Curriculum Vitae of

Sharif Mohammad Mominuzzaman, Ph.D.

Professor, Department of EEE, BUET

Section-A: BAETE Instructed Information

Name: Prof. Dr. Sharif Mohammad Mominuzzaman

Designation: Professor, Dept of EEE, BUET

Educational qualification

- **PhD in Electrical Engineering**, Nagoya Institute of Technology, JAPAN, 2001
- **Post-Doctoral Research**, Nagoya Institute of Technology, JAPAN, 2005~2007
- **Master of Engg. in Electrical Engineering**, Nagoya Institute of Technology, JAPAN, 1998
- M.Sc. Engg (EEE), Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh, 1993
- B.Sc. Engg (EEE), Department of Electrical and Electronic Engineering, Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh, 1991

Academic experience

- Professor, Department of EEE, BUET, 01 Jan, 2009 to Present
- Associate Professor, Department of EEE, BUET, 08 June, 2004 to 31 Dec., 2008
- Assistant Professor, Department of EEE, BUET, 14 Dec., 1994 to 07 June 2004
- Lecturer, Department of EEE, BUET, 4 Jan., 1992 to 13 Dec., 1994

Non-academic experience

- Board member, Bangladesh Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh. (2018~)
- Chair, Accreditation Committee, Bangladesh Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh. (2018~)
- Member of the Committee for Technical Evaluation of Detailed Documents of Dhaka Mass Rapid Transit Development Project (Line-6) provided by Dhaka Mass Transit Company Limited (DMTCL), Government of the People's Republic of Bangladesh. (2022~2024)
- Member, Selection Committee, "Green Factory Award-2023" (for the Sectors of RMG, textiles, tea, cement, plastic, leather, pharmaceuticals, tiles and ceramics, electric and electronics manufacturer and food processing industries), The Ministry of Labour and Employment, Government of the People's Republic of Bangladesh.
- Member of the Proposal (Technical and Financial) Evaluation Committee "Supply, Installation, Commissioning, Operation and Maintenance of Real-Time Web-Based Toll Collection and Weigh Scale System of Sayed Nazrul Islam Bridge for 2(Two) Years at 88th Km of Dhaka (Katchpur)-Bhairab-Jagadishpur-Saishtagonj-Sylhet-Tamabil-Jaflong Road (N-

02) under Narsingdi Road Division during the year 2022-2023, Roads and Highway Division, Government of the People's Republic of Bangladesh. (2022~2023)

- Syndicate Member, Bangabandhu Sheikh Mujibur Rahman Aviation and Aerospace University, Dhaka, Bangladesh, 2020~2022
- Member of Power Electronics (ET-18) Sectional Committee, Bangladesh Standard and Testing Institution (BSTI) Committee, Ministry of Industries, Government of the People's Republic of Bangladesh. (2019~2022)
- Chair, The Board of Accreditation for Engineering and Education (BAETE), the Institution of Engineers, Bangladesh (IEB), Dhaka for Accreditation of Dept of EEE, International University of Business Agriculture and Technology (IUBAT), 2018
- Member, The Board of Accreditation for Engineering and Education (BAETE), the Institution of Engineers, Bangladesh (IEB), Dhaka for Accreditation of Dept of ECE, Khulna University, 2016
- Chair, The Board of Accreditation for Engineering and Education (BAETE), the Institution of Engineers, Bangladesh (IEB), Dhaka for Accreditation of Electrical & Electronic Engineering (EEE) program of the American International University Bangladesh (AIUB), 2013
- Member, The Board of Accreditation for Engineering and Education (BAETE), the Institution of Engineers, Bangladesh (IEB), Dhaka for Accreditation of B.Sc. in Electrical, Electronic and Communication Engineering (EECE) Program of Military Institute of Science and Technology (MIST), 2010
- Member, Selection Board of Teachers' Recruitment, Independent University, Bangladesh (IUB), Dhaka.
- Member of the Technical Evaluation Committee of "Design, Supply, Installation & Commissioning, including 5 years PWC of Solar PV LED Street Lighting Systems (SSLS) and LED based Street Lighting Systems (LSLS) in 8 City Corporations (SSLPC Project)", Bangladesh Power Development Board (BPDB), Government of the People's Republic of Bangladesh. (2016)
- Member of the Divisional Committee (Electrical and Electronics (EEDC)), Bangladesh Standard and Testing Institution (BSTI) Committee, Ministry of Industries, Government of the People's Republic of Bangladesh. (2013~2015)
- Member for the Selection Committee for the recruitment of Assistant Engineer, Petrobangla, Bangladesh Oil, Gas and Mineral Corporation, Ministry of Energy, Government of the People's Republic of Bangladesh. (2008)
- Member of selection committee, Japan Society for the Promotion of Science (JSPS) Bridge Fellowship Program (2009-2010)
- Member for the Installation of Household Appliances, Parliamentary Supervisory team, Government of the People's Republic of Bangladesh Committee, Government of the People's Republic of Bangladesh. (2004-2005)
- Member for the Preparation of Bangladesh Standards (BDS) of Specialized Products and Household Appliances, Bangladesh Standard and Testing Institution (BSTI) Committee, Ministry of Industries, Government of the People's Republic of Bangladesh. (2002-2003)
- Associate Director, Bureau of Research, Testing and Consulation (BRTC), BUET. November 2021- January 2024.

Fellowship/membership of academic bodies and professional organizations

- Life Fellow, Institution of Engineers Bangladesh (IEB) (F/7837)
- Life Fellow, Bangladesh Computer Society (BCS) (F/00170)
- Life Member, Bangladesh Physical Society.
- Life Member, Bangladesh Electronics Society.

Honors and awards

- **Achievement of Best (2) Oral Paper Award** in the 10th International Conference on Electrical and Computer Engineering, (ICECE 2018), 20-22 December 2018, Dhaka, Bangladesh. (Paper Titled, *"Reduction of Excitation Volume in Fluorescence Spectroscopy with Localized Surface Plasmon")*.
- **Achievement of Best Oral Paper Award in the category-I (Fundamental and New Approaches) in the 14th International Photovoltaic Science and Engineering Conference (PVSEC-14)** Jan. 26-30, 2004, Bangkok, Thailand. (Paper Titled, "*Nitrogen Doping in Camphoric Carbon Films and its Application to Photovoltaic Cell*")
- Achievement of "Japan Society for the Promotion of Science (JSPS)-University Grants Commission (UGC) Joint Research Project for FY 2009" to conduct cooperative research with Japanese host researcher (Professor) under "JSPS Postdoctoral Fellowship Program" [From April 2009 to March. 2011]
- Achievement of "Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship award" to conduct cooperative research with Japanese host researcher (Professor) under "JSPS Postdoctoral Fellowship Program" [From Nov. 14, 2005 to Nov. 13, 2007, for 2 years]
- Achievement of Scholarship of Ministry of Education, Science and Culture (MONBUSHO), Japan [From Jan. 1996 to March 2001]
- Achievement of Merit Scholarship during undergraduate study at BUET [From 1986 to 1991].
- Achievement of Merit Scholarship from Jessore Education Board (Bangladesh Government), [From 1986 to 1991].
- Achievement of Altaf Hossain Fellowship at BUET [From 1988 to 1989].
- Achievement of Chancellors Award (Awarded by the President of the People's Republic of Bangladesh) for obtaining 13th in the combined Merit list out of about 0.2 Million students in the Higher Secondary Certificate (HSC) examination in 1984.

Professional Work at National and International Levels:

- Technical Chair, 12th International Conference on Electrical and Computer Engineering (ICECE 2022), Dhaka, Bangladesh organized by the Department of Electrical and Electronic Engineering, BUET with the IEEE Bangladesh section as the technical co-sponsor, 21-23 December, 2022.
- Reviewer of technical papers, Journal of Materials Chemistry and Physics, Elsevier Science, March 2008-date.
- Reviewer of technical papers, Intelligent Automation & Soft Computing (AutoSoft) - An International Journal – Official Journal of World Automation Congress, since June 2005.
- Reviewer of technical papers, INTEGRATION – The VLSI Journal, Elsevier Science, 2003-date
- Reviewer of technical papers, Computers & Electrical Engineering, PERGAMON, 2002-date.
- Reviewer of technical papers, International Conference on Electrical and Computer Engineering (ICECE), Dhaka, Bangladesh organized by the Department of Electrical and Electronic Engineering, BUET with the IEEE Bangladesh section as the technical co-sponsor since 2002.
- Reviewer of technical papers, International Conference on Information and Communication

Technology (ICICT 2007), March 8-9, 2007, Dhaka, Bangladesh, organized by the Institute of Information and Communication Technology (IICT), Bangladesh University of Engineering and Technology (BUET).

- Reviewer of technical papers, Journal of the Institution of Engineers, Bangladesh, 2001-date.
- Member of the evaluation committee for the paper published to select the best paper of the Journal of the Institution of Engineers, Bangladesh, since 2003.
- Serving as the member of the Technical/Organizing Committee, "International Conference on Electrical and Computer Engineering (ICECE)", Dhaka, Bangladesh, organized by the Department of Electrical and Electronic Engineering, BUET with the IEEE Bangladesh section as the technical co-sponsor since 2002
- Served as the member of the Organizing Committee, "International Workshop on Distributed Internet Infrastructure for Education and Research (*IWIER* 2003)", December 31, 2003-january 2, 2004, Dhaka, Bangladesh, organized by the Institute of Information and Communication Technology (IICT), Bangladesh University of Engineering and Technology (BUET).
- Participated in the Training Workshop on Modern Telecommunication Engineering, May 22-23, 2003 organized by the Directorate of Continuing Education (DCE), BUET.
- Served as a part-time project organizer in the Computer Center, BUET to provide computerization of the Secondary School Certificate and Higher Secondary School Certificate (S.S.C. & H.S.C.) examinations & result publications.
- Served as external member of Post Graduate Examination Committee, Department of Electronics and Computer Science, Jahangirnagar University, Savar, Dhaka, Bangladesh, 2003~2005.

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Participation in National Commissions, Committees, etc. commissioned by the Government of Bangladesh and Govt. Institution / Organizations:

- Board member, Bangladesh Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh. (2018~)
- Member of the Committee for Technical Evaluation of Detailed Documents of Dhaka Mass Rapid Transit Development Project (Line-6) provided by Dhaka Mass Transit Company Limited (DMTCL) Government of the People's Republic of Bangladesh. (2022~2024)
- Member of the Proposal (Technical and Financial) Evaluation Committee "Supply, Installation, Commissioning, Operation and Maintenance of Real-Time Web-Based Toll Collection and Weigh Scale System of Sayed Nazrul Islam Bridge for 2(Two) Years at 88th Km of Dhaka (Katchpur)-Bhairab-Jagadishpur-Saishtagonj-Sylhet-Tamabil-Jaflong Road (N-02) under Narsingdi Road Division during the year 2022-2023, Roads and Highway Division, Government of the People's Republic of Bangladesh. (2022~2023)
- Member of Power Electronics (ET-18) Sectional Committee, Bangladesh Standard and Testing Institution (BSTI) Committee, Ministry of Industries, Government of the People's Republic of Bangladesh. (2019~2022)
- Member of the Technical Evaluation Committee of "Design, Supply, Installation & Commissioning, including 5 years PWC of Solar PV LED Street Lighting Systems (SSLS) and LED based Street Lighting Systems (LSLS) in 8 City Corporations (SSLPC Project)", Bangladesh Power Development Board (BPDB), Government of the People's Republic of Bangladesh. (2016)
- Member of the Divisional Committee (Electrical and Electronics (EEDC)), Bangladesh Standard and Testing Institution (BSTI) Committee, Ministry of Industries, Government of the People's Republic of Bangladesh. (2013~2015)

- Member for the Selection Committee for the recruitment of Assistant Engineer, Petrobangla, Bangladesh Oil, Gas and Mineral Corporation, Ministry of Energy, Government of the People's Republic of Bangladesh. (2008)
- Member for the Installation of Household Appliances, Parliamentary Supervisory team, Government of the People's Republic of Bangladesh Committee, Government of the People's Republic of Bangladesh. (2004-2005)
- Member for the Preparation of Bangladesh Standards (BDS) of Specialized Products and Household Appliances, Bangladesh Standard and Testing Institution (BSTI) Committee, Ministry of Industries, Government of the People's Republic of Bangladesh. (2002-2003)

List of significant publications and presentations

Journal

1) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "*Empirical Model for Optical Transitions in Inner Semiconducting Tubes of Double Wall Carbon Nanotubes*", *AIP Advances*, 2023 (Web of Science and Scopus)
2) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "*Empirical Model for Bandgaps of Armchair Graphene Nanoribbons*", *AIP Advances*, 2023 (Web of Science and Scopus)
3) Imtiaj Khan, Ovishek Morshed, Sharif Mohammad Mominuzzaman, "*Diameter optimisation for highest DoB of CNT-FETs*", Micro & Nano Letters, 2019, Vol. 14 No. 6, pp 590-594, 2019.
4) Md Mahadi Masnad and Sharif Mohammad Mominuzzaman, "*Graphene-MoS_2 spacer on metal-insulator-metal structure for enhanced surface plasmon coupled emission*", *AIP ADVANCES 8, 055128*, 2018, pp 055128 (1-8), 2019.
5) Sheikh Ahmed, Mashiyat Shawkat, Md. Iramul Chowdhury, Sharif Mohammad Mominuzzaman, "*Gate dielectric material dependence of current-voltage characteristics of ballistic Schottky barrier graphene nanoribbon field-effect transistor and carbon nanotube field-effect transistor for different channel lengths*". Micro & Nano Letters, 10 (10), pp 523–527, 2015
6) Khan, I., Morshed, O., Mominuzzaman, S. M., "*Performance Study of Strain Engineered CMOS Inverter Logic Using Silicon Nanowire and Carbon Nanotube Field Effect Transistors*". American Scientific Research Journal for Engineering, Technology, and Sciences, 37(1), pp 99–109.
7) Nirjhor Tahmidur Rouf, Ashfaqul Haq Deep, Rusafa Binte Hassan, Sabbir Ahmed Khan, Mahmudul Hasan, Sharif Mohammad Mominuzzaman, "*High dielectric material dependence of carbon nanotube field effect transistor considering non-ballistic conduction*". Micro & Nano Letters, 9(10), pp 620–625, 2014
8) Nirjhor Tahmidur Rouf, Ashfaqul Haq Deep, Rusafa Binte Hassan, Sabbir Ahmed Khan, Mahmudul Hasan, Sharif Mohammad Mominuzzaman:
9) Current-voltage characteristics of CNTFET considering non-ballistic conduction: Effect of dielectric constant. NEMS 2014: 256-259
10) Khan, S. A., Hasan, M., & Mominuzzaman, S. M. (2014). Investigation of CNTFET performance with gate control coefficient effect. Journal of Nano- and Electronic Physics, 6(2)
11) Sabbir Ahmed Khan, Nirjhor Tahmidur Rouf, Mahmudul Hasan, Sharif Mohammad Mominuzzaman, "*Investigation of CNTFET performance with drain control coefficient effect*". Nanoscience and Nanotechnology, 4(2), pp 34–40, 2014.

12) Adnan Siraj Rakina, S. M. Mominuzzaman, "*Double Walled Carbon Nanotube Simulator to Achieve Higher Accuracy in Finding Optical and Electrical Properties of the Tubes*", American Scientific Research Journal for Engineering, Technology, and Sciences (ASRJETS) (2017) Volume 26, No 3, pp 282-289.

13) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "Universal empirical formula for optical transition energies of semiconducting single-walled carbon nanotubes", *AIP Advances* 6, 015012, 2016. (Web of Science and Scopus) http://dx.doi.org/10.1063/1.4940761
14) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "Empirical Prediction of Optical Transitions in Metallic Armchair SWCNTs", *Cogent Physics,*Vol. 2, Issue. 1, 2015. (Web of Science) https://doi.org/10.1080/23311940.2015.1006107
15) **G. R. Ahmed Jamal**, S. M. Mominuzzaman, "Limitations of Tight Binding Model in Describing Electronic Properties of Single Wall Carbon Nanotubes**",** *Journal of Nanoscience and Nanoengineering,* Vol. 1, No. 2, pp. 96-106, 2015. (Google Scholar Indexed) http://www.aiscience.org/journal/paperInfo/jnn?paperId=1563
16) G. R. Ahmed Jamal, S. M. Mominuzzaman, "Beyond the Basic Tight Binding Model to Calculate Optical Transition Energies of SWCNT", *Journal of Nanoscience and Nanoengineering*, Vol. 1, No. 2, pp. 84-95, 2015. (Google Scholar Indexed) http://www.aiscience.org/journal/paperInfo/jnn?paperId=1657
17) **G. R. Ahmed Jamal,** S. M. Mominuzzaman, "Modified Parameter of Tight Binding Model to Calculate First and Second Optical Transition Energies of Semiconducting SWCNTs", *Journal of Nanoscience and Nanoengineering,* Vol. 1, No. 2, pp. 56-65, 2015. (Google Scholar Indexed) http://www.aiscience.org/journal/paperInfo/jnn?paperId=1659
18) **G. R. Ahmed Jamal**, S. M. Mominuzzaman, "Empirical Ratio of First Two Optical Transition Energies in Semiconducting Single Wall Carbon Nanotubes**",** *Journal of Nanoscience and Nanoengineering,* Vol. 1, No. 3, pp. 107-114, 2015. (Google Scholar Indexed) http://www.aiscience.org/journal/paperInfo/jnn?paperId=1616
19) **G. R. Ahmed Jamal**, S. M. Mominuzzaman, "Different Techniques for Chirality Assignment of Single Wall Carbon Nanotubes", *Journal of Nanoscience and Nanoengineering,* Vol. 1, No. 2, pp. 74-83, 2015. (Google Scholar Indexed)
http://www.aiscience.org/journal/paperInfo/jnn?paperId=1658

20) M Ahmed, N Kishi, R Sugita, A Fukaya, I Khatri, J B Liang, S M. Mominuzzaman, T Soga, T Jimbo, "*Graphene Synthesis on Nickel Substrate by Thermal Chemical Vapor Deposition using Solid Precursor*" Journal of Materials Science: Materials in Electronics,24, pp 2151 - 2155 2013
21) Junie Jhon M. Vequizo M. Muhibbulillah, M. Golam Mowla Choudhury, Sharif M Mominuzzaman, "*Annealing Effect of the CuxO Thin Films Prepared by Drop Chemical Technique*", Transactions of the Materials Research Society of Japan, Vol. 39 No. 2, pp 109-112, 2014
22) Yang Kai M. Muhibbulillah, M. Golam Mowla Choudhury, Sharif M Mominuzzaman ,Junie Jhon M. Vequizo, , "*An equation of average lifetime of the minority carriers in semiconductors from photo-electrochemical measurement*", Transactions of the Materials Research Society of Japan, Vol. 38 No. 3, pp 385-388, 2013
23) Sharif M Mominuzzaman, M. Muhibbullah, M. Golam Mowla Choudhury, , "*An equation of the width of the depletion layer for a step heterojunction*", Transactions of the Materials Research Society of Japan, Vol. 37 No. 3, pp 405-408, 2012
24) Jianhui Zhang a, Ishwor Khatri a, Naoki Kishi a, Sharif M. Mominuzzaman b, Tetsuo Soga a, Takashi Jimbo, "*Low substrate temperature synthesis of carbon nanowalls by ultrasonic spray pyrolysis*" Thin Solid Films Vol 519, Issue 13, pp 4162-4165,24, 2011
25) M. A. Uddin, M. S. H. Choudhury, M. M. Hasan, S. M. Mominuzzaman, "*An Experimental Approach of DLC Film Deposition on Metal Substrates,*" Journal of Electrical Engineering The Institution of Engineers, Bangladesh, vol. EE 37, No. II, pp. 35-38, 2011
26) Md. Shofiqul Islam and S. M. Mominuzzaman, "*Photoabsorption in Carbon and Silicon Layer of Phosphorous doped Camphoric Carbon/p-Silicon (n-CC/p-Si) Solar Cell*", Thin Solid Films 518 (2010) 2867–2870.
27) S. M. Mominuzzaman, N. Chandrasekaran, T. Soga and T. Jimbo, "*Polymeric semiconducting carbon from fullerene by pulsed laser ablation*", Diamond and Related Materials (ELSEVIER), Volume 17, Issues 4-5, April-May, 2008, pp. 641-645.

28) Ahmed Tasnim Rasin and S. M. Mominuzzaman, "*Effecs of Nitrogen Doping on the Quantum Efficiency of Carbon on Silicon (n-C/p-Si) Photovoltaic Cell*", Journal of Electrical Engineers, The Institution of Engineers, Bangladesh, 35 (2008) 15-18.
29) S. M. Mominuzzaman, Mahbub Alam, T. Soga and T. Jimbo, "*Rearrangements of sp^2/sp^3 hybridized bonding with phosphorus incorporation in pulsed laser deposited semiconducting carbon films by X-ray photoelectron spectroscopic analysis*", Diamond and Related Materials (ELSEVIER), Volume 15, Issues 11-12, November-December 2006, pp. 1795-1798.
30) S. M. Mominuzzaman, M.Rusop, T. Soga, T. Jimbo and M. Umeno, "*Nitrogen Doping in Camphoric Carbon Films and its Application to Photovoltaic Cell*", Solar Energy Materials and Solar Cells(ELSEVIER), Volume 90, Issues 18-19, November 2006, pp.3238-3243.
31) M.Rusop, S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Photovoltaic Properties of n-C:P/p-Si Cells Deposited by XeCI Eximer Laser Using Graphite Target*", Solar Energy Materials and Solar Cells (ELSEVIER), Volume 90, Issues 18-19, 23 November 2006, pp. 3205-3213.
32) M.Z. Islam, M. Alam, S. M. Mominuzzaman, M.Rusop, , T. Soga, T. Jimbo and M. Umeno, "*Study of pulsed laser-deposited phosphorus-doped carbon/p-silicon photovoltaic cell*", Journal of Crystal Growth (ELSEVIER), Volume 288, Issue 1, 2 February 2006, pp. 195-199.
33) S. M. Mominuzzaman and M. Athar Uddin, "*Carbon Thin Film Deposition By Electroplating*," Journal of Engg. and Applied Sciences 1, pp 19-23, 2006.
34) M.Rusop, S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Nitrogen doped n-type amorphous carbon films obtained by pulsed laser deposition with a natural camphor source target for solar cell applications*," Journal of Physics: Condensed Matter (IOP), Vol. 17, No. 12, pp. 1929-1946, 2005.
35) M. Rusop, X.M. Tian, S.M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Photoelectrical properties of pulsed laser deposited boron doped p-carbon/n-silicon and phosphorus doped n-carbon/p-silicon heterojunction solar cells*," Solar Energy(ELSEVIER), Vol. 78, Issue 3, pp. 406-415, 2005.
36) M. Rusop, S.M.Mominuzzaman, T. Soga, T. Jimbo M. *Umeno* "*Photovoltaic characteristics of nitrogen-doped camphoric carbon films deposited by XeCl excimer laser*," Transactions of the Materials Research Society of Japan Vol. 30,2005, pp. 257-260.
37) M.Rusop, S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Photovoltaic Properties of n-C:P/p-Si Cells Deposited by XeCI Eximer Laser Using Graphite Target*," Asian Journal of Energy and Environment, Vol 5, Issue 4, pp. 309-325, 2005.
38) M. Rusop, S.M. Mominuzzaman, T. Soga and T. Jimbo, "*Properties of a-C:H films grown in inert gas ambient with camphoric carbon precursor of pulsed laser deposition*," Diamond and Related Materials(ELSEVIER), Vol 13, Issues 11-12, pp. 2180-2186, 2004.
39) M.Rusop, S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Characterization of Phosphorus-Doped Amorphous Carbon and Construction of n-Carbon/p-Silicon Heterojunction Solar Cells,*" Jpn. J. Appl. Phys., Vol. 42, 2003, pp.2339-2344.
40) M.Rusop, S. M. Mominuzzaman, X. M. Tian, T. Soga, T. Jimbo and M. Umeno, "*Nitrogen Doping and Structural Properties of Amorphous Carbon Films Deposited by Pulsed Laser Ablation*," Applied Surface Science(ELSEVIER), Vol. 197-198, 2002, pp.542-546.
41) M.Rusop, S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Effect of Helium Gas on the Deposition of Diamond Like Carbon Thin Films by Pulsed Laser Ablation*," International Journal of Modern Physics B (World Scientific), Vol. 16, Nos. 6 & 7, 2002, pp.871-875.
42) M.Rusop, S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Effect of Substrate Temperature on Growth of Nitrogen Incorporated Camphoric Carbon Films by Pulsed Laser Ablation*," International Journal of Modern Physics B(World Scientific), Vol. 16, Nos. 6 & 7, 2002, 866-870.
43) S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Diamond-Like Carbon by Pulsed Laser Deposition from Camphoric Carbon Target: Effect of Phosphorus Incorporation*," Diamond and Related materials(ELSEVIER), Vol. 10, 2001, pp. 1839-1842.
44) S. M. Mominuzzaman, H. Ebisu, T. Soga, T. Jimbo and M. Umeno, "*Phosphorus Doping and Defect Studies of Diamond-Like Carbon Films by Pulsed Laser Deposition using Camphoric Carbon Target*," Diamond and Related materials(ELSEVIER), Vol. 10, 2001, pp. 984-990.

45) S. M. Mominuzzaman, T. Soga, T. Jimbo and M. Umeno, "*Camphoric Carbon Soot: A New Target for Deposition of Diamond-Like Carbon Films by Pulsed Laser Ablation*," Thin Solid Films(ELSEVIER), Vol. 376, 2000, pp.1-4.
46) S. M. Mominuzzaman, K. M. Krishna, T. Soga, T. Jimbo and M. Umeno, "*Raman Spectra of Ion Beam Sputtered Amorphous Camphoric Carbon Thin Films*," Carbon(ELSEVIER), Vol. 38, 2000, pp. 127-131.
47) S. M. Mominuzzaman, K. M. Krishna, T. Soga, T. Jimbo and M. Umeno, "*Optical Absorption and Electrical Conductivity of Amorphous Carbon Thin Films from Camphor: a Natural Source*," Jpn. J. Appl. Phys., Vol. 38, 1999, pp.658-663.
48) S. M. Mominuzzaman, K. M. Krishna, K. Hagimoto, T. Soga, T. Jimbo and M. Umeno, "*Optical and Electrical Characterization of Semiconducting Carbon from Natural Source*," Technical Report of IEICE., ED98-21, CPM98-6, SDM98-21 (1998-05), 1998, pp.37-44.

International and National conferences

1) S. Ahmed and Sharif Mohammad Mominuzzaman and S. M. Mominuzzaman, "*Transport Layer Material and Thickness Optimization of Cs_2TiBr_6 Based Solar Cell*", Proceedings of IEEE 12th International Conference on Electrical and Computer Engineering (ICECE 2022), December 21-23, 2022, Dhaka, Bangladesh.
2) S.M. Abir Hossain;Nahian Ibn Hasan;Sharif Mohammad Mominuzzaman and S. M. Mominuzzaman, "*Analytical Study of 1D Monocrystal Graphene Island based Single Electron Transistor (SET)*", Proceedings of IEEE 12th International Conference on Electrical and Computer Engineering (ICECE 2022), December 21-23, 2022, Dhaka, Bangladesh.
3) Muhammad Athar Uddin, Md. Ariful Islam, Imon Deb Nath, Jobair Al Rafi and S. M. Mominuzzaman, "*Modeling and Numerical Analysis of Heterostructure Single-Walled Carbon Nanotube (SWCNT) Solar Cell*", Proceedings of IEEE 12th International Conference on Electrical and Computer Engineering (ICECE 2022), December 21-23, 2022, Dhaka, Bangladesh.
4) Muhammad Athar Uddin, T. Soga and S. M. Mominuzzaman, "*Comparison of Optoelectronic Characteristics of Carbon Thin Films Electrodeposited on Silicon and Zinc Substrates*", Proceedings of IEEE 12th International Conference on Electrical and Computer Engineering (ICECE 2022), December 21-23, 2022, Dhaka, Bangladesh.
5) Muhammad Athar Uddin, T. Soga and S. M. Mominuzzaman, "*Characterization of Multiwall Carbon Nanotube Thin Films Electrodeposited on Indium Tin Oxide Substrates*", Proceedings of IEEE 10th International Conference on Electrical and Computer Engineering (ICECE 2018), December 21-23, 2022, Dhaka, Bangladesh.
6) Md Mahadi Masnad, M. Shah Alam, and S. M. Mominuzzaman*, "Reduction of Excitation Volume in Fluorescence Spectroscopy with Localized Surface Plasmon,"* Proceedings of Tenth International Conference on Electrical and Computer Engineering, ICECE 2018, pp. 293-296, 20-22 December 2018, Dhaka, Bangladesh. Published in IEEE Xplore.
7) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "Calculating Optical Transition Energies in Semiconducting Zigzag SWCNTs", *Proceeding of IEEE Sponsored International Conference on Advanced Mechatronics, Intelligent Manufacture and Industrial Automation (ICAMIMIA-2017)',* 12-14 October, 2017, GedungPusatRobotika, InstitutTeknologiSepuluhNopember, Surabaya, East Java, Indonesia. (Web of Science and Scopus)
DOI: 10.1109/ICAMIMIA.2017.8387593
8) Imtiaj Khan, Ovishek Morshed, Sharif Mohammad Mominuzzaman, "*A comparative performance analysis of 10 nm Si nanowire and carbon nanotube field effect transistors*",

2017 IEEE 17th International Conference on Nanotechnology (IEEE-NANO), pp 109-112, 2017

9) Imtiaj Khan, Ovishek Morshed, Sharif Mohammad Mominuzzaman, "*Transport characterization of silicon nanowire field effect transistors with strain and scattering*", TENCON 2017-2017 IEEE Region 10 Conference, pp 1666-1669, 2017
10) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "Many Body Corrections for Higher Optical Transitions in Semiconducting SWCNTs", *Proceeding of IEEE Sponsored 9th International Conference on Electrical and Computer Engineering (ICECE-2016),* 20-22 December, 2016, BUET, Dhaka, Bangladesh. **DOI:** 10.1109/ICECE.2016.7853919 (Web of Science and Scopus)
11) NT Rouf, AH Deep, RB Hassan, SA Khan, M Hasan, SM Mominuzzaman, "*Current-voltage characteristics of CNTFET considering non-ballistic conduction: Effect of gate oxide thickness*". 2014 2nd International Conference on Devices, Circuits and Systems (ICDCS), 6-8 March 2014, pp 1–4.
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13) **G. R. Ahmed Jamal** and S. M. Mominuzzaman, "Empirical Prediction of Optical Transitions in Metallic Armchair SWCNTs". *Proceeding of IEEE Sponsored 8th International Conference on Electrical and Computer Engineering (ICECE), pp.361-364,*20-22 December, 2014, Pan Pacific Sonargaon, Dhaka, Bangladesh. DOI:10.1109/ICECE.2014.7026903 (Web of Science and Scopus)
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Others

List of Professional Consultancy and Sponsored Research activities in the five most recent years

(organization, title of the consultancy/research project, amount received if any, year)

Consultancy

Consultant in the area of PV systems Designing, Fabrication, Integration, Evaluation Technologies; Mobile, Battery Systems Assembling and Fabrication Technologies; Consultant in Preparing Proposal for Accredited Laboratories, Consultant in the area of Low Medium and High Voltage Power System: Power transformer and Distribution Transformers, HT/LT switchgears, Automatic Transfer Switch (ATS) Panel, PFI Panels, Vacuum Circuit Breakers (VCB), Air Circuit Breakers (ACB), MCCB, MCB, 11kV, 33kV Fuse Link, inverters, etc. for about 30 years.

Some of the Recent Professional activities

- Consultant in a team of EEE, BUET Consultants for Consultancy Services for Vetting on Price Escalation of "Construction of New 132/33 KV & 33/11 KV Substation Under DPDC (with Financial assistance of ADB and AFD)", Dhaka Power Distribution Co. (DPDC) Ltd. House-47, Road-135, Gulshan-01, Dhaka.

  (Substations: Charsayed-pur, Fatulla, Jigatola, Kazla, Motijheel, New Ramna, Postogola, Rampura, Madaniganj, Hasnabad). (2021)

  Major Components: Transformers (132/33kV 80/120MVA, 33/11kV 28/35MVA), GIS (132kV, 33kV), Switchgears (CB and DS), Cu Cables (33kV, 11kV, 500 Sqmm, 185 Sqmm) UG Cable (33kV, 132kV)) etc.

- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 33kV/11kV, 2MVA Tranformer Manufactured by Electromech Automation and Engineering Ltd. (2023)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 33kV/11kV, 3MVA Tranformer Manufactured by Bay Power Technology Ltd., Banani, Dhaka, Bangladesh (2021)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 11/0.415 kV, 2MVA Distribution Tranformer Manufactured by Bay Power Technology Ltd., Banani, Dhaka, Bangladesh (2021)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by Adex Corporation Limited Supplied by Dhaka Electric Supply Company Limited (DESCO), Dhaka. (2020)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by Energy Pac Engineering Limited Supplied by Bangladesh Power Development Board (BPDB) (The sample was sealed with two Seals, No. CZ4008757 and CZ4008758. The sample was chosen by the BPDB's inspection team at random sampling basis from the manufacturers' works under the BPDB's Contract No.: PD/PDSDP/(CZ)/Package-11 (lot-2)/2018-19/212, Date: 24.09.2018), Dhaka. (2019)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by Energy Pac Engineering Limited Supplied by Bangladesh Power Development Board (BPDB), Dhaka. (2017)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by M/S BETELCO, Dhaka, supplied by Bangladesh Power Development Board (BPDB) (BPDB's contract no. Pur-203/ID-10415/Rev/Transformer/14-15/26, dated: 02/04/2015 was selected at random sampling basis and duly sealed (seal no.: CZ0372550 & CZ0372553) by the inspection team of BPDB), Dhaka. (2016)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by M/S Shakti Engineering Ltd., Dhaka, supplied by Bangladesh Power Development Board (BPDB) (The transformer was sealed with seal numbers BPDB-CZ0392300 and BPDB-CZ0392268), Dhaka. (2016)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by M/S Techno Venture Limited Dhaka, Supplied by Directorate of Renewable Energy Research & Development,

Bangladesh Power Development Board (BPDB), Dhaka. (2014)

- Consultant in a team of EEE, BUET Consultants for testing and consultation work of routine test, impulse test and temperature rise test on a sample of 50/75 MVA, 132/33 kV, Dyn1, 3-phase power transformer manufactured by Energypac Engineering Ltd., Baruipara, Savar, Dhaka. (2014)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of on samples of 11 kV Pin insulator with pin, 11 kV Disc insulator with fittings, 33 kV Pin insulator with pin, 33 kV Disc insulator with fittings for Marlin conductor, and 33 kV Post type insulator supplied by Bangladesh Power Development Board (BPDB), Dhaka. (2013)
- Consultant in a team of EEE, BUET Consultants for consultation work of a 300 KW Vapor Phase Drying Plant Machine from China imported by Energypac Engineering Limited (EEL), Energy Center, 25, Tejgaon I/A, Dhaka (Commercial Invoice No.: ST140622, Invoice date: 27-Jun-2014, Country of Origin: China, PROFORMA Invoice No. (S/C No.): TS-2013/050BD R-2, L/C No.: 248140035, CONTROL NO.: 421010373606, LCA FORM NO.: SCB27699, IMPORTER'S IRC NO.: BA-61978, H.S. CODE NO.: 8479.89.00, APPLICANT'S BIN.: 17121000884). (2014)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3-phase Distribution Transformer Manufactured by M/S BETELCO, Dhaka, Supplied by Bangladesh Power Development Board (BPDB), Dhaka. (2013)
- Consultant in a team of EEE, BUET Consultants for Consultancy services to BCB for Power Connection for the Lighting Circuits/installation of LED Sport Lights and accessories at the indoor and outdoor practice facilities area at Sher-e-Bangla National Cricket Stadium (SBNCS), Mirpur, Dhaka. (2023)
- Consultant in a team of EEE, BUET Consultants for Consultancy services of Power Saving and Efficacy on two samples of P8 outdoor LED modules supplied by M/S APSON, Dhaka Airport, Mollartek, Kosaibari Railgate, Dhaka. (2023)
- Consultant in a team of EEE, BUET Consultants for Consultancy services to Computer World BD, Dhaka on one sample of P10 module of LED Advertisement Board and one sample of P16 Module Giant Screen., Dhaka. (2022)
- Consultant in a team of EEE, BUET Consultants for Consultancy services to National Sports Council, Dhaka on four P10 Modules of LED Giant Advertisement Board for Bangabandhu National Stadium, Dhaka. (2022)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A Automatic Transfer Switch (ATS) Panel for the purpose of BUET substation Manufactured by Maan Engineering Limited, Dhaka (2023)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A Automatic Transfer Switch (ATS) Panel of Manufactured by Electromech Automation and Engineering Ltd (2023)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A Automatic Transfer Switch (ATS) Panel Manufactured by Universal Power-Tech & Engg. Ltd., 32, Sultan Ahmed Plaza, 8th Floor, Suit #904, Purana Palton, Dhaka-1000, Bangladesh, (2021)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of

a 3200A Automatic Transfer Switch (ATS) Panel Manufactured by Maan Engineering Limited, Dhaka (2020)

- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A Automatic Transfer Switch (ATS) Panel for the purpose of BUET substation Manufactured by Adex Corporation Limited, Dhaka (2018)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A Automatic Transfer Switch (ATS) Panel Manufactured by EnergyPac Engineering Limited, Dhaka (2020)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of 33kV Fuse Links supplied by Bangladesh Power Development Board (BPDB), Dhaka (2017)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of 11kV Fuse Links supplied by Bangladesh Power Development Board (BPDB), Dhaka (2017)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of 3-phase MCCB supplied by Bangladesh Power Development Board (BPDB), Dhaka (2017)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 1200 kVAR Automatic PFI Plant Manufactured by Bay Power Technology Ltd., Banani, Dhaka, Bangladesh (2021)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a HT Switchgear Panel as a part of a sub-station Manufactured by Electromech Automation and Engineering Ltd. (2023)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A LT Switchgear Panel as a part of a sub-station Manufactured by Electromech Automation and Engineering Ltd. (2023)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a HT Switchgear Panel as a part of a sub-station to be supplied and installed at the factory of Everbright Sweater Ltd, Savar, Dhaka Manufactured by Bay Power Technology Ltd., Banani, Dhaka, Bangladesh (2021)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of a 3200A LT Switchgear Panel as a part of a sub-station to be supplied and installed at the factory of Everbright Sweater Ltd, Savar, Dhaka Manufactured by Bay Power Technology Ltd., Banani, Dhaka, Bangladesh (2021)
- Consultant in a team of EEE, BUET Consultants for testing and consultation work of thirty-three (33) sealed bottles of 230 kV transformer Insulation Oil supplied by Guangdong Power Engineering Corporation Limited of CEEC (GPEC) and Guangdong Electric Power Design Institute Co., Ltd of CEEC (GEDI), China. (2015)
- Consultant in a team of EEE, BUET Consultants for the Design, Supply and Execution of Works of Solar Hybrid Power Plant in Bhasan Char (for Rohingya) Under Ashrayan-3 Project for Bangladesh Navy. (2019-2020)
- Consultant in a team of EEE, BUET Consultants for the Technical and Financial Assessment of Rooftop Solar Projects (Paragon Poultry Limited, Gazipur) supported by Infrastructure Development Company Limited (IDCOL). Project Features: Provide

technical feasibility on the renewable energy penetration to national grid through rooftop solar in context of Bangladesh. (2019)

- Consultant in a team of EEE, BUET Consultants for the Technical and Financial Assessment of Rooftop Solar Project (Paragon Poultry Limited, Gazipur) supported by Infrastructure Development Company Limited (IDCOL). Project Features: Provide technical feasibility on the renewable energy penetration to national grid through rooftop solar in context of Bangladesh. (2019)
- Consultant in a team of EEE, BUET Consultants for the Technical and Financial Assessment of Rooftop Solar Project (Megaroof Limited), Mymensingh) supported by Infrastructure Development Company Limited (IDCOL). Project Features: Provide technical feasibility on the renewable energy penetration to national grid through rooftop solar in context of Bangladesh. (2019)
- Consultant in a team of EEE, BUET Consultants for the Technical Audit of Renewable Energy System under TR/KABITA Program requested. by Infrastructure Development Company Limited (IDCOL) (Inspected more than 700 solar home and solar street light systems in 40 upazillas located in different geographical locations of Bangladesh and checked their performance) (2018-2019)
- Consultant in a team of EEE, BUET Consultants for the Technical Audit of Partner Organizations (PO) of Infrastructure Development Company Limited (IDCOL) (Inspected 517 solar home systems in 12 geographical locations of Bangladesh selected by IDCOL and checked their performance) (2014-2015)
- Consultant in a team of EEE, BUET Consultants for the Preparation of Project-profile for establishment of an 'Electrical and Electronic Testing Laboratory (EETL) (Nine Laboratories were considered)' that would conform to international standards and norms in 'Shyampur-Kadomtoli Industrial Park' (2014-2015). The specifications of the test equipments are chosen such a way that the testing of products can be done as per the standards of BDS, IEC, ISO, ASTM, BS, VDE, IS or other internationally reputed standard organizations.

Section-B Additional Information

1. **Contact Information**

- Office Room Number: 122
- Office Telephone Number: 6150
- Mobile Number: 01553552300
- Email Address: momin@eee.buet.ac.bd

2. Short Biography (250 words or less)

Dr. Sharif Mohammad Mominuzzaman is a Professor in the Department of Electrical and Electronic Engineering (EEE) of Bangladesh University of Engineering and Technology (BUET). He is faculty of BUET since 1992. He obtained his B.Sc. and M.Sc. degree from BUET in 1991 and 1993, respectively. Later he earned Ph.D. from Nagoya Institute of Technology, Nagoya, Japan in 2001. His M.Sc. topic was on second breakdown phenomenon in electronic device. His Ph.D. research was on Fabrication of Carbon/Silicon hetero-junction Photovoltaic solar Cell by Ion Beam Sputtering and Pulsed Laser Ablation methods. During his PhD

work, he has synthesized doped semiconducting carbon from fullerene C_{60} and fabricated n-C/p-Si hetero-junction PV cell and performed in depth investigation successfully. Due to his recognition of research activity he was awarded Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship. During his postdoctoral research he has synthesized various types of nano carbon including single wall carbon nanotube (SWCNT) and multi wall carbon nanotube (MWCNT), graphene, semiconducting a-C, DLC for opto-electronic device applications. His research area includes synthesizing of nano-materials, fabrication of nano devices for opto-electronic applications, solar cells, renewable energy and power systems; and simulation of the materials, device and systems. He was also awarded prestigious Japan Society for the Promotion of Science (JSPS)-University Grants Commission (UGC) Joint Research Project (During 2009~2011). He has published more than 200 papers in the International Journal and Conferences.

In recognition to his research Dr. Mominuzzaman has received Best Oral Paper Award in the category-I (Fundamental and New Approaches) in the 14th International Photovoltaic Science and Engineering Conference (PVSEC-14), Jan. 26-30, 2004, Bangkok, Thailand. He has also received Best (2) Oral Paper Award in the 10th International Conference on Electrical and Computer Engineering, (ICECE 2018), 20-22 December 2018, Dhaka, Bangladesh. He has been serving as consultant, member in top supervision committee, member in tender evaluation committee, member in negotiation committee and member in technical specification preparation committee in many national projects in Bangladesh especially in the field of Renewable energy and Power systems. He is directly involved in preparation and finalization of Bangladesh Standards (BDS). He is also an expert member of the Committee for Technical Evaluation of Detailed Documents of Dhaka Mass Rapid Transit Development Project (Line-6) provided by Dhaka Mass Transit Company Limited (DMTCL) Government of the People's Republic of Bangladesh. Currently he is serving as Board member, Bangladesh Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh.

3. Research Interests

- Opto Electronic Devices
- Photovoltaic Cells
- Nano Materials and Devices
- Renewable Energy and Power Systems

4. Web Links:

- Personal Website: http://www.buet.eee/momin
  https://www.researchgate.net/profile/Sharif-Mominuzzaman/research

5. News Articles and Interview Links:

- N/A

6. Major Courses Offered:

Undergraduate

- EEE 455 – Compound Semiconductor Device
- EEE 459 – Optoelectronics

Postgraduate

- EEE 6407 – Carbon Nanotechnology

Section-C Information Supporting this Role

(1) Consultancy Experience.

(i) Expertise in evaluating technical designs, documents and system specifications for large-scale projects.

- Consultant in a team of EEE, BUET Consultants for Consultancy services including evaluating technical designs, documents and system specifications to BCB for Power Connection for the Lighting Circuits/installation of LED Sport Lights and accessories at the indoor and outdoor practice facilities area at Sher-e-Bangla National Cricket Stadium (SBNCS), Mirpur, Dhaka. (2023)
- Consultant in a team of EEE, BUET Consultants for Consultancy services for Grameen Distribution Limited (GDL) at Gazipur, Bangladesh on the assemble/manufacture batteries, cell phones and other accessories in their factory (2023).
- Consultant to BCB for Power Connection for the Lighting Circuits/installation of LED Sport Lights and accessories at the indoor and outdoor practice facilities area at Sher-e-Bangla National Cricket Stadium (SBNCS), Mirpur, Dhaka. (2023)
- Consultant in a team of EEE, BUET Consultants for the Design, Supply and Execution of Works of Solar Hybrid Power Plant in Bhasan Char (for Rohingya) Under Ashrayan-3 Project for Bangladesh Navy. (2019-2020)
- Consultant in a team of EEE, BUET Consultants for evaluating technical designs, documents and system specifications including Financial Assessment of Rooftop Solar Projects (Paragon Poultry Limited, Gazipur) supported by Infrastructure Development Company Limited (IDCOL). Project Features: Provide technical feasibility on the renewable energy penetration to national grid through rooftop solar in context of Bangladesh. (2019)
- Consultant in a team of EEE, BUET Consultants for evaluating technical designs, documents and system specifications including Financial Assessment of Rooftop Solar Project (Megaroof Limited), Mymensingh) supported by Infrastructure Development Company Limited (IDCOL). Project Features: Provide technical feasibility on the renewable energy penetration to national grid through rooftop solar in context of Bangladesh. (2019)
- Consultant in a team of EEE, BUET Consultants for the Technical Audit of Renewable Energy System under TR/KABITA Program requested. by Infrastructure Development Company Limited (IDCOL) (Inspected more than 700 solar home and solar street light systems in 40 upazillas located in different geographical locations of Bangladesh and checked their performance) (2018-2019)
- Consultant in a team of EEE, BUET Consultants for the Technical Audit of Partner Organizations (PO) of Infrastructure Development Company Limited (IDCOL) (Inspected 517 solar home systems in 12 geographical locations of Bangladesh selected by IDCOL and checked their performance) (2014-2015)
- Consultant in a team of EEE, BUET Consultants for the Consultancy Service for Preparing a Project-Profile to Establish an International Standard Electrical and Electronic Testing Laboratory in Shyampur-Kodomtoli Electrical Industrial City Bangladesh for Electrical Merchandisers Manufacturers Association (BEMMA)

Requested by SME Foundation (2013-2014).

(ii) Expertise in supervising production, ensuring quality control and supporting the integration and interoperability of systems across multiple platforms.

- Designing, Supervising Production of Multiple Instruments/Devices/System Components required to Evaluate Performance of installed PV Systems in different geographical locations all over Bangladesh as a member of Consultant in a team of EEE, BUET Consultants for the Technical Audit of Partner Organizations (PO) of Infrastructure Development Company Limited (IDCOL) (Inspected 517 solar home systems in 12 geographical locations of Bangladesh selected by IDCOL and evaluated their performance, 2014-2015).
- Designing, Supervising Production of Multiple Instruments/Devices/System Componnets required to Evaluate Performance of installed PV Systems in different geographical locations all over Bangladesh as a member of Consultant in a team of EEE, BUET Consultants for the Technical Audit of Renewable Energy System under TR/KABITA Program requested. by Infrastructure Development Company Limited (IDCOL) (Inspected more than 700 solar home and solar street light systems in 40 upazillas located in different geographical locations of Bangladesh and checked their performance, 2018-2019).

(2) Research Expertise.

Expertise in R&D, particularly in projects related to electrical, electronics and communication systems.

- Project Titled "Synthesis and Characterization of Carbon Nanotubes for Environmental Applications", Japan Society for the Promotion of Science (JSPS)-University Grants Commission (UGC) Joint Research Project for FY 2009, (Amount Japanese Yen 5,000,000), April, 2009 to March 2011

- Project Titled "Studies on new type of solar cell using nanostructured carbon", Japan Society for the Promotion of Science (JSPS) - Ministry of Education, Culture, Sports, Science and Technology (Monbukagakusho). (Amount Japanese Studies on new type of solar cell using nanostructured carbon Yen 2,700,000), Nov, 2005 to November 2007.

- Worked for more than nine years in the sophisticated **clean room** in Nagoya Institute of Technology (NIT), Japan.
- Experienced in high technology deposition systems, such as, Laser Ablation, Ion Beam Sputtering, MBE, Chemical Vapor Deposition (CVD) Systems, such as, Thermal CVD, rf. PECVD, Microwave CVD, etc.
- Worked in Electron Beam and thermal evaporator systems.
- Experienced in various structural, optical, electrical characterization systems, such as, Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM), Thickness Profiler, Transmittance/Reflectance spectrophotometer (UV-VIS-IR range), FTIR and Raman Spectroscopy, Electron Spin Resonance Spectroscopy (ESR), Conductivity measurement systems (4-probe/two probe), Current-Voltage (I-V) and Capacitance-Voltage (C-V) analyzer, Solar Simulator, etc.
- Worked in optical lithographic system for metal contacts of electronic devices.
- Contributed to set up Excimer (XeCl) Pulsed Laser Deposition set up in the clean room

of Nagoya Institute of Technology (NIT), Japan.

- Develop nanotube synthesis system
- Synthesized single wall and multi wall nanotube
- Fabricated Electronic and Optical Devices

(3) Standards Compliance Expertise

. Expertise in ensuring compliance with international standards such as IEEE/ ISO/ IEC.

Review the accreditation process of laboratory accreditation (IEC 17025, 17020 and other relevant standards) and finally ballot their individual recommendations on accreditation as Chair, Accreditation Committee, Bangladesh Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh. More than 50 Testing & Calibration Laboratories, Certification Bodies, Inspection Bodies, Training Institutions and Persons who perform conformity assessments Laboratories, Inspection bodies, since 2018.

Visit and short Training in an internationally standard laboratory. "Agilent Singapore, Repair & Calibration Services", 1 Yishun Avenue 7, Singapore 768923, January 2014.

Visit and short Training in an internationally standard laboratory. "Electrical & Electronic SectionTesting Services, Department SIRIM QAS International Sdn. Bhd.",. Building 8, SIRIM Complex, No. 1, Persiaran Dato' Menteri, Section 2, P.O. Box 7035, 40700 Shah Alam, Selangor Darul Ehsan, Malaysia January 2014.

Consultant in a team of EEE, BUET Consultants for the Consultancy Service for Preparing a Project-Profile to Establish an International Standard (IEC 17025 and relevant Standards) Electrical and Electronic Testing Laboratory in Shyampur-Kodomtoli Electrical Industrial City Bangladesh for Electrical Merchandisers Manufacturers Association (BEMMA) Requested by SME Foundation (2013-2014).

BDS IEC Standard Training on "Basic Understanding of BDS IEC Standard Testing For Photovoltaic Panels", for Sustainable and Renewable Energy Development Authority (SREDA), Power Division, Ministry of Power, Energy and Mineral Resources, June 2018.

(4) Expertise on Cyber Security and Data Integrity

. Experience in ensuring cyber security standards in software and hardware solutions, especially in areas involving encryption and data security protocols.

N/A

Other Qualification

(5) Project and System Evaluation.

(i) Expertise in reviewing technical documents and deliverables, identifying defects or areas of improvement and ensuring compliance with international standards.

Review the accreditation process of laboratory accreditation and finally ballot their individual recommendations on accreditation as Chair, Accreditation Committee, Bangladesh

Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh. (2018~).

Consultant in a team of EEE, BUET Consultants for the Consultancy Service for Ascertaining the proximate cause of loss and extent of damages sustained to the Building and Machinery, Determining the precautionary measure against the prevention of fire, Providing necessary recommendation for running the factory in future in the affected building of Nasir Glassware and Tube Industries Limited, Mirzapur, Tangail, Bangladesh (2022-2023)

Assessment on Supply and Installation of Materials, Functionality of Installed System and Testing of Materials for Turnkey Project of Computerized Control System for Modernization of Gate and Hoisting System of Teesta Barrage

Consultant in a team of EEE, BUET Consultants for the Consultancy Service for Determining the Adequacy of Fire Prevention Measures and finding the probable cause of fire through a qualitative inference of the Mill Building of Kader Compact Spinning Limited (KCSL), BSCIC Industrial Estate, Konabari, Gazipur, Bangladesh. (2019).

(ii) Ability to provide technical opinion and recommendation on the development, installation and evaluation of systems, ensuring desired performance and quality benchmarks.

Consultant in a team of EEE, BUET Consultants for the Consultancy Service to provide technical opinion and recommendation on input-output coefficient of cell phone during production/ manufacturing process based on physical investigation the factory setup and installed machineries and relevant documents factory site of WALTON Digi-Tech Industries Limited, Chandra, Kaliakoir, Gazipur, Bangladesh, requested by Deputy Commissioner, Customs, Excise and VAT Commissionerate, Dhaka (North) (2019). (In short, the manufacturing of a cell phone is carried out in seven units namely printed circuit board (PCB), surface-mount technology (SMT), Housing, Battery, Charger and Assembly Line. The PCB unit produces the PCB board which mechanically supports and electrically connects electronic components or electrical components using conductive tracks, pads and other features etched from one or more sheet layers of copper laminated onto and/or between sheet layers of a non-conductive substrate. The SMT unit makes the PCB ready for assembly line for producing electronic circuits in which the components are mounted or placed directly onto the surface of printed circuit boards. An electronic device so made is called a surface-mount device (SMD). Housing, Battery and Charger units produce housing, battery and charger for cell phone, respectively. Assembly line attaches housing, battery, charger, display, camera and other necessary parts onto the PCB (output from SMD). Hence, the input and output coefficient is also calculated for that seven stages. The team calculated the input output coefficient or the percentage of wastage on the spot for several units. Also the team checked the past production data and calculated the percentage of wastage.)

(6) Prototype Development and Testing.

Expertise in testing prototypes especially for communication systems and electronic components as per given design files.

Fabricating Various types of electrical and electronic equipment's/instruments' in order to perform test the solar home, street lighting systems on many geographical locations and laboratory for Bangladesh for Technical Audit of Partner Organizations (PO) of Infrastructure Development Company Limited (IDCOL)

(7) Quality Assurance (QA) and Certification

. Expertise on quality assurance and certification processes, ensuring that final products meet performance and reliability benchmarks.

Review the accreditation process of laboratory accreditation (IEC 17025, 17020 and other relevant standards) and finally ballot their individual recommendations on accreditation as Chair, Accreditation Committee, Bangladesh Accreditation Board (BAB), Ministry of Industries, Government of the People's Republic of Bangladesh. More than 50 Testing & Calibration Laboratories, Certification Bodies, Inspection Bodies, Training Institutions and Persons who perform conformity assessments Laboratories, Inspection bodies, since 2018.

Consultant in a team of EEE, BUET Consultants for the Consultancy Service for Preparing a Project-Profile to Establish an International Standard Electrical and Electronic Testing Laboratory in Shyampur-Kodomtoli Electrical Industrial City Bangladesh for Electrical Merchandisers Manufacturers Association (BEMMA) Requested by SME Foundation (2013-2014).