan 4, Zeiss Gemini 1540 XB (Thornwood, NY 10594). Size Exclusion Chromatography (SEC) with JASCO PU980 as pump, JASCO RI-930 Surface tensiometer, CBV-A3 Type (Kyowa Interface Science Co. Ltd.). Static light scattering (SLS) ELS-8000 (Otsuka Electronics Co., Ltd) with a vertically polarized light of 10 mW He-Ne laser of 632.8 nm.

Member of the Learned Society:

Life member of Bangladesh Chemical Society **(BCS LM 838)**, Association of Humboldt Fellows Bangladesh (**AHFB**), Alumni Association German Universities Bangladesh, Japanese Universities Alumni Association in Bangladesh (**JUAAB**).

Current Position:

Professor- Department of Applied Chemistry and Chemical Engineering, Islamic University, Kushtia 7003, Bangladesh, since January 28, 2007 till now.

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Research Interest:

1. Design of Synthetic Monomers and Polymers
2. Synthesis of Amphiphilic Polymer Design by Macromonomer Technique and their Composite Preparation.
3. Biodegradable Nano Composites from Bio-renewable resources

4. Nano-composites from biomaterials and wastewater purification
5. Production of bio-plastics from bio-renewable resources

References	
(a) Academic	
1. Professor Dr. Shinichi Itsuno Department of Materials Science Toyohashi University of Technology 1-1 Hibarigaoka, Tempaku-cho,Toyohashi-Shi 441-8580, Japan Tel and Fax: +81-0532-44-6813 e-mail:itsuno@tutms.tut.ac.jp	2. Professor Dr. Kenan YILDIRIM Department of Polymer Materials Engineering Faculty of Engineering and Natural Sciences Bursa Technical University Mimar Sinan Mahallesi Mimar Sinan Bulvarı Eflak Caddesi No:177 E Blok-418 Kat 4 16310, Busra, Turkey Tel: +90 (224)-3003557 e-mail: kenan.yildirim@btu.edu.tr
(b) Professional	
1. Professor Dr. M. Rostom Ali Department of Applied Chemistry Chemical Engineering Rajshahi University, Rajshahi 6205 Mobile: +880-1727226745 e-mail: dmrali@yahoo.com http://www.ru.ac.bd/achem/m_r_ali.htm	2. Professor Dr. Nurjahan Begum Department of Agricultural Chemistry Sher-e-Bangla Agricultural UniversityDhaka-1207, Bangladesh Tel: 01716-816311 e-mail: nbegumsau@yahoo.com

Academic Job (Teaching and Research) in the Department of Applied Chemistry and Chemical Engineering (December 1995 till now)

Academic degree	Level	Course Code	Course Title
Under Graduate student Bachelor of Science (B.Sc. Enng.)	1st Year	ACCE-1105	Inorganic Chemistry-I
		ACCE-1106 (Practical)	Analysis and Preparation of Inorganic Compounds
	2nd Year	ACCE-2209	Fundamentals of Biomaterials Science and Engineering
	3rd Year	ACCE-3105	Biodegradable Polymers and Composites
		ACCE-3104 (Practical)	Experimental Chemical Technology (Practical)
		ACCE-3201	Fuels and Petrochemicals
		ACCE-3202 (Practical)	Fuels and Lubricants Analysis
		ACCE-3203	Heavy Chemical Industries
	4th Year	ACCE-4103	Polymer Science and Engineering
		ACCE-4104 (Practical)	Polymer Engineering
		ACCE-4205	Chemistry & Technology of High Polymers and Textiles
		ACCE-4207	Instrumental Methods of Chemical Analysis
		ACCE-4206 (Project)	Project Supervision of Undergraduate Student for partial fulfilment of B.Sc. degree
Post Graduate student Masters of Science (M. Sc Enng.)	5th Year	ACCE 5103	Macromolecular Chemistry
		ACCE 5209	Research Methodology
		ACCE-5104 (Practical)	Experimental Polymer Chemistry (Practical
		ACCE-5204 (Thesis work)	Thesis supervision in the field of Polymer Chemistry for the partial fulfilment of Masters of Science
Masters of Philosophy	6th Year	ACCE-6103	Advanced Polymer Chemistry for the partial fulfilment Masters of Philosophy degree course work

List of Publications:

Research Articles

1. Md. Moniruzzaman, Md. Mahmudur Rahman, Rafiquel Islam, **Mohd. Maniruzzaman,** Strength Enhancement of Recycled LOCC-Based Paper Using Chemical Additives: A Review, *Chemistry Africa* (2026) 9:268 https://doi.org/10.1007/s42250-026-01777-8
2. Rubaiatul Islam Zerin, Md. Kamrul Hossain, Humaira Rashid, Sababa Tasnim, Md. Julfikar Ali, Md. Mizanur Rahman, **Mohd. Maniruzzaman**, Rafiquel Islam, Integrated spatial analysis and Gaussian dispersion modelling of airborne particulate matter from rice processing mill hubs in rural Bangladesh and associated public health risks, *Environmental Science and Pollution Research*, 2026, 33(21), https://doi.org/10.1007/s11356-026-38036-9
3. Md. Kamrul Hossain, Rubaiatul Islam Zerin, Humaira Rashid, Umma Suraiya Parvin Kakon, Mst. Sadia Siddika Trina, Laila Anjum Eva, Shahin Ali, Mohammad Omar Faruk Molla, Md. Saikoth Jahan, Md. Assraf Seddiky, Sazal Kumar, **Mohd. Maniruzzaman**, Geoff R. MacFarlane, Rafiquel Islam, Spatial Distribution and AirQ + -Based Health Risk Analysis of Particulate Matter in Bangladesh's Industrial Hubs, Water Air Soil Pollut, 237(11), 660, 2026. https://doi.org/10.1007/s11270-026-09294-7
4. Md Mahmudur Rahman, Md Shamim Reza, **Mohd Maniruzzaman,** Fabrication and characterization of biocomposites from acetylated and bleached Agave atroverance L. fibers by grafting of styrene to enhance their thermomechanical, physicochemical, and morphological properties: A new approach, *South African Journal of Chemical Engineering*, Volume 55, 586-604, 2026. https://doi.org/10.1016/j.sajce.2026.01.001
5. Md. Mahmudur Rahman, **Mohd. Maniruzzaman**, Nor E-Alam, Parvej Mahmud, Sumiya Khatun, Md. Kaowsar Hossain, Md. Ismail Hossain, Md. Hasanuzzaman, Md. Aahraful Alam, Md. Al-Amin, Bijoy Chandra Ghos, Adsorptive removal of toxic heavy metal and dyes from wastewater by rice husk (lignocellulosic biomass) derived activated biochar: A fixed-bed column adsorption study, *Carbohydrate Polymer Technologies and Applications* 9, 100698, 2025. https://doi.org/10.1016/j.carpta.2025.100698
6. Md. Mahmudur Rahman, **Mohd. Maniruzzaman**, Ripon Kumar Saha, A green route of antibacterial films production from shrimp (*Penaeus monodon*) shell waste biomass derived chitosan: Physicochemical, thermomechanical, morphological and antimicrobial activity analysis, *South African Journal of Chemical Engineering*, 51, 153-169, 2025. https://doi.org/10.1016/j.sajce.2024.11.005
7. Md. Mahmudur Rahman, **Mohd. Maniruzzaman**, Md. Abdul Gafur, Khairia Mohammed Al-Ahmary, Ali Shawabkeh, Aliyah Alsharif, Suraiya Naznin, Jamelah S. Al-Otaibi, Fabrication of chitosan coated bentonite clay multifunctional nanosorbents from waste biomass for the effective elimination of hazardous pollutants from waterbodies: A fixed bed biosorption, mechanism, and mathematical model study, *International Journal of Biological Macromolecules*, 282(6), 137439, 2024. https://doi.org/10.1016/j.ijbiomac.2024.137439
8. Md. Mahmudur Rahman, Md. Elius Hosen Pk, Md. Waliullah, Md. Ismail Hossain, **Mohd. Maniruzzaman**, Bijoy Chandra Ghos, Production of cellulose nanocrystals from the waste banana (M. Oranta) tree rachis fiber as a reinforcement to fabricate useful bionanocomposite, *Carbohydrate Polymer Technologies and Applications*, 6, 100607, 2024. https://doi.org/10.1016/j.carpta.2024.100607
9. Md. Mahmudur Rahman, **Mohd. Maniruzzaman,** Mst Nusrat Zaman, Fabrication and characterization of environmentally friendly biopolymeric nanocomposite films from cellulose nanocrystal of banana *M. Oranta* (Sagar kala) tree rachis fibers and poly lactic acid: A new route, *South African Journal of Chemical Engineering* 49, 100619, 2024. https://doi.org/10.1016/j.sajce.2024.10.002

10. A. A. Mohana, M. A. Rahman, M. H. Rahaman, **Mohd. Maniruzzaman**, S. M. Farhad, M. M. Islam, M. S. I. Khan and M. Z. Parvez, Okra Micro-Cellulose Crystal (MCC) and Micro-Clay Composites for the Remediation of Copper, Nickel, and Dye (Basic Yellow II) from Wastewater, *Reactions 2023, 4, 342-358, 2023*. https://doi.org/10.3390/reactions4030021

11. Md. Mahmudur Rahman, **Mohd. Maniruzzaman,** A new route of production of the meso-porous chitosan with well-organized Honey comb surface microstructure from shrimp waste without destroying the original structure of native shells: Extraction, modification and characterization study. *Results in Engineering*, 19, 1-13, 2023. https://doi.org/10.1016/j.rineng.2023.101362

12. Md. Mahmudur Rahman, and **Mohd. Maniruzzaman,** Environmentally friendly strength bio-composite preparation by grafting of HEMA onto shrimp chitosan without destroying original microstructure to enrich their physicochemical, thermomechanical, and morphological properties. *South African Journal of Chemical Engineering* 47, 300-311, 2024. https://doi.org/10.1016/j.sajce.2023.12.005

13. Md. Mahmudur Rahman, **Mohd. Maniruzzaman**, M.M.S**. Y**easmin, M.A. Gafur, M.A.A. Shaikh, M.A. Alam., M.J. Uddin, M. Hasan, M. A. Bashera, T.A. Chowdhury, B. Maitra, M.R. Naim, G.M.M. Rana, B.K. Saha, M. S. Quddus, Adsorptive abatement of Pb^{2+} and crystal violet using chitosan-modified coal nanocomposites: A down flow column study, *Groundwater for Sustainable Development, 23, 1011028, 2023***.** https://doi.org/10.1016/j.gsd.2023.101028

14. Md. Mahmudur Rahman, M. M, Islam, **Mohd. Maniruzzaman,** Preparation and characterization of biocomposite from modified α-cellulose of Agave cantala leaf fiber by graft copolymerization with 2-hydroxy ethyl methacrylate. *Carbohydrate Polymer Technologies and Applications 6, 100354,2023*. https://doi.org/10.1016/j.carpta.2023.100354

15. Md. Mahmudur Rahman, **Mohd. Maniruzzaman, M.S.** Yeasmin, A state-of-the-art review focusing on the significant techniques for naturally available fibers as reinforcement in sustainable bio-composites: Extraction, processing, purification, modification, as well as characterization study, *Results in Engineering, 20, 101511, 2023*. https://doi.org/10.1016/j.rineng.2023.101511

16. M. S. Sheikh, Md. Mahmudur Rahman, M.S. Rahman, K. Yildirim, **Mohd. Maniruzzaman,** Fabrication of nano composite membrane filter from graphene oxide (GO) and banana rachis cellulose nano crystal (CNC) for industrial effluent treatment, *Journal of Industrial and Engineering Chemistry, 128(25), 196-208, 2023*. https://doi.org/10.1016/j.jiec.2023.07.048

17. Md. Mahmudur Rahman, M.S. Yeasmin, M.J. Uddin, M. Hasan, M, Shaikh, M.A., Rahman, M.S., Mohd. Maniruzzaman, Simultaneous abatement of Ni^{2+} and Cu^{2+} effectually from industrial wastewater by a low cost natural clay-chitosan nanocomposite filter: Synthesis, characterization and fixed bed column adsorption study, *Environmental Nanotechnology, Monitoring & Management 20, 100797, 2-23, 2023*. https://doi.org/10.1016/j.enmm.2023.100797

18. O. Rahman, Md. Mahmudur Rahman and **Mohd. Maniruzzaman,** Removal of dye and heavy metals from industrial wastewater by activated charcoal-banana rachis cellulose nanocrystal composites filter, *International Journal of Environmental Analytical Chemistry, 104(7), 1478-1496, 2022.* https://doi.org/10.1080/03067319.2022.2039647

19. M. M. Islam, M. S. Islam, **Mohd. Maniruzzaman**, M. M.-Ul. Haque, and A. A. Mohana, Banana Rachis CNC/Clay Composite Filter for Dye and Heavy Metals Adsorption from Industrial Wastewater, *Engineering Science & Technology, 2(2), 140-152, 2021.* https://doi.org/10.37256/est.222021817,

20. Md. Mahmudur Rahman and **Mohd. Maniruzzaman,** Extraction of Nano-cellulose from Banana Rachis (Agro-waste) and Preparation of Nanocellulose Clay Nanofilter for the Industrial Wastewater Purification, *Journal of Bioremediation & Biodegradation, 12(2), 485-491, 2021,* https://doi.10.4172/2155-6199.1000485

21. Ujjal Kumar Das, Chamely, Khatun, Md Sakinul Islam, Nhol Kao, Fazle Rabbi**, Mohd. Maniruzzaman,** M. A. Gafur, Effect of Drum Pressure on Flow Accelerated Corrosion in Gas-Fired Combined Cycle Power Plant: A Case Study in the light of Literature Review, *Research Communication in Engineering Science & Technology 2, 17-27, 2019.* https://www.researchgate.net/publication/338254532

22. Md. Mahmudur Rahman, **Mohd. Maniruzzaman**, Preparation of Shrimp Shell Chitosan-Clay-Nanofilter for the Purification of Drinking Water, *International Journal of Food Engineering and Technology 2 (2), 17-26, 2018.* DOI: 10.11648/j.ijfet.20180202.12

23. Md. Mahmudur Rahman, **Mohd Maniruzzaman**, Md. Rashidul Islam, Md. Saifur Rahman Synthesis of Nano-Cellulose from Okra Fibre and FTIR as Well as Morphological Studies on It, *American Journal of Polymer Science and Technology, 4(2): 42-52, 2018***,** https://doi.org/10.11648/j.ajpst.20180402.11

24. M. M. Haque, **Mohd. Maniruzzaman** and M. S. Reza, Thermal and Tensile Mechanical Behavior of Polystyrene Graft Acetic Anhydride-Treated Pulque Fibers, *Journal of Natural Fibers, 13(2), 125-136, 2016.* https://doi.org/10.1080/15440478.2014.984057

25. L. Habib, B. Ahmed, **Mohd. Maniruzzaman**, M.H. Rahman, M.S. Islam, M.A. Gafur, Instrumental Characterization of Chemically Treated *Agave cantala* Fibres, *Journal of Applied Science and Technology, 10(2), 44-49, 2016, ISSN: 2218-841X***,** *https://www.researchgate.net/publication/373688389*

26. M. M Alam and **Mohd. Maniruzzaman**, M. M Morshed Application and Advances in Microprocessing of Natural Fiber (Jute)-Based Composites, Comprehensive Materials Processing, Volume 7, 243-260, 2014, https://doi.org/10.1016/B978-0-08-096532-1.00714-7

27. M. M.-Ul Haque, M. A. A. Zaman, M. H. Rahaman, M. Z. Hossain, **Mohd. Maniruzzaman**, Thermal and tensile mechanical behavior of acetic anhydride treated silk fibres, *International Journal of Materials Science and Applications, 3(3), 106-110 2014.* https://doi.10.11648/j.ijmsa.20140303.16

28. M. T. Sultan, M. M. Haque, **Mohd. Maniruzzama**n and Md Ashraful Alam, Composites of polypropylene with pulque fibres: Morphology, thermal and mechanical, Properties, *Journal of Thermoplastic Composite Materials*, 28, 12, 2013. https://doi.org/10.1177/0892705713513295

29. E. Fortunati , D. Puglia, M. Monti , C. Santulli , **Mohd. Maniruzzaman**, M. L. Foresti, A.Vazquez , J. M. Kenny, Okra (*Abelmoschus esculentus*) Fibre Based PLA Composites: Mechanical Behaviour and Biodegradation, *Journal of Polymers and the Environment,* 21, 726-737, 2013. https://doi.10.1007/s10924-013-0571-5

30. E. Fortunati, D. Puglia, M. Monti, C. Santulli, **Mohd. Maniruzzaman**, J. M. Kenny Cellulose Nanocrystals Extracted from Okra Fibers in PVA Nanocomposites, *Journal of Applied Polymer Science*, *3220-3230, 2012*, https://doi.org/10.1002/app.38524

31. **Mohd. Maniruzzaman**, M. A. Rahman, M. A. Gafur, H. Fabritius, D. Raabe, Modification of Pineapple Leaf Fibres and Graft Copolymerization of Acrylonitrile onto Modified Fibres, *Journal of Composite Materials*, *46(1) 79-90, 2011*, https://doi.org/10.1177/0021998311410486

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Md. Abdullah Al Mamun, Ayesha Akter Zaman, Basir Ahmed, Md. Minhaz-Ul Haque, **Mohd Maniruzzaman**
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(35) **"Thermal and Mechanical Properties of Shrimp Chitosan Sheet and Their Antimicrobial Activity"**
Mst. Roksana Parveen, Md. Shorah Hossaon, Ayesha Akter Zaman, Basir Ahmed, Md. Anwarul Haque, Md. Minhaz Ul Haque**, M. Maniruzzaman**
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Md. Shahinuzzaman, Ayesha Akter Zaman, Basir Ahmed, Md. Minhaz Ul Haque**, M. Maniruzzaman**
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(37) **Industrial Waste Water Purification by Fabricated Banana Rachis Nano-Cellulose and Bone Char Composites Filter**
Md. Shafiqul Islam, Mst. Ayesha Akther Zaman and **M. Maniruzzaman**
International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), BCSIR, Dhaka, Bangladesh, 11-13 March, OP-E-02 p.117,2021

(38) **Purification of Wastewater by Modified Bone-char and Chitosan Nano-filter**
Md. Shafiqul Islam, Mst. Ayesha Akther Zaman, Md Minhaz-Ul Haque, Md. Monjurul Alam and **M. Maniruzzaman**
International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), BCSIR, Dhaka, Bangladesh, 11-13 March, OP-L-02 p.254,2021

(39) **Removal of Dye, Pb (II) and Cr (III) from Wastewater Using Biodegradable Composite: An Innovative Approach for Clean Environment**
Md. Monjurul Islam**,** Anika Amir Mohana and **M. Maniruzzaman**
International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), BCSIR, Dhaka, Bangladesh, 11-13 March, OP-E-03 p.117,2021

(40) **Okra Cellulose Nano Crystal (CNC) and Clay Nano-Composite for the Remediation of Copper and Nickel and Dye (Basic Yellow II) from Wastewater**
Anika Amir Mohana, Md. Aminur Rahman, S.M. Farhad, Md. Hafezur Rahaman, **M. Maniruzzaman**
International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), BCSIR, Dhaka, Bangladesh, 11-13 March, PP-47 pp 417,2021

Research Project	
(Researching years) Place:	*(Title and content of research)*
Researching year: 1999-2000 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Isolation, Characterization and Studies on Dyeing of Cotton Tree (Shimul Tree) Fibre ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfillment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2000-2001 Place: Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Preparation and Radiation Processing of Bioblend Film of Jiga (*Lannea Grandis Dennst*) Gum with Water Soluble Polymers 2. Effect of Sago on the Properties of poly (N-Vinyl Pyrrolidone)/Sago Blend Hydrogel Synthesized by y-irradiation Techniques ***Content of research:*** Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfillment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2001-2002 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Studies on Isolation, Characterization and Dyeing Properties of *Agave cantala* (Dakatia) Fibre 2. Analysis of Pulque Fibre and Their Properties 3. Studies on Composites Preparation of Natural Fibre and Synthetic Polymer and Its Mechanical Properties ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfillment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2002-2003 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Grafting of Vinyl Monomers onto *Agave cantala* Fibre and Physico-chemical Properties of the Grafted Fibre ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfillment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2003-2004 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Studies on the Preparation, Modification and Characterization of Natural Fibre (Pulque) Reinforced LDPE Composite 2. Studies on Composites Preparation of Chemically Modified Fibre (*Agave cantala*) with Synthetic Polymer LDPE and Their Properties ***Content of research***: Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science

Researching year: 2004-2005 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Studies on Composites Preparation of Grafted Pulque Fibre with Synthetic Polymer LDPE and Their Properties ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2005-2006 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Interface Modification and Mechanical Properties of Ligno-Cellulosic Okra Fibre-LDPE Composite 2. Patentability of Modified Grafted *Agave cantala* Fibre-LDPE Composites and Their Properties ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2005-2006 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Phil thesis Title:** 1.Charaterization of Modified Pulque (*Agave Atroverance*) Fibers ***Content of research***: M. Phil thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Philosophy(M.Phil)with specialty in the field of Polymer Science
Researching year: 2006-2007 **Place:** Islamic University, Kushtia 7003, Bangladesh	***M. Phil thesis*** 1. Improvement of Interfacial Properties of Natural Fibre *Agave cantala*-Polyester Bio-Composites by Various Fibre Surface Treatment **Content of research**: Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2006-2007 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Patentability of Modified Grafted Pine apple Leaf fibres- Epoxy Composites and Their Properties ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2007-2008 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Surface Modification of Natural Fibers and Their Performance in Polyester Composites ***Content of research***: M. Phil thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Philosophy(M. Phil) with specialty in the field of Polymer Science 2. **Characterization Modified Pulque (*Agave atroverance L.)* Fibers** ***Content of research****:* Project research work by the financial support of University Grants Commission, Dhaka, Bangladesh in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science *Ref. No. 016/UGC/UC/Chemistry2005-2006/7373; dated on 27/08/2007*
Researching year: 2009-2010 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Surface Morphology of Modified *Agave cantala L*. (Dakatia) Leaf Fibres 2. Mechanical Properties of Acetylated Vinyl Monomer Grafted *Agave atroverance* L. Fibres ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science

Researching year: 2010-2011 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Antimicrobial Activity of Grafted Shrimp Chitosan Films 2.Thermal and Mechanical Properties of Shrimp Chitosan Sheet and Their Antimicrobial Activity ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2011-2012 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Isolation and Characterization of Nano-cellulose from *Agave cantala* fibers ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2012-2013 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Isolation and Characterization of Nano-cellulose from *Agave Atroverance* fibers 2. Comparative study of Nano cellulose from Bast fibers and Tradition Cotton ***Content of research****:* Master thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2012-2013 **Place:** Islamic University, Kushtia 7003, Bangladesh	**Ph.D. Thesis Title:** 1. Surface Properties of the Composites of Chitosan extracted Shrimp Shell –Synthetic Polymers 2. Surface Properties of Acetylated Pulque Fibers and Their Mechanical Behavior Study ***Content of research****:* Ph. D. thesis work in the Department of Applied Chemistry and Chemical Engineering in fulfilment of the requirements for the degree of Doctor of Philosophy with specialty in the field of Polymer Science
Researching year: 2013-2014 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Preparation and Characterization of Biodegradable Nano-composites from Banana Tree rachis Fibers with Shrimp Shell Chitosan 2. Preparation and Characterization of Biodegradable Nano-composites from Banana Tree rachis Fibers with Poly(lactic acid) ***Content of research****:* Master thesis work in the Department of Applied Chemistry and Chemical engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science
Researching year: 2014-2015 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc. Thesis Title:** 1. Preparation and Characterization of Nano-composites from Okra fibers-Clay and Their wastewater Purification 2. Comparative Study of Shrimp Shell Chitosan-Banana Rachis –Clay nano Filter for Textiles Industries wastewater Purification ***Content of research:*** Master of Science. thesis work in the Department of Applied Chemistry and Chemical Engineering in fulfillment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science

Researching year: 2014-2015 **Place:** Islamic University, Kushtia 7003, Bangladesh	***MoST Project Title:*** 3. Production of Bio-Plastics from Bio-renewable Okra (*Abelmuchus esculentusts* L.) Fibers of Bangladesh ***Content of research:*** Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 3*9.009.002.01.00.053.2014-2015/EAS-314; dated on 15/02/2015
Researching year: 2015-2016 **Place:** Islamic University, Kushtia 7003, Bangladesh	***Title:*** 1. Removal of Heavy Metal from Waste Water By Nano-cellulose Chitosan Nano-composite 2. Removal of Heavy Metal, Dye and Salinity from Industrial Waste Water by Banana Rachis CNC-Clay Composite ***Content of research****:* Master thesis work in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science ***MoST Project Title:*** 3. Characterization and Preparation of Biodegradable Nano-composites from Banana tree Rachis Fibers ***Content of research:*** Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 39.009.002.01.00.057.2015-2016/EAS-333/1262; dated on 08/12/2015*
Researching year: 2016-2017 **Place:** Islamic University, Kushtia 7003, Bangladesh	***M. Sc. Thesis Title:*** 1. Purification of Waste Water by Modified Bone-Char and Chitosan Nano filter 2. Removal of Heavy Metal from Industrial waste water by activated Charcoal-Banana rachis nano-composites *Content of research:* Master thesis work in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science *MoST Project Title:* 3. Preparation of Shrimp Shell Chitosan-Clay Nanocomposites and Their Applications for Dyeing Industries wastewater effluents Purification *Content of research:* Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 39.00.0000.09.02.69.2016-2017/EAS-311/325; dated on 15/01/2017*

Researching year: 2016-2017 **Place:** Islamic University, Kushtia 7003, Bangladesh	**University Grants Commission** **Project Title** 4. Bio-plastic and Bio-composites from Renewable Resources from Bangladesh ***Content of research****:* Project research work by the financial support of University Grants Commission, Dhaka, Bangladesh in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science *Ref No. 6(77) UGC/Sci. & Tech./Engineering-15/2016/7501; dated on 13.09.2017*
Researching year: 2017-2018 **Place:** Islamic University, Kushtia 7003, Bangladesh	**M. Sc Thesis Title:** 1.Removal of heavy metal, dye and salinity from industrial wastewaters using cellulose nano crystal-bone char-graphene oxide (CNC-BC-GO) tri blends nano-filter 2.Graphene oxide-Banana rachis cellulose micro crystal (GO-CMC) composite functionalized poly(vinylidene fluoride) (PVDF) membrane with improved antifouling performance in wastewater treatment: Behavior and mechanism ***Content of research****:* Master thesis work in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science ***MoST Project Title:*** 3. Fabrication of Nano-Filter by Banana Rachis Nano-Cellulose and Clay Composites for Industrial Wastewater Purification ***Content of research:*** Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 39.00.0000.09.06.79.2017/EAS-359/363; dated on 06/11/2017*
Researching year: 2018-2019 **Place:** Islamic University, Kushtia 7003, Bangladesh	***MoST Project Title:*** 1. Industrial Wastewater Purification by Fabricated Banana Rachis Nano-Cellulose and Bone-Char Composites Filter ***Content of research:*** Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 39.00.0000.009.14.006.19/EAS-13/436; dated on 16/01/2019*
Researching year: 2019-2020 **Place:** Islamic University, Kushtia 7003, Bangladesh	***MoST Project Title:*** 1. Fabrication of Nano-Filter by Cellulose Nano-Crystal from Agricultural bio-Based Residues and Chitosan Composites for Industrial Wastewater Purification **(Submitted for Allocation)**

Researching year: 2019-2020 **Place:** Islamic University, Kushtia 7003, Bangladesh	***MoST Project Title:*** 3. Fabrication of Nano-Filter by Cellulose Nano-Crystal from Agricultural bio-Based Residues and Chitosan Composites for Industrial Wastewater Purification ***Content of research:*** Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 39.00.0000.009.06.024.19/EAS-13/439-455; dated on 12/01/2020*
Researching year: 2020-2021 **Place:** Islamic University, Kushtia 7003, Bangladesh	***MoST Project Title:*** 1. Industrial Waste Water Purification by Fabricated Cellulose nano Crystal-Bone char-Graphene Oxide (CNC-BC-GO) *Tri* blends Nano-filter ***Content of research:*** Capacity Build-up Capacity Institutionalization program Proposal under Special allocation for Science and Technology from Ministry of Science Technology (MoST) Government of people's Republic of Bangladesh *Ref. G.O. 39.00.0000.009.14.011.20/EAS-393/1729; dated on 12/10/2020*
Researching year: 2020-2021 **Place:** Islamic University, Kushtia 7003, Bangladesh	***UGC Project Title:*** Production of multifunctional bionanocomposites from agro-waste biomass for the effective adsorption of hazardous toxicants from industrial wastewater ***Content of research****:* Project research work by the financial support of University Grants Commission, Dhaka, Bangladesh in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science *Ref. No. 141/Academic/IU-27 (Special)/Date: 05/10/2024*
Researching year: 2020-2021 **Place:** Islamic University, Kushtia 7003, Bangladesh	***UGC Project Title:*** Adsorption of heavy metals and dye onto rice husk charcoal and acid modified rice husk charcoal from aqueous solution and their adsorption isothermal behavior ***Content of research****:* Project research work by the financial support of University Grants Commission, Dhaka, Bangladesh in the Department of Applied Chemistry and Chemical Engineering in partial fulfilment of the requirements for the degree of Master of Science with specialty in the field of Polymer Science *Ref. No. 141/Academic/IU-2024/ Date: 17/12/2024*

Undergraduate Project supervised by Dr. M. Maniruzzaman

Undergraduate thesis work in the Department of Applied Chemistry & Chemical Technology in partial fulfilment of the requirements for the degree of Bachelor of Science (B.Sc.) with specialty in the field of Polymer Science

Session: 1996-1997

1. Study of Tea Technology in Bangladesh
2. Chemistry and Technology of Refining of Edible Oils and Essential Oils
3. Chemistry and Technology of Extraction of Coals and Coals Chemicals
4. Chemistry and Technology of Manufacture of Rubbers and Plastics Goods

Session: 1997-1998

5. Study of Leather Technology
6. Comparative Study of Natural Fibre Silk and Jute
7. Comparative Study of Natural Fibre Cotton and Jute

Session: 1998-1999

8. Uses of Gel Permeation Chromatography for Polymer Characterization
9. Role Additives for Rubbers and Plastics Processing

Session: 1999-2000

10. Uses of DLS for Polymer Characterization
11. Role of Additives for Paint Manufacture
12. Manufacture of Resins and Gums

Session: 2000 -2001

13. Application of Emulsion Polymer in Our Daily life
14. Role of Coupling Agents in Composites Processing

Session: 2001 -2002

15. Living Polymerization and Its Future Application
16. Role of Phosphorus Fertilizer in Grow More Food Production

Session: 2002-2003

17. Chemistry and Technology of Green Fibre and Polyethylene Composites
18. Comparative Study of Green Fibre-LDPE and Green fibre-PP Composites

Session: 2003-2004

19. Studies on Biodegradability: A Key Factor of the Environmental Tolerance to Solid Wastes
20. Modification of Wood and their Performance on the Composites
21. Development of Hydrophobic Bio-Fibre Surfaces via Tailored Grafted Architecture
22. Properties Improvement of Polyester Composites Reinforced with Rice Straw
23. Studies on the Grafting onto Natural Fibre with different Types of Vinyl Monomers and Their Properties

Session: 2006-2007

24. Characterization of Some Ligno-Cellulosic Fibers by Scanning Electron Microscope
25. Surface Roughness Study by Atomic Force Microscope (AFM) of Some Chitinous Materials
26. Studies of Attenuated Total-Reflectance -Fourier Transformer Infrared (ATR-FTIR) Analysis of Some Natural Polymers

Session: 2007-2008

27. Surface Behaviour of Some Salts treated Natural Fibers
28. FTIR Studies on Some Bleached Ligno-Cellulosic Fibers
29. Thermogravimetric Analysis of Some Isolated Natural Pure cellulose

Session: 2008-2009

30. Thermal Properties of Some Salt Treated Fibers
31. SEM Studies on Some Double Bleached Ligno-cellulose Fibers
32. Mechanical Properties of Some Acetylated -Double Bleached *Agave cantala* Leaf Fibres
33. FTIR Studies on Some Acetylated- Double Bleached Ligno-Cellulose Fibres

Session: 2009-2010

34. Thermal Properties of Some Salt Treated Baste Fibers
35. SEM Studies on Some $KMnO_4$ Treated Ligno-Cellulosic Fibers
36. Mechanical Properties of Double-Bleached and H_2SO_4 Treated Ligno-Cellulosic Fibers
37. FTIR Studies on Some Nano-Cellulose from Natural Fibres

Session: 2010-2011

38. SEM studies of Nano-cellulose from Beetle Nut fibers
39. Thermal properties on nano cellulose from Beetle Nut fibers
40. FTIR studies of nano cellulose form okra fibers
41. Mechanical properties of $KMnO_4$ treated okra fibres