

Dr. Mohammad Jellur Rahman

Professor

Department of Physics, Bangladesh University of Engineering and Technology,
Dhaka-1000, Bangladesh,

Tel: +88-01-552346458, Web: <http://mjrahman.buet.ac.bd/>

E-mail: mjrahman@phy.buet.ac.bd, mjrahman.phy@gmail.com



EDUCATION

- **Doctor of Philosophy (Ph.D.)** [October 2011–September 2014] -Year 2014
Department of Optoelectronics and Nanostructure Science,
Graduate School of Science and Technology, Shizuoka University, Shizuoka 422-8529, Japan
Thesis: Study of the Production, Functionalization and Applications of Carbon Nanotubes
Supervisor: Prof. Tetsu Mieno
Research Key Words: Carbon nanotubes, arc discharge, plasma functionalization
MEXT (Monobukagakusho) Scholar
- **Master of Philosophy (M.Phil.)** [October 2007 – April 2011] - Year 2011
Department of Physics, Bangladesh University of Engineering and Technology, Dhaka-1000,
Bangladesh
Thesis: Optical and AC Electrical Properties of Plasma Polymerized o-Methoxyaniline Thin Films
Supervisor: Prof. Md. Abu Hashan Bhuiyan
Research Key Words: Plasma polymer, thin films, optical and electrical properties
ICT Fellow, GOB
Result: GPA 3.416 (out of 4)
- **Master of Science (M.S.)** [July 2001 – June 2002; held in 2005] -Year 2002
Department of Physics, University of Dhaka, Dhaka-1000, Bangladesh
Thesis: Synthesis of Pure and Cerium Doped Barium Titanate and Study of their Different Electrical
and Dielectric Properties
Supervisor: Prof. Shamima Karim Choudhury
STRC Fellow, University of Dhaka
Result: First Class Thirteenth. Marks: 67.83%
- **Bachelor of Science (B.Sc.)** with 4 years Honours [July 1998 – June 2001; held in 2004] – Year
2001
Department of Physics, University of Dhaka, Dhaka-1000, Bangladesh
Specialized subjects: Solid State Physics, Computational Physics, Reactor Physics
Result: First class tenth, Marks obtained: 61.37%
- **Higher Secondary Certificate (H.S.C.)** [December 1994 – October 1996] – Year 1996
Science group, Dhaka board, Notre-Dame College, Dhaka-1000, Bangladesh
Result: First Division, 70.6%
- **Secondary School Certificate (S.S.C.)** [January 1989-August 1994] – Year 1994
Science group, Dhaka board, Vibekananda High School, Tangail-1900, Bangladesh
Result: First Division, 80.6%

PROFESSIONAL CARRIER

Professor [01 March, 2021 – to date]

Department of Physics, Bangladesh University of Engineering and Technology (BUET)
Dhaka -1000, Bangladesh

- Lecturing courses and conducting laboratory classes in undergraduate and postgraduate level.
- As the member of board of undergraduate and postgraduate studies, participate in discussion meetings for review and suggest modification for improvement of the courses of the undergraduate and graduate level.
- Assisting newly enrolled postgraduate students in their research work in the Department of Physics, BUET.
- Supervising the graduate students in the Department of Physics, BUET.

Associate Professor [March 12, 2018 – 28 February, 2021]

Department of Physics, Bangladesh University of Engineering and Technology (BUET)
Dhaka -1000, Bangladesh

- Lecturing courses and conducting laboratory classes in undergraduate and postgraduate level.
- As the member of board of undergraduate and postgraduate studies, participate in discussion meetings for review and suggest modification for improvement of the courses of the undergraduate and graduate level.
- Assisting newly enrolled postgraduate students in their research work in the Department of Physics, BUET.
- Supervising the graduate students in the Department of Physics, BUET.

Assistant Professor [February 24, 2015 – March 11, 2018]

Department of Physics, Bangladesh University of Engineering and Technology (BUET), Dhaka -1000, Bangladesh

- Lecturing courses and conducting laboratory classes in undergraduate and graduate level.
- As the member of board of undergraduate and postgraduate studies, participate in discussion meetings for review and suggest modification for improvement of the courses of the undergraduate and graduate level.
- Assisting newly enrolled postgraduate students in their research work in the Department of Physics, BUET.
- Supervising the graduate students in the Department of Physics, BUET.

Lecturer [June 27, 2007 – February 24, 2015]

Department of Physics, Bangladesh University of Engineering and Technology (BUET)
Dhaka -1000, Bangladesh

- Lectured courses and conducted laboratory classes in undergraduate level
- Completed Master of Philosophy (MPhil) as a part time student

Assistant Director [December 3, 2006 – June, 26 2007]

Bangladesh Bank, Dhaka-1000, Bangladesh

- Central Banking
- Monetary policy making

RESEARCH EXPERIENCE

Department of Physics, BUET, Dhaka, Bangladesh

Professor

Plasma Polymers and Polymer Nanocomposites

November 2014 – Till to date

Shizuoka University, Japan

Graduate Researcher

Study of the Production, Functionalization and Applications of Carbon Nanotubes

October 2011 - September 2014

Department of Physics, BUET, Dhaka, Bangladesh

Graduate Researcher

Study of optical, structural and electrical properties of plasma polymerized thin films

November 2007 - April 2011

Semiconductor Technology Research Centre, University of Dhaka, Dhaka, Bangladesh

Research Fellow

Synthesis of Pure and Cerium Doped Barium Titanate and Study of their Different Electrical and Dielectric Properties

December 2005- November 2006

Department of Physics, DU

Graduate Researcher

Synthesis of Pure and Cerium Doped Barium Titanate and Study of their Different Electrical and Dielectric Properties

December 2004- November 2005

STUDENT SUPERVISION

A. Doctor of Philosophy (Ph.D.) Thesis

1. **Structural, Optical and Electrical Properties of Thin Films of N-Benzylaniline Synthesized by Plasma Polymerization Method**, Rani Nasrin, **Student no:** 1014144005P, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 26 September, 2023.
2. **Structural, Optical and AC Electrical Properties of Different Thin Films of Synthesized by Plasma Polymerization Method** (Tentative Title), Masud Reza, **Student no:** 0417144013, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing
3. **Structural, Optical and DC Electrical Properties of Plasma Polymerized Composite Thin Films** (Tentative Title), Md. Ahaduzzaman Deraz, **Student no:** 0417144005, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing
4. **Investigation of Structural, Optical and Electrical Properties of Inorganic Thin Films Deposited by Chemical Bath Deposition Technique** (Tentative Title), Tanvir Ahmmed, **Student no:** 1017144003, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing.
5. **Synthesis of plasma modified magnetic biochar derived from different biomass sources and its application in industrial wastewater treatment** (Tentative Title), Md. Hedayet Ullah, **Student no:** 0421144002, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing.

B. Master of Philosophy (M. Phil.)

1. **Synthesis of ZnO Nanorods by Microwave Irradiation of Precursor Solution and Study of their Process Parameters**, Munira Sultana, **Student no:** 0417143010, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 30 June, 2021.
2. **Study of Optical and Electrical Properties of Plasma Polymerized 1,2-Diaminocyclohexane Thin Films Synthesized by AC and RF Power Source**, Md. Mahmud Hasan, **Student no:** 0416143006, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 12 June, 2021.
3. **Preparation and Optical Characterization of Zinc Selenide/Plasma Polymerized o-Methoxyaniline Hybrid Thin Films**, Farzana Yasmin, **Student no:** 1017143004, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing.

C. Master of Science (M.Sc.)

1. **Investigation of Structural, Optical and Electrical Properties of Zinc Selenide Thin Films Deposited by Chemical Bath Deposition Technique**, M.Sc. Thesis, Tanvir Ahmmad, **Student no:** 1014142514, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, January 2017.
2. **Investigation of Structural, Mechanical, and Electrical Properties of Rubber Nanocomposites of Carbon Nanotubes**, M.Sc. Thesis, Md. Forhad Hossain, **Student no:** 1015142503, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, September 2017.
3. **Investigation of Structural, Mechanical, and Electrical Properties of Cellulose Nanocomposites of Carbon Nanotubes**, M.Sc. Thesis, Urena Mostafa, **Student no:** 1015142503F, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 27 May, 2018.
4. **Investigation of the Electrical, Thermal and Mechanical Properties of Graphene Reinforced Low Density Polyethylene Nanocomposite**, M.Sc. Thesis, Md. Mehedi Hasan Sohag, **Student no:** 0417142523F, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 11 December, 2019.
5. **Functionalization of Carbon Nanotubes using Oxygen Plasma to Prepare Jute Nanocomposites**, MSc Thesis, Md. Johurul Islam, **Student no:** 1017142504F, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 17 December, 2019.
6. **Synthesis and Characterization of Plasma Polymerized 3,4-Ethylenedioxythiophene Thin Films**, M.Sc. Thesis, Md. Juel Sarder, **Student no:** 1018142512, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 23 April, 2022.
7. **Synthesis and Characterization of Plasma Polymerized 3,4-Ethylenedioxythiophene Thin Films**, M.Sc. Thesis, Md. Saddam Sheikh, **Student no:** 0419142516, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, 28 May, 2023.
8. **Preparation and Characterization of Carbon Nanotube and Bamboo Fiber Reinforced Polylactide Nanocomposites**, M.Sc. Thesis, K. M. Yamin Arafath, **Student no:** 0419142521, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing.

9. **Synthesis and Characterization of Carbon Nanotubes Reinforced Fish Gelatin Nanocomposite Sheet for Pressure Sensors**, M.Sc. Thesis, Salvin Mustakim, **Student no:** 0421142503, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, Ongoing.

CO-SUPERVISION

1. **Study of Structural and Dielectric Properties of Pure and Cerium Doped Barium Titanate**, MS Thesis, Sabina Yasmin, Student no: 2512, Session: 2004-2005, Department of Physics, University of Dhaka, Dhaka, Bangladesh, November, 2008.
2. **Study of Structural and Frequency Dependent Dielectric Properties of Pure and Cerium Doped Barium Titanate**, MS Thesis, Md. Sahriaz Hossain Khan, Student no: 2812, Session: 2007-08, Department of Physics, University of Dhaka, Dhaka, Bangladesh, March 2009.
3. **Structural, Electrical and Dielectric Properties of Pure and Manganese Dioxide (MnO₂) Doped Barium Titanate (BaTiO₃) Ceramics**, MS Thesis, Rafiqul Islam, Student no: 3704, Session: 2006-07, Department of Physics, University of Dhaka, Dhaka, Bangladesh, June 2010.
4. **Alternating Current Electrical Properties of Cerium Doped Barium Titanate at Intermediate Temperature (-25 °C to 30 °C)**, MS Thesis, Afia Iffat, Student no: 3120, Session: 2009-10, Department of Physics, University of Dhaka, Dhaka, Bangladesh, November 2012.
5. **Synthesis and study of Structural and Electrical properties of Cerium (Ce) doped, Manganese (Mn) doped and Ce-Mn co-doped Barium Titanate ceramics at room temperature**, MS Thesis, Myeesha Mostafa, Student no: 4413, Session: 2013-14, Department of Physics, University of Dhaka, Dhaka, Bangladesh, March 2016.
6. **Synthesis, Structural and Electrical properties of undoped, doped (Ce & Mn) and co-doped (Ce-Mn) Barium Titanate ceramics at different temperatures**, Tahmida Raheen Iqbal, Student no: 5023, Session: 2014-15, Department of Physics, University of Dhaka, Dhaka, Bangladesh, April 2017.
7. **Fabrication and Characterization of Multiwalled Carbon Nanotube Reinforced Starch Biocomposites**, Nafisa Alam, Student no: 1924, Session: 2015-16, Department of Physics, University of Dhaka, Dhaka, Bangladesh, February 2018.
8. **Fabrication and Characterization of Multiwalled Carbon Nanotube Reinforced Banana Tree Fiber Nanocomposites**, Mahjabin Binte Mostafiz, Student no: 2323, Session: 2017-18, Department of Physics, University of Dhaka, Dhaka, Bangladesh, February 2020.
9. **Preparation and characterization of Composite Boards and Sheets from Solid Leather Waste with Plant Fibers- a Waste Utilization Effort**, Md. Tauhiduzzaman, Student no: LPE-ZH-5509, Exam roll: 81906, Reg: 2015-018-193, Session: 2019-20, M.Sc. Engineering in Leather Products Engineering, Institute of Lather Technology, University of Dhaka, Dhaka, Bangladesh, July 2022.
10. **MS Thesis**, Abdullah Al Mahmud, Registration no: 2017813675, Session: 2021-22, Department of Physics, University of Dhaka, Dhaka, Bangladesh, Ongoing.

FUNDING

1. *Extraction of Gelatin from Fish Scale and Synthesis of Ternary Nanocomposite for Advanced Technology*, Sanction order: 39.00.0000.009.99.023.23-363; 18/12/2023, Project ID # SRG-236629 (Tk. 250000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Ongoing).

2. *Synthesis of Plasma Modified Magnetic Biochar Derived from water hyacinth and Its Application in Industrial Wastewater Treatment*, Grant Number: Physical Science-31-2022, Date: 01-11-2023, (Tk. 30000/-) University Grants Commission, Bangladesh.
3. *Biopolymer Extracted Nanocelluloses and Smart Fibers for Future Technology*, Sanction order: 39.00.0000.009.99.024.22-901; 14/11/2022, Project ID # SRG-226630 (Tk. 30000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Completed).
4. *Biopolymer Extracted Nanocelluloses and Smart Fibers for Future Technology*, Sanction order: 39.00.0000.009.14.019.21-Phy's-608-1355; 15/12/2021, (Tk. 30000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Completed).
5. *Biopolymer Extracted Nanocelluloses and Smart Fibers for Future Technology*, Sanction order: 39.00.0000.009.14.011.20-Phy's-542/1878; 10/12/2020, (Tk. 50000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Completed).
6. *Carbon Nanotube Reinforced Nanocomposites of Natural Polymers for Biofriendly Applications*, Sanction order: 39.00.0000.09.06.024.19/Phy's-529-545; 12/01/2020, (Tk. 40000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Completed Successfully).
7. *Carbon Nanotube Reinforced Nanocomposites of Natural Polymers for Biofriendly Applications*, Sanction order: 39.00.0000.09.14.009.2019/PHY's-35/505; 16/01/2019, (Tk. 50000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Completed).
8. *Carbon Nanotube Reinforced Nanocomposites of Natural Polymers for Biofriendly Applications*, Sanction order: 39.00.0000.09.06.79.2017/PHY's-443/447, Date: 06.11.2017, (Tk. 50000/-), Ministry of Science and Technology, Government of the People's Republic of Bangladesh, Bangladesh Secretariat, Dhaka – 1000 (Completed).

FIELD OF INTEREST

- ◆ Carbon nanotubes and nanomaterials.
- ◆ Plasma modification of carbon nanomaterials.
- ◆ Study of optical, structural and electrical properties of plasma polymerized thin films.
- ◆ Study of structural and electrical properties of ceramics materials.
- ◆ Studies of crystallization, phase transition, surface morphology, mechanical micromechanical, thermal, electrical and other properties of soft condensed matters (polymeric and organic substances).

EXPERIMENTAL TECHNIQUES AND INSTRUMENTS USED

- ◆ Arc discharge method to produce carbon nanotubes, radio frequency plasma surface modification of the carbon nanotubes, and application of the carbon nanotubes especially as electro-thermal element.
- ◆ Characterization of carbon nanotubes using transmission electron microscope, scanning electron microscope, Raman spectroscopy, X-ray photoelectron spectroscopy, Time of flight mass spectroscopy, Thermogravimetric analysis, FT-IR and UV-visible spectroscopies, and optical microscopy.
- ◆ Preparation of ceramics materials using solid state reaction method.
- ◆ Preparation of organic thin films using capacitively coupled plasma polymerization technique.
- ◆ Preparation of polymer composites and blends by compression molding, extrusion molding and injection molding method.

- ◆ Differential Thermal Analyzer (DTA), Thermogravimetric Analyzer (TGA).
- ◆ Study of crystal structure by X-ray Diffraction (XRD) method.
- ◆ Optical Microscopy, Scanning electron microscopy.
- ◆ AC and DC electric measurements using impedance analyzer and electrometer respectively.
- ◆ UV-visible spectroscopy.
- ◆ FTIR Spectroscopy using IR spectrophotometer.
- ◆ Microhardness measurements using a micro-indentation tester.
- ◆ Mechanical testing using universal testing machine.

PUBLICATIONS

Manuscripts under Preparation:

1. Md. Mahmud Hasan, Mohammad Jellur Rahman, Md. Azizul Hoque and A. H. Bhuiyan, Smooth and Transparent Plasma Polymerized 1,2-Diaminocyclohexane Thin Films for Optoelectronic Applications, prepared to submit in a peer-reviewed Journal.

Submitted Manuscripts:

1. Sadia Afrin Mimu, Md. Abdul Mottalib, Mohammad Jellur Raman and Md. Abul Kalam, Multi-functional Nanocomposite Films from Bio-inspired Gelatin Ambient with Safely Functionalized Multi-walled Carbon Nanotubes, Submitted
2. Md Abul Kalam, Salvin Mustakim, Mohammad Jellur Rahman, Md. Tushar Uddin, Md. Ashraf Alam, Mohammad Mahabubur Rahman, Bio-degradable Smart Nanocomposite Fiber from Moringa Oleifera Fiber Reinforced with Safely Functionalized Carbon Nanotubes, *Journal of Composite Materials*, 2023 (Under Revision).
3. M. M. Rahman, M. A. Momin, M. J. Rahman, Effect of Applied Pressure on Structural, Electronic and Optical Properties of Indium Doped SnO₂ Quantum Dot: a DFT based study, Submitted to *Physica Status Solidi B: Basic Solid State Physics*, 2023.
4. Salvin Mustakim, Md. Mehedi Hasan Sohag, Md. Abul Kalam and Mohammad Jellur Rahman, Enhanced strength Conducting Nanocomposite of Low-Density Polyethylene with Controlled Loading of Reduced Graphene Oxide, *Journal of Materials Engineering and Performance*, (Under Revision).
5. Farzana Yasmin, Md. Saddam Sheikh, A. H. Bhuiyan, Mohammad Jellur Rahman, "A Comprehensive Study on Structural and Optical Properties of Hybrid Thin Films Fabricated through Chemical Bath Deposition and Dynamic Plasma Techniques," *Arabian Journal of Chemistry*, 2023. (Under review)
- 6.

Published Manuscripts:

2024

1. Salvin Mustakim, Md Abul Kalam, Tetsu Mieno, Mohammad Jellur Rahman, Fish Gelatin Reinforced with Carbon Nanotubes and ZnO Nanorods for Wearable Smart Technologies, *ACS Applied Nano Materials*, 7 (5), **2024**, 5202-5213. DOI: <https://doi.org/10.1021/acsnm.3c05830> (IF: 6.03). Published on February 27, 2024
2. Rani Nasrin, Mohammad Jellur Rahman, and A. H. Bhuiyan, Schottky Conduction Mechanism in Plasma Polymerized N-benzylaniline Thin Films, *Thin Solid Films*, 792 (2024) 140251. DOI: <https://doi.org/10.1016/j.tsf.2024.140251> (IF: 2.358). Published on 5 February 2024

2023

3. Md. Tawhiduzzaman, Md. Abdul Mottalib, Mohammad Jellur Raman and Md. Abul Kalam, Preparation and Characterization of Composite Sheets from Solid Leather Waste with Plant Fibers – A Waste Utilization Effort, *Clean Technologies and Environmental Policy*, 2023, Online version DOI: <https://doi.org/10.1007/s10098-023-02642-9> (IF: 4.7). Published on 14 November 2023
4. Md. Forhad Hossain, Md. Abdul Awal, Md. Johurul Islam, Mist Toma Khatun, Suravi Islam, Mohammad Jellur Rahman, Synthesis and Characterization of Structural, Magnetic and Electrical Properties of Mn Substituted Co-Zn Ferrite, *Journal of Magnetism and Magnetic Materials*, Article ID: 171440 (7 pages), 2023. DOI: <https://doi.org/10.1016/j.jmmm.2023.171440> (IF: 3.096) Published on 28 October 2023
5. Md. Saddam Sheikh, A. H. Bhuiyan, and Mohammad Jellur Rahman, Direct current conduction mechanism in the methyl acrylate–vinyl acetate composite thin films, *Scientific Reports*, 13, Article number: 18337 (11 pages) (2023). DOI: <https://doi.org/10.1038/s41598-023-44413-y> (IF: 4.6, 2022) Published: 26 October 2023
6. Md. Saddam Sheikh, Md. Juel Sarder, A. H. Bhuiyan, and Mohammad Jellur Rahman, Structural and Optical Behaviours of Methacrylate-Vinyl Acetate Composite Thin Films Synthesized under Dynamic Low-Pressure Plasma, *Heliyon*, 2023, Volume 9, Issue 8, August 2023, Article ID: e18524 (13 pages), DOI: <https://doi.org/10.1016/j.heliyon.2023.e18524> (IF: 4.0, 2023) Published on 20 July 2023

2022

7. Md. Juel Sarder, Md. Mahmud Hasan, A. H. Bhuiyan, and Mohammad Jellur Rahman, Thickness dependence of structural and optical behavior of plasma polymerized 3,4-ethylenedioxythiophene thin films, *Optical Materials*, 134, Article ID:113170, 2022. DOI: <https://doi.org/10.1016/j.optmat.2022.113170>. (IF: 3.754, 2021), Published: 30 October 2022
8. Mohammad Jellur Rahman, Md. Forhad Hossain, Md. Johurul Islam, Tetsu Mieno, M. N. Chowdhury, Carbon Nanotube Reinforced Natural Rubber Nanocomposite as a Stretchable Electronic Material, *Journal of Materials Engineering and Performance*, 32, 5338–5345 (2023). DOI: <https://doi.org/10.1007/s11665-022-07488-8> (IF: 2.047 2021) Published: 12 October 2022
9. M. Sultana, Mohammad Jellur Rahman, M. S. Bashar, Size Distribution of Hexagonal Prismatic Shaped ZnO Nanorods Synthesized by Microwave Assisted Irradiation of Precursors, *Journal of Electronic Materials*, 2022, 51, 2682–2691. DOI: <https://doi.org/10.1007/s11664-022-09496-9>. (IF: 1.938, 2020) Published: 10 March 2022
10. P. Mojumder, M. J. Rahman, M. A. H. Bhuiyan, and S. Choudhury, Structural and Thickness Dependent Optical Parameters of Plasma Polymerized 2-Vinylpyridine Thin Films, *Bulletin of Materials Science*, (2022) 45:27 (9 pages). DOI: <https://doi.org/10.1007/s12034-021-02593-1>. IF: 1.783 (2020)
11. Rani Nasrin, Mohammad Jellur Rahman, A. T. M. K. Jamil and A. H. Bhuiyan, Thickness Dependent Thermal and Optical Properties of Plasma Polymerized N-benzylaniline Thin Films, *Molecular Crystals and Liquid Crystals*, 2022, 738(1), 50-66. DOI: <https://doi.org/10.1080/15421406.2021.2017103>. IF: 0.896 (2020)

2021

12. Tanvir Ahmmed, Farzana Yasmin, A. H. Bhuiyan, Mohammad Jellur Rahman, “Effect of Deposition Duration and Concentration of Chemical Bath in the Formation of Zinc Selenide Thin Films”, *Bangladesh Journal of Physics*, Vol. 28, pp. 11-25, 2021.
13. Md. Johurul Islam, Kamaruzzaman, Mohammad Jellur Rahman, M. M. Alam. Carbon Nanotube Reinforced Natural Fibers for Biodegradable Nanocomposites. *American Journal of Polymer Science and Technology*. Vol. 7, No. 4, 2021, pp. 73-79. DOI: <https://doi.org/10.11648/j.ajpst.20210704.14> Published: Dec. 24, 2021
14. Md. Johurul Islam, M. Jhahan, N. I. Khan, Toma Khatun, Mohammad Jellur Rahman, Md. Aminul Islam, Abdullah Al-Momin, Md. Monjarul Alam, Influence of Mg Substitution on Structural, Magnetic

and Electrical Properties of Zn-Cu Ferrites, *Journal of Materials Science: Materials in Electronics*, 2021, 32, 26173–26180. DOI: <https://doi.org/10.1007/s10854-021-06617-8>. **IF: 2.478** (2020)

15. Md. Abdul Momin, Md. Aminul Islam, Meherun Nesa, Mehnaz Sharmin, Mohammad Jellur Rahman, A. H. Bhuiyan, Effect of M (Ni, Cu, Zn) doping on the structural, electronic, optical, and thermal properties of CdI₂: DFT based theoretical studies, *AIP Advances*, 2021, 11, Article ID: 055203 (10 pages); <https://doi.org/10.1063/5.0050145>. **IF: 1.62** (2020)
16. Mahajabin Binte Mustafiz, Kazi Haniun Maria, Mohammad Jellur Rahman, Tetsu Mieno, Bio-composites from Banana Tree Fibers Ambient with Multi-Walled Carbon Nanotubes: Manufacturing and Properties, *International Nano Letters*, 2021, 11(2), 149-158. DOI: <https://doi.org/10.1007/s40089-021-00331-3>.
17. Rani Nasrin, Mohammad Jellur Rahman, A. T. M. K. Jamil, Khandker S. Hossain, and A. H. Bhuiyan, Thickness Dependent Structural and Surface Properties of Plasma Polymerized N-benzylaniline Thin Films, *Applied Physics A*, 2021, 127, Article ID: 240 (12 Pages). DOI: <https://doi.org/10.1007/s00339-021-04326-x>. **IF: 2.50** (2020)
18. Tahmida Iqbal, Myeasha Mostafa, Md Saif Ishtiaque, Mohammad Jellur Rahman, Shamima Choudhury, Effect of Ce-Mn co-doping on the Structural, Morphological and Electrical Properties of the BaTiO₃ Based Ceramics, *Biointerface Research in Applied Chemistry*, 11(4), 2021, 12215 – 12226. DOI: <https://doi.org/10.33263/BRIAC114.1221512226>. **IF: 0.873** (2020)

2020

19. N. Alam, K. H. Maria, M. J. Rahman, P. Sultana, T. Mieno, A wet chemical synthesis and characterization of mwcnt-starch biocomposites, *Journal of Bangladesh Academy of Sciences*, 44(1), 43-52, 2020. DOI: <https://doi.org/10.3329/jbas.v44i1.48562>.
20. A. Nahar, M. A. Bhuiyan, M. J. Rahman, S. Choudhury, Enhanced Dielectric properties of Bismuth Doped Barium Titanate Ceramics with their Structural and Compositional Studies, *Biointerface Research in Applied Chemistry*, 11(3), 9862 - 9870, 2021. DOI: 10.33263/BRIAC113.98629870. **IF: 0.873** (2020)
21. Urena Mostafa, Mohammad Jellur Rahman, Tetsu Mieno, Md. Abu Hashan Bhuiyan, Carbon nanotube-incorporated cellulose nanocomposite sheet for flexible technology, *Bulletin of Materials Science*, 2020, 43, 142 (1-10). DOI: <https://doi.org/10.1007/s12034-020-02145-z>. **IF: 1.392** (2020) Published: 16 June 2020
22. M. J. Islam, M. J. Rahman, T. Mieno, Safely functionalized carbon nanotube-coated jute fibers for advanced technology, *Advanced Composites and Hybrid Materials*, 2020, 3, 285-293. DOI: <https://doi.org/10.1007/s42114-020-00160-6>. **IF: 11.806** (2021) Published: 08 June 2020
23. M. A. Momin, M. J. Rahman, and T. Mieno, Foot pressure sensor system made from MWCNT coated cotton fibers to monitor human activities, *Surface and Coatings Technology*, 394, 2020, Article ID: 125749. DOI: <https://doi.org/10.1016/j.surfcoat.2020.125749>. **IF: 3.784** (2020)

2019

24. M. J. Rahman, A. Iffat, M. A. H. Bhuiyan, S. Choudhury, Alternating Current Electrical Properties of Cerium Doped Barium Titanate below the Room Temperature, *Bangladesh Journal of Physics*, 25, 55-64, 2019.
25. M. A. Momin, M. J. Rahman, and T. Mieno, Development of Compact Load Cell Using Multiwall Carbon Nanotube/Cotton Composites and Its Application to Human Health and Activity Monitoring, *Journal of Nanomaterials*, 2019, Article ID 7658437, 15 pages (2019). DOI: <https://doi.org/10.1155/2019/7658437>. **IF: 1.98** (2020)
26. M. Mostafa, M. J. Rahman, Shamima Choudhury, Enhanced Dielectric Properties of BaTiO₃ Ceramics with Cerium Doping, Manganese Doping and Ce-Mn Co-doping, *Science and Engineering of Composite Materials*, 26(1), 62-69, (2019). DOI: <https://doi.org/10.1515/secm-2017-0177>. **IF: 1.56** (2020)
27. S. Alam, M. F. Mina, M. J. Rahman, M. A. Gafur, K. H. Maria, T. Mieno, A. K. M. M. Alam, M. D. H. Beg, Effects of Micro-Size Graphite-Flake to Reinforce the Performances of Poly (Lactic Acid)

Thermoplastic Biocomposites, *Polymer and Polymer Composites*, 27(1), 20–32, 2019. DOI: <https://doi.org/10.1177/0967391118811218>. **IF: 1.74** (2020)

2018

28. M. J. Rahman and A. H. Bhuiyan, AC Electrical Properties of Plasma Polymerized o-Methoxyaniline Thin Films, *Polymer Science: Series A*, 60(3) 2018, 1-8. DOI: 10.1134/S0965545X18030148. **IF: 0.968** (2020)

2017

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1. M. J. Rahman and T. Mieno, Safer Production of Water Dispersible Carbon Nanotubes and Nanotube/Cotton Composite Materials, In: Carbon Nanotubes - Current Progress of their Polymer Composites, Eds. M. R. Berber and I. H. Hafez, InTechOpen, Croatia, Chapter 12, 323-343 (2016). DOI: 10.5772/62880
2. M. F. Mina, T. A. Mobarak and M. J. Rahman, Physics Part I and II, Text Books for Higher Secondary Education, Updated Version of the Book Approved by NCTB, Unique Science Book, Dhaka, Bangladesh (2022).
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Presentations at Conferences, Seminars and Symposiums

1. Salvin Mustakim, Md Abul Kalam, Tetsu Mieno, and Mohammad Jellur Rahman, “Structural, Thermal, and Mechanical Study of Gelatin Based Ternary Nanocomposite.” *1st National Conference on Advances in Science and Technology*, NCAST-2023. Organized by Faculty of Science, BUET, 7 - 8 December, 2023.
2. Salvin Mustakim, Md Abul Kalam, Tetsu Mieno, and Mohammad Jellur Rahman, “Structural Investigation of 1-D nanofillers Incorporated Polymer Nanocomposite.” *8th Conference of Bangladesh Crystallographic Association (BCA)*, 24 – 25 November, 2023.
3. Farzana Yasmin, Md. Saddam Sheikh, A. H. Bhuiyan, Mohammad Jellur Rahman; Unveiling the Optical Properties of Zinc Selenide/Plasma Polymerized o-Methoxyaniline Hybrid Thin Film, *1st National Conference on Advances in Sciences and Technology* (NCAST-2023), *Faculty of Science*, BUET, 7- 8 December, 2023, (Abstract-Phy-pp-11), p-232.
4. Farzana Yasmin, Md. Saddam Sheikh, A. H. Bhuiyan, Mohammad Jellur Rahman; Elementary Depiction of Zinc Selenide/Plasma Polymerized o-Methoxyaniline Hybrid Thin Films, 8th Conference of BCA-2023, *Bangladesh Crystallographic Association*, 23-24 November, 2023, (Abstract-Phy-pp-24), p-104.

5. Md Abul Kalam, Salvin Mustakim, Mohammad Jellur Rahman and Md Tushar Uddin, Bio-Degradable Microelectric Fiber from Moringa Oleifera Fruit Fiber Reinforced with Safely Functionalized Carbon Nanotubes, National Conference on Physics – 2023, 9 – 11 March 2023, Jahangirnagar University, Savar, Dhaka, *Organized by Bangladesh Physical Society*.
6. Farzana Yasmin, Saddam Sheikh, A. H. Bhuiyan, and Mohammad Jellur Rahman, Optical Characterization of Zinc Selenide/Plasma Polymerized o-Methoxyaniline Hybrid Thin Films, 1st International Science Conference for Women-2023, *organized by Dhaka Nanomaterials Group*, 15 - 16 February 2023, Hotel Pan Pacific Sonargaon, Dhaka, Bangladesh
7. Rani Nasrin, Mohammad Jellur Rahman, A. T. M. K. Jamil, A. H. Bhuiyan, Electrical Charge Transport Mechanism in Plasma Polymerized N-benzylaniline Thin Films, 7th Conference of BCA, Organized Conference of Bangladesh Crystallographic Association, Dhaka-1000, Bangladesh, SCSP 08, 8 – 9 December 2022
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9. Md. Saddam Sheikh, A. H. Bhuiyan, and Mohammad Jellur Rahman, Optical Characterization of Plasma Polymerized Methyl Acrylate-Vinyl Acetate Composite Thin Films, 7th Conference of BCA, Organized Conference of Bangladesh Crystallographic Association, Dhaka-1000, Bangladesh, PP 20, 8 – 9 December 2022
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13. Rani Nasrin, Mohammad Jellur Rahman, A. T. M. K. Jamil, A. H. Bhuiyan, “Thickness dependent thermal and optical characteristics of plasma polymerized N-benzylaniline thin films”, National Conference on Physics-2021, Organized by Bangladesh Physical Society, Dhaka-1000, Bangladesh, TS-01, 6-7 August, 2021.
14. Md. Juel Sarder, Mohammad Jellur Rahman, Md. Mahmud Hasan, and A. H. Bhuiyan, “Surface Morphological, Comparative study of power and thickness dependent optical properties of AC plasma polymerized 3,4-Ethylenedioxythiophene thin films”, National Conference on Physics-2021, Organized by Bangladesh Physical Society, Dhaka-1000, Bangladesh, TS-02, 6-7 August, 2021. (Best Oral Presentation)
15. M. Sultana, Mohammad Jellur Rahman, M. S. Bashar, “Facile method for synthesizing ZnO nanorods with controllable size:”, National Conference on Physics-2021, Organized by Bangladesh Physical Society, Dhaka-1000, Bangladesh, PP-27, 6-7 August, 2021.

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20. Mohammad Jellur Rahman, Md. Abdul Momin, Urena Mostafa, Md. Johurul Islam, Tetsu Mieno, Applications of carbon nanotubes on to natural fibers for advanced technology, Invited Talk (IL-K06), International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), 11-13 March 2021, BCSIR, Dhaka-1205, Bangladesh.
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22. M. Sultana, Mohammad Jellur Rahman, M. S. Bashar, "Study of the size distribution of ZnO nanorods synthesized by microwave assisted irradiation of precursor", OP- H02, International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021), 11-13 March, 2021, Bangladesh Council of Scientific and Industrial Research, Dhaka-1205, Bangladesh.
23. Md. Abdul Momin, Mohammad Jellur Rahman, Tetsu Mieno, "Wearable Foot Pressure Sensors from MWCNT Coated Cotton Fibers for Human Activity Monitoring System", 20th Workshop on fine particle plasmas, NIFS, Toki, Gifu, Japan; December 2020.
24. Md. Abdul Momin, Mohammad Jellur Rahman and Tetsu Mieno, "Compact Wearable Foot Pressure Sensors from MWCNT Coated Cotton Fibers for Human Activity and Sporting Performance Monitoring", 58th Fullerenes-Nanotubes-Graphene General Sympo., Univ. Tokyo, March 15-17, 2020, Japan.
25. Md. Abdul Momin, Mohammad Jellur Rahman and Tetsu Mieno, "Wearable Foot Pressure Sensors from MWCNT Coated Cotton Fibers for Human Activity Monitoring System", The 6th International Symposium toward the Future of Advanced Researches in Shizuoka University (ISFAR-SU 2020), March 5, 2020, Shizuoka Univ., Hamamatsu, Japan.
26. Md. Johurul Islam, Mohammad Jellur Rahman, Parvin Sultana, Green Synthesis of Copper Nanoparticles Using Justicia Adhatoda Leaf Extract and Its Application in Cotton Fibers as Antibacterial Coatings, International Conference on Physics - 2020, NM-09, 05-07 March, 2020, AECD, Dhaka, Bangladesh.

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32. Md. Abdul Momin, Mohammad Jellur Rahman, Tetsu Mieno, "Development of a Compact Wearable Load Cell from MWCNT/Cotton Composite Sheet for Human Activity Monitoring", Asian-European Int. Conf. Plasma Surface Eng., 2019, Jeju Island, South Korea, September 1-5, 2019.
33. Md. Abdul Momin, Mohammad Jellur Rahman, Tetsu Mieno, "Study of MWCNT/Cotton Composites and Development of Compact Load Cells", 57th Fullerenes -Nanotubes-Graphene General Sympo., Nagoya, Japan, September 2019.
34. K. Z. Islam, M. J. Rahman, and P. Sultana, Influence of Iron on the Optical, Morphological and Magnetic Properties of Zinc Sulfide Thin Films Grown by Chemical Bath Deposition Technique, International Conference on Physics - 2019, 07-09 February, 2019, PP-53, Dhaka, Bangladesh.
35. Urena Mostafa, Tetsu Mieno and Mohammad Jellur Rahman, Influence of Carbon nanotubes (CNTs) on the Mechanical Flexibility and Flame Retardancy of CNT/Cellulose Nanocomposites, International Conference on Physics - 2019, 07-09 February, 2019, PP-77, Dhaka, Bangladesh.
36. Md. Mehedi Hasan Sohag, Mohammad Jellur Rahman, Synthesis and Characterization of Reduced Graphene Oxide Reinforced Polymer Nanocomposite for Advanced Technology, International Conference on Physics - 2019, 07-09 February, 2019, PP-72, Dhaka, Bangladesh.
37. Rehab Binte Hashem, Kazi Haniem Maria, Mohammad Jellur Rahman, and Parvin Sultana, Investigation of Structural, Optical and Electrical properties of Chemical Bath Deposited ZnS Thin Films, International Conference on Physics 2018, March 08–10, 2018, Bangladesh Physical Society, Dhaka, Bangladesh.
38. Md. Forhad Hossain, Tetsu Mieno and Mohammad Jellur Rahman, Multiwall Carbon Nanotube in Natural Rubber to obtain Flexible and Stretchable Conductive Nanocomposites International Conference on Physics 2018, March 08–10, 2018, Bangladesh Physical Society, Dhaka, Bangladesh.
39. Nafisa Alam, Kazi Haniem Maria, M. J. Rahman, Tetsu Mieno, Fabrication and Characterization of Multiwalled Carbon Nanotube Reinforced Starch Biocomposites, International Conference on Nanotechnology and Condensed Matter Physics 2018 (ICNCMP 2018), January 11–12, 2018, BUET –Dhaka, Bangladesh.
40. Urena Mostafa, Tetsu Mieno and M. J. Rahman, Carbon Nanotube Integrated Cellulose Nanocomposites for the Advanced Technology, International Conference on Nanotechnology and Condensed Matter Physics 2018 (ICNCMP 2018), January 11–12, 2018, BUET –Dhaka, Bangladesh.

41. Md. Forhad Hossain, Tetsu Mieno and M. J. Rahman, Carbon Nanotube Reinforced Rubber Nanocomposites, International Conference on Nanotechnology and Condensed Matter Physics 2018 (ICNCMP 2018), January 11–12, 2018, BUET –Dhaka, Bangladesh.
42. M. F. Hossain and M. J. Rahman, Carbon Nanotubes in Polymer Composites: Rubber Nanocomposites, National Conference on Physics-2017, organized by Bangladesh Physical Society, 05-07 January, 2017, Atomic Energy Centre, Dhaka.
43. M. Mostafa, M. J. Rahman, Shamima Choudhury, Dielectric Properties of Cerium and Manganese Co-doped Barium Titanate ($Ba_{1-x}Ce_xTi_{1-y}Mn_yO_3$) Ceramics at Room Temperature, National Conference on Physics-2017, organized by Bangladesh Physical Society, 05-07 January, 2017, Atomic Energy Centre, Dhaka.
44. T. Ahmmed and M. J. Rahman, Investigation of Structural, Optical and Electrical Properties of Chemical Bath Deposited Zinc Selenide Thin Films, National Conference on Physics-2017, organized by Bangladesh Physical Society, 05-07 January, 2017, Atomic Energy Centre, Dhaka.
45. M. J. Rahman and T. Mieno, Safely Produced Water Dispersible Carbon Nanotubes in Nanotube/Cotton Composite Materials, International Conference on Physics - 2016, organized by Bangladesh Physical Society, 10-12 March, 2016, Atomic Energy Centre, Dhaka.
46. M. J. Rahman and T. Mieno, Application of Functionalized Carbon Nanotubes to Obtain Conductive Cotton Textile for Advanced Nanotechnology, *2015 International Symposium toward the Future of Advanced Researches in Shizuoka University*, 27–28 January, 2015, Hamamatsu, Shizuoka, Japan.
47. M. J. Rahman and T. Mieno, Functionalization of Carbon Nanotubes by Citric-Acid-Assisted Oxygen Plasma to Enhance Water-Dispersibility, Project Meeting on 'Production of new nanomaterials using fine particle plasmas' in the Research Institute of Electrical Communication, Tohoku University, 25–26 September, 2014, Tohoku, Japan.
48. M. J. Rahman and T. Mieno, New and Safe Method of Carbon Nanotube Functionalization to Enhance Water-Dispersibility, *13th International Conference on Global Research and Education, Inter-Academia 2014*, 10 - 12 September 2014 Riga, Latvia.
49. M. J. Rahman and T. Mieno, Application of water-dispersible multiwalled carbon nanotubes to obtain electroconductive cotton textile for flexible heater, *The 47th Fullerenes-Nanotubes-Graphene General Symposium*, 3–5 September, 2014, Nagoya, Japan.
50. M. J. Rahman and T. Mieno, Rahman M J and Mieno T (2014) Surfactant-Free Green Approach to Obtain Water-Dispersible Carbon Nanotubes by RF Plasma Treatment, The 5th International Conference on Plasma Medicine (ICPM5), 18 – 23 May, 2014, Nara, Japan.
51. M. J. Rahman and T. Mieno, Environment-Friendly Functionalization Method to Obtain Water-Dispersible Carbon Nanotubes, The 46th Fullerenes-Nanotubes-Graphene General Sympos., 2–5 March, 2014, Tokyo, Japan.
52. M. J. Rahman and T. Mieno, Preparation of Water-Dispersible Multiwalled Carbon Nanotubes using Radio Frequency Oxygen Plasma and Citric Acid/Water Solution, ISPlasma2014/IC-PLANTS2014, 2–6 March, 2014, Meijo University, Nagoya, Japan.
53. M. J. Rahman, and T. Mieno, Change of the Single-Walled Carbon Nanotube Production Rate with the Directions of Arc Discharge Current and Magnetic Field, Proceedings of The 15th Takayanagi Kenjiro Memorial Symposium, 12-13 November, 2013, Hamamatsu Campus, Shizuoka University, Japan, S4-21-1 - 5.
54. M. J. Rahman, and T. Mieno, Effects of Magnetic Field and Gravity on Single-Walled Carbon Nanotube Production in Three Directions of Arc Discharge Current, The 12th Asia Pacific Physics Conference of AAPPS (APPC12), 14-19 July, 2013, Chiba, Japan.
55. M. J. Rahman, and T. Mieno, Production of Single-Walled Carbon Nanotubes by Modified Arc Discharge Method, Seminar of Nanomaterials for DC & MC Students, 22 March, 2013, Faculty of Science, Shizuoka University, Japan.

56. M. J. Rahman, and T. Mieno, Effects of discharge current direction and magnetic field for the production of single-walled carbon nanotubes in the arc discharge method, The 44th Fullerenes-Nanotubes-Graphene General Symposium, 11-13 March, 2013, Tokyo, Japan.
57. M. J. Rahman, and T. Mieno, Efficient Production of Single-Walled Carbon Nanotubes by Changing the Arc Discharge Current Direction and Magnetic Field, Shizuoka University International Symposium (China-Korea-Japan Partnership in Science and Technology), 7- 8 January, 2013, Shizuoka, Japan.
58. M. J. Rahman, and T. Mieno, Production Characteristics of Single Walled Carbon Nanotubes by the JxB Arc Discharge Method, the 11th APCPST (Asia Pacific Conference on Plasma Science and Technology) and 25th SPSM (Symposium on Plasma Science for Materials), 2-5 October, 2012, Kyoto, Japan.
59. M. J. Rahman and M. A. H. Bhuiyan, Effect of Temperature on Optical and AC Electrical Properties of Plasma Polymerized O-Methoxyaniline Thin Films, National Conference on Physics for Development, Bangladesh Physical Society (2011).
60. M. J. Rahman and M. A. H. Bhuiyan, Study of Optical Properties of Plasma Polymerized O-Methoxyaniline Thin Films, Presented in International Conference on Recent Advances in Physics, Department of Physics, University of Dhaka, 27-29th March, 2010, Dhaka, Bangladesh.
61. M. J. Rahman and M. A. H. Bhuiyan, Study of Optical and Electrical Properties of Plasma Polymerized Ortho-Methoxyaniline Thin Films, International Conference on Magnetism and Advanced Materials (ICMAM-2010), March 3-7, 2010, Dhaka, Bangladesh.
62. S. Yasmina, S. Choudhury, M. A. Hakim, A. H. Bhuiyan and M. J. Rahman; Structural and Dielectric Properties of Pure and Cerium Doped Barium Titanate, Presented in International Physics Conference (IPC-09), 15-17, May, 2009, Bangladesh Physical Society, Dhaka, Bangladesh.
63. M. F. Mina, N. Banu, R. Matin, M. J. Rahman, M. A. Gafur and A. H. Bhuiyan, Mechanical, Thermal and Electrical Properties of Polypropylene/White-Clay Composites, Presented in Bose Conference on Contemporary Physics, LCPTF-9, March 19-21, p. 78 (2008), Dhaka, Bangladesh.
64. M. J. Rahman, Shamima Choudhury, A. H. Bhuiyan, S. N. Rahman and A. H. Khan; Electrical Properties of Cerium Doped Barium Titanate; Presented in Conference BPS (2007), Bangladesh Physical Society, Dhaka, Bangladesh.

Curriculum Activities:

Teaching the following courses to the Postgraduate students during my teaching period at BUET:

PHY 6014	Solid State Plasma	April 2015, April 2016, October 2016, April 2017, April 2018,
PHY 6000	Project/Thesis	October 2015 April 2016, October 2016
PHY 6002	Low Temperature Physics and Vacuum Techniques	October 2015
PHY 6018	Materials Science	October 2017, April 2018, October 2018, April 2019, April 2020, April 2021
PHY 6004	Polymer Physics	April 2018, April 2020, October 2021, October 2022
PHY 6012	Experimental Techniques in Solid State Physics	October 2018, April 2019, October 2019, April 2020, April 2021, October 2021
PHY 6101	Nuclear Physics	October 2018, April 2019, April 2020, April 2021
PHY 6113	Advanced Nuclear Physics	April 2021, April 2022

Teaching the following courses to the undergraduate students during my teaching period at BUET:

Modern Physics as part of PHY-105, PHY-113, PHY-151, PHY-157, PHY-167, PHY-117 courses to the CE, WRE, ME, IPE, NAME and ChE, MME, BME Departments.

Structure of Matter as part of PHY-105, PHY-117, PHY-151 course to the CE, ChE, WRE, IPE and NAME departments and as part of PHY-109 course to the CSE department.

Wave Mechanics as part of PHY- 117 course to the IPE department.

Also conducted Physics Sessional courses (PHY-102 and PHY-104) in each term as department scheduled time to time. Time to time participated in development and maintenance of the undergraduate laboratory.

Extra Curriculum Activities:

- a) Activities Assigned by the University Authorities in Addition to own Duties:
- *Acting BPGS Secretary of the Department of Physics, BUET from October 2020 to November 2022.*
 - *Acted as Postgraduate Tabulator of the Department of Physics, BUET from October 2017 to September 2020.*
 - *Acted as Web-administrator of the Department of Physics, BUET from March 2016 to September 2020.*
 - *Gave invigilation in the semester final exams and admission tests at BUET in 2008, 2009 and 2010, 2011, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021.*
 - *Act as Paper setter, Scrutinizer /Examiner of the UG Admission test of the sessions 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021, 2021-2022.*
 - *Helped to buy and set up new laboratory apparatus for the undergraduate level.*
- b) Hall Administration:
- Worked as an Assistant Provost (Mess) of the Dr. M. A. Rashid Hall of BUET from June 13, 2015 to October 2020.*
- c) Chairman or Member of Committees formed by University Authority, Syndicate, Academic Council, Finance Committee, etc:
- *Member of the Academic Council, BUET since June 2018.*
 - *Member of the Examination Committee of Undergraduate and Graduate levels of the Physics Department since June, 2018.*
 - *Members of different Recruitment Committees of BUET*
 - *Member of the **Board of Undergraduate Studies (BUGS)** of the Physics Department since June, 2007.*
 - *Member of the **Board of Postgraduate Studies (BPGS)** of the Physics Department since June, 2015.*
 - *Member, **Publication Sub-committee**, 10th Convocation, 2011, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh*
 - *Members of the vigilance team to observe the law-and-order situation of different residential halls.*
- d) Reviewers of:
- Applied Surface Science
 - Dhaka University Journal of Sciences
 - Journal of Bangladesh Academy of Sciences
 - Bangladesh Journal of Physics
 - The Dhaka university Journal of Science
 - International Journal of Nanoscience and Nanotechnology
- e) Others
- Assistant Editor of Bangladesh Journal of Physics, published by Bangladesh Physical Society science 2018.
 - Chair of the Poster Session to Evaluate the Presented Poster for Best Poster Awards in the 7th Conference of BCA, Organized Conference of Bangladesh Crystallographic Association, Dhaka-1000, Bangladesh, 8 – 9 December 2022.

- Co-Convenor of the Scientific Committee of the 7th Conference of BCA, Organized Conference of Bangladesh Crystallographic Association, Dhaka-1000, Bangladesh, 8 – 9 December 2022.
- Convenor of the Publication Committee of the 1st International Conference on Frontier in Sciences (ICFS - 2022), Organized by the Faculty of Science, BUET, Dhaka-1000, Bangladesh, 11 – 12 November 2022.
- Member of the Abstract Screening committee, Technical Committee, Press and Publication Committee of the National Conference on Physics, 2021, organized by Bangladesh Physical Society, 6-7 August, 2021, Dhaka, Bangladesh.

Award : Best poster award in the 2015 International Symposium toward the Future of Advanced Researches in Shizuoka University, 27–28 January, 2015, Hamamatsu, Shizuoka, Japan.

Scholarship : Japanese Govt. MEXT (Monobukagakusho) Scholarship (2011)

Membership :

- Life member of the '*Bangladesh Physical Society*' (LM E0035)
- Member of '*The Fullerenes, Nanotubes and Graphene Research Society*'
- Life member of the Association of Asia Pacific Physical Societies-Division of Plasma Physics (Membership number: 206)
- Life Member of BUET Alumni Association
- Life Member of Dhaka University Physics Alumni Association
- Life Member of the Japanese Universities Alumni Association in Bangladesh (JUAAB)
- Life member of Dhaka University Alumni Association (Membership number: LM-16061)
- Life member of Bangladesh Crystallographic Association (BCA) (Membership number: LM 70)

Fellowship : NSICT Fellowship, 2010-2011, GOB

Personal Database ID:

1. Scopus ID: 55457930700
2. ORCID number: 0000-0002-7869-3383 (<https://orcid.org/0000-0002-7869-3383>)

REFERENCES

1. Prof. Dr. Md. Abu Hashan Bhuiyan
University of Information Technology and Science, Baridhara, Dhaka-1212, Bangladesh
Contact: +8801712836384, E-mail: mahbhuiyan@gmail.com
2. Prof. Shamima Choudhury
Former Professor, Department of Physics, University of Dhaka, Dhaka-1000.
Contact: Phone: +8801819188520, E-mail: skc.phy@gmail.com
3. Prof. Dr. Md. Forhad Mina
Department of Physics, BUET, Dhaka-1000.
Contact: +8801727265238, E-mail: mfmmina@phy.buet.ac.bd

I hereby declare that the information stated above is true.



Dr. Mohammad Jellur Rahman
Professor
Department of Physics, BUET