

Dr. Mohammad JellurRahman

Associate Professor

Department of Physics, Bangladesh University of Engineering and Technology, Dhaka-1000, Bangladesh, Tel: +88-01-552346458

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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, Vibekanda High School, Tangail-1900, Bangladesh
Result: First Division, 80.6%

PROFESSIONAL CARRIER

Associate Professor [March 12, 2018 – 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.

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

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, Ongoing.
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.

B. Master of Philosophy (M.Phil)

5. **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, Ongoing.
6. **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, 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 Ahmmed, **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**, MSc 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**, MSc Thesis, Urena Mostafa, **Student no:** 1015142503, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, May 2018.
4. **Investigation of the Electrical, Thermal and Mechanical Properties of Graphene Reinforced Low Density Polyethylene Nanocomposite**, MSc Thesis, Md. Mehedi HasanSohag, **Student no:** 0417142523, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, December 2019.
5. **Functionalization of Carbon Nanotubes using Oxygen Plasma to Prepare Jute Nanocomposites**, MSc Thesis, Md. Johurul Islam, **Student no:** 1017142504, Department of Physics, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh, December 2019.

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.:**, **Session:** 2017-18, Department of Physics, University of Dhaka, Dhaka, Bangladesh, Ongoing.

FUNDING

- **Project Name:** *Carbon Nanotube Reinforced Nanocomposites of Natural Polymers for Biofriendly Applications, Funded by The Ministry of Science and Technology, Government of Bangladesh*, Number and date of sanction order: 39.00.0000.09.14.009.2019/PHY'S-35/505
Date: 16/01/2019 MOST Project (Since 2018-Ongoing)

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 microindentation tester.
- ◆ Mechanical testing using universal testing machine.

PUBLICATIONS

2019

1. 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>
2. M. Mostafa, M. J. Rahman, ShamimaChoudhury, Enhanced Dielectric Properties of BaTiO₃ Ceramics with Cerium Doping, Manganese Doping and Ce-Mn Co-doping, *Science and Engineering of Composite Materials*, *Science and Engineering of Composite Materials*, 26(1), 62-69, (2019).DOI: <https://doi.org/10.1515/secm-2017-0177>
3. 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>.

2018

4. 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.

2017

5. M. J. Rahman and T. Mieno, Functionalization of Single-Walled Carbon Nanotubes by Citric Acid/Oxygen Plasma Treatment, *Fullerenes, Nanotubes and Carbon Nanostructures*, 25(9), 2017, 519–525. DOI: <http://dx.doi.org/10.1080/1536383X.2017.1347639>.

2016

6. 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
7. M. F. Mina, T. A. Mobarak and M. J. Rahman, Physics Part II, Text Books for Higher Secondary Education, Approved by NCTB, Alam Book House (Jupitar Publications), Dhaka, Bangladesh (2016).

2015

8. M. J. Rahman and T. Mieno, Conductive cotton textile from safely functionalized carbon nanotubes, *Journal of Nanomaterials* 2015 (2015) 978484 (10 pages). DOI: <http://dx.doi.org/10.1155/2015/978484>
9. M. F. Mina, T. A. Mobarak and M. J. Rahman, Physics Part I, Text Books for Higher Secondary Education, Approved by NCTB, Alam Book House (Jupitar Publications), Dhaka, Bangladesh (2015).

2014

10. M. J. Rahman and T. Mieno, Water-Dispersible Multiwalled Carbon Nanotubes Obtained from Citric-Acid-Assisted Oxygen Plasma Functionalization, *Journal of Nanomaterials*, 2014 (2014) 508192 (9 pages). DOI: <http://dx.doi.org/10.1155/2014/508192>
11. 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, *JPS Conference Proceedings* 1 (2014) 015074 (8 pages). DOI: <http://dx.doi.org/10.7566/JPSCP.1.015074>

2013

12. M. J. Rahman and T. Mieno, Production of Single-Walled Carbon Nanotubes by Modified Arc Discharge Method, *Japanese Journal of Applied Physics*, 52 (2013), 056201 (5 pages). DOI: <http://dx.doi.org/10.7567/JJAP.52.056201>
13. M. J. Rahman and A. H. Bhuiyan, Structural and Optical Properties of Plasma Polymerized o-Methoxyaniline Thin Films, *Thin solid Films*, 534 (2013) 132–136. DOI: <http://dx.doi.org/10.1016/j.tsf.2013.02.026>

2012

14. R. Islam, S. Choudhury, S. N. Rahman and M. J. Rahman, The Effect of Manganese Doping on the Grain Size and Transition Temperature of Barium Titanate Ceramics, *Journal of Ceramic Processing Research*, 13(3) (2012) 248-251. Link: http://jcpr.kbs-lab.co.kr/file/JCPR_vol.13_2012/JCPR13-3/12-2011-95.pdf
15. M. A. Haque, M. F. Mina, A.K.M. M. Alam, M. J. Rahman, M. A. H. Bhuiyan, T. Asano, Multiwalled Carbon Nanotubes-Reinforced Isotactic Polypropylene Nanocomposites: Enhancement of Crystallization and Mechanical, Thermal, and Electrical Properties, *Polymer Composites*, 33 (2012) 1094-1104. DOI: 10.1002/pc.22235

2011

16. S.Yasmin, S. Choudhury, M. A. Hakim, A. H. Bhuiyan and M. J. Rahman, Effect of Cerium doping on microstructure and dielectric properties of BaTiO₃ Ceramics, *Journal of Materials Science and Technology*, 27(8) (2011)759-763. DOI: 10.1016/S1005-0302(11)60139-4
17. A. H. Bhuiyan, M. F. Mina, S. Seema, M. J. Rahman, M. M. Khan, and M. A. Gafur, Structural, Elastic and Thermal Properties of Titanium Dioxide Filled Isotactic Polypropylene, *Journal of Polymer research*, 18 (2011)1073-1079. DOI:10.1007/s10965-010-9509-y
18. S.Yasmin, S. Choudhury, M. A. Hakim, A. H. Bhuiyan and M. J. Rahman, Structural and dielectric properties of pure and cerium doped barium titanate, *Journal of Ceramic Processing Research*, 12(4), 387-391 (2011).

2009

19. M. F. Mina, S.Seema, R.Matin, M. J. Rahman, R. B.Sarker, M. A Gafur, and M. A. H.Bhuiyan; Improved performance of isotactic polypropylene/titanium dioxide composites: Effect of processing conditions and filler content; *Polymer Degradation and Stability*, 94, 183-188 (2009).DOI: 10.1016/j.polymdegradstab.2008.11.006
20. M. F. Mina, N. Banu, A. Razzak, M. J. Rahman, M. A.Gafur, and M. A. H.Bhuiyan; Structures and Performance of White Clay-Filled Isotactic-Polypropylene Composites Prepared by Double-Molding Techniques, *Polymer-Plastics Technology and Engineering*, 48: 1275–1281, 2009. DOI:10.1080/03602550903204139

2008

21. S.Choudhury, S.Akter, M. J. Rahman, A. H. Bhuiyan, S. N. Rahman, N. Khatun and M. T. Hossain; Study of Dielectric and Electrical Properties of Zirconium Doped Barium Titanate Perovskite; *Journal of Bangladesh Academy of Sciences*, 32(2): 221-229 (2008).

2007

22. M. J. Rahman, S.Choudhury, A. H. Bhuiyan, S. N. Rahman and A. H. Khan; Electrical Properties of Cerium Doped Barium Titanate; *Journal of Bangladesh Academy of Sciences*, 31(1): 137-141(2007).

Presentations at Conferences, Seminars and Symposiums

1. Md. Johurul Islam, Mohammad Jellur Rahman, Tetsu Mieno, Functionalization of Carbon Nanotubes Using Oxygen Plasma to Prepare Jute Nanocomposites, 4th Young Scientist Congress, Bangladesh Academy of Sciences, 13 – 15 December 2019, Dhaka, Bangladesh.
2. Nafisa Alam, Kazi Haniun 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.
3. 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.
4. 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.

5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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 nonmaterials using fine particle plasmas*' in the Research Institute of Electrical Communication, Tohoku University, 25–26 September, 2014, Tohoku, Japan.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.

20. 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.
21. 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.
22. 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).
23. 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.
24. 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.
25. 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.
26. 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.
27. 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:

I have taught the following courses to the undergraduate students during my teaching period at BUET:

Modern Physics as part of PHY-105, PHY- 113 course to the CE, ChE, WRE, ME, IPE, NAME and MME departments;

Structure of Matter as part of PHY-105 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 developing and maintenance of the undergraduate laboratory.

TRAINING PROGRAMS

- *Participated in the workshop on **Intellectual Property Rights (IPRs)** held during 7-8 November 2017, organized by Technology Transfer Office (TTO), BUET.*
- *Participation in an introductory training course on **Nanofabrication Technologies** at Centre for Nano Science and Engineering, Indian Institute of Science, Bengaluru, India from 17 August to 1 September, 2017.*

- *Participation in a daylong Training workshop on **Learning Management System: Moodle**, jointly organized by Department of Computer Science and Engineering, and Institutional Quality Assurance Cell (IQAC), BUET held on April 16, 2017.*
- *Participation in the Training workshop on **Teaching-Learning and Curriculum Development**, organized by Institutional Quality Assurance Cell (IQAC), BUET held on April 27-28, 2016.*
- *Participation in the Training workshop on **Quality Assurance & Self-Assessment Exercise**, organized by Institutional Quality Assurance Cell (IQAC), BUET held on February 17, 2016.*
- *Training on **Quick Web Development** organized by Department of Computer Science and Engineering, BUET, January, 2016.*
- ***Teachers' Appreciation Workshop** organized by Directorate of Continuing Education (DCE), BUET from 12 to 13 March, 2008.*
- *Training on **Remote Sensing and GIS in Water Management** organized by Directorate of Continuing Education (DCE) in collaboration with Institute of Water and Flood Management (IWFM), BUET from 27 to 30 January, 2008.*
- *Short course on **The Public Procurement Management in Bangladesh** organized by Directorate of Continuing Education (DCE), BUET from 19 to 23 April, 2008.*
- ***Foundation Training** for the Assistant Directors from December 2006 to June 2007 introduced by Bangladesh Bank, Dhaka, Bangladesh.*

Professional Award/ Honours Received:

- *Got United Group Paper Award 2016 for the journal paper "Structural and Optical Properties of Plasma Polymerized o-Methoxyaniline Thin Films, Thin solid Films, 534 (2013) 132–136".*
- *Poster Award for the outstanding poster presentation in the **2015 International Symposium toward the Future of Advanced Researches in Shizuoka University**, 27–28 January, 2015, Hamamatsu, Shizuoka, Japan.*
- *Scholarship for securing First Class in B.Sc. awarded by Dhaka University.*
- *Books for securing First Class in B.Sc. awarded by the Provost of Amar Ekushey Hall, Dhaka University.*
- *Scholarship from Tangail Zilla Student's Welfare Association.*

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 Association of Asia Pacific Physical Societies-Division of Plasma Physics (Membership number 206)

Fellowship : NSICT Fellowship, 2010-2011, GOB

Personal Database ID:

1. Scopus ID: 55457930700
2. ORCID number: 0000-0002-7869-3383

Extra Curriculum Activities:

- Working as Assistant Provost of Dr. M. A. Rashid Hall of BUET, since 11 June, 2015.
- As a member of Publication committee of the **10th Convocation, 2011 of BUET** I have participated actively to publish the Graduate lists and Convocation Souvenir.

REFERENCES

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I hereby declare that the information stated above is true.



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