Dr. Mehnaz Sharmin

Bangladesh University of Engineering and Technology
Department of Physics
Dhaka-1000
Bangladesh
E-mail: proggaph@gmail.com, mehnaz@phy.buet.ac.bd
Mobile: +880-1712685078
Website: https://phy.buet.ac.bd/faculty_profile/27/mehnaz-sharmin
Researchgate: https://www.researchgate.net/profile/Mehnaz_Sharmin
GoogleScholar:
https://scholar.google.com/citations?hl=en&user=WHihhj0AAAAJ

Education:

Name of Degree	Board/University	Year of Passing	Results
Ph. D.	Bangladesh University of Engineering and Technology	2019	CGPA: 3.67
M. Phil. (Physics)	Bangladesh University of Engineering and Technology	2015	CGPA: 3.67
M. S. (Physics)	University of Dhaka	2010	1st Class 2nd
B. Sc. (Hons.) in Physics	University of Dhaka	2009	1st Class 8th
H. S. C.	Rajshahi Board	2002	1st Division
S. S. C.	Rajshahi Board	2000	1st Division

Theses:

1. Ph. D Thesis: Synthesis and Characterization of Mg and Al Doped Fe_2O_3 Thin Films for Gas Sensing Application, December-2019
2. M. Phil. Thesis: Characterization of Boron Doped Zinc Oxide Thin Films Prepared by Spray Pyrolysis Deposition Technique, July-2015
3. M. S. Thesis: Study of Electrical and Optical Properties of Single Crystal p-Type Gallium Arsenide and p-Type Silicon, May-2010

Work Experience

Nov 2025 - Present **Professor**
Department of Physics, BUET, Dhaka, Bangladesh

Sept 2020 – Nov 2025 **Associate Professor**
Department of Physics, BUET, Dhaka, Bangladesh

Apr 2016 – Sept 2020 **Assistant Professor**
Department of Physics, BUET, Dhaka, Bangladesh

Oct 2011 – Apr 2016 **Lecturer**
Department of Physics, BUET, Dhaka, Bangladesh

Feb 2011 – Oct 2011 **Lecturer**
Department of Basic Sciences, Primeasia University, Dhaka, Bangladesh

Awards & Grants

February 2025	Best oral presentation in the "Materials Science" session of National Conference on Physics-2025 organized by Bangladesh Physical Society
May 2024	Best oral presentation in the "Thin Films" session of International Conference on Physics-2024 organized by Bangladesh Physical Society
March 2023	Best oral presentation in the "Thin Films" session of National Conference on Physics-2023 organized by Bangladesh Physical Society
December 2022	Best poster paper award at 7th Conference of Bangladesh Crystallographic Association organized by Bangladesh Crystallographic Association
March 2020	Best oral presentation award in Thin Film Session International Conference on Physics - 2020 organized by Bangladesh Physical Society
February 2019	Best Poster Award for 2 posters in the National Conference on Physics, 2019 organized by Bangladesh Physical Society
March 2018	The best poster paper award at 4th International Conference on Structure, Processing and Properties of Materials 2018 organized by Bangladesh University of Engineering and Technology
October 2017	Bangabandhu Science and Technology Fellowship 2017-2018 for Ph. D. program awarded by Bangabandhu Science and Technology Fellowship Trust.
March 2016	2 posters were selected among best 10 posters in the International conference on Physics-2016 organized by Bangladesh Physical Society

Skills & Activities

Skills	Semiconductor materials, Metal oxide thin films, Spray pyrolysis techniques, Sol-gel technique, Thin film characterization.
Languages	Bengali; Bangla, English, Hindi
Computer Literacy	Applications: MS Office, Basic and advanced Graphics Programs. Operating systems: Windows 2000/XP/2007, Windows 8, Window
Scientific Memberships	Bangladesh Physical Society, Bangladesh Crystallographic Association
Interests	Recitation, Music

Journal Publications:

1. Tusar Saha, Selina Akter Lucky, Mehnaz Sharmin, Jiban Podder, ZnO and CuO/ZnO nanostructured thin films via thermal spray pyrolysis for ethanol sensing at room temperature: A cost-effective approach, Physica B, 727 (2026) 418300
2. Mehnaz Sharmin, I.N. Esha, Tasnima Begum, Arafat Rahman, Kazi Hanium Maria, Influence of Mg doping on growth, structural, morphological, optical, and electrical properties of CuO thin films: Experimental and DFT studies, Micro and Nanostructures 210 (2026) 208486
3. Rutaba Jania, Mehnaz Sharmin, Kazi Hanium Maria, Optimizing TMDs dispersion and the synergistic effects of solvents: A methodical study of design strategies, challenges, and opportunities, Next Nanotechnology, 8 (2025) 100264
4. Selina Akter Lucky, Mehnaz Sharmin, Harinarayan Das, and Jiban Podder, Evolution in Morphological Features, Enhancement of Optical Transparency and Band Gap Broadening in Manganese Doped Nickel Oxide Thin Films for Optoelectronics Applications, Thin Solid Films, 816 (2025) 140651
5. R. Rahaman, Mehnaz Sharmin and J. Podder, The effect of cobalt doping on the structure and properties of copper oxide thin films: Evolution in surface morphology, p to n-type carrier

transition and enhancement optoelectronic behavior, International Journal of Modern Physics B, (2025) 2550145

6. Mehnaz Sharmin, J. Podder, K. S. Hossain, Substrate temperature dependence of surface morphology and structure of n-type Fe_2O_3 thin films with enhanced transparency, Bangladesh Journal of Physics, Vol. 30(1), pp. 13–22, 2023.
7. P. Datta, Mehnaz Sharmin, J. Podder, S. Choudhury, Enhancement of the structural, morphological, optical, and electrical properties of Mn doped CuO thin films via spray pyrolysis, Journal of Optoelectronics and Advanced Materials, 23(1-2), 35-42, 2023.
8. R. Rahaman, Mehnaz Sharmin and J. Podder, Band gap tuning and p to n-type transition in Mn-doped CuO nanostructured thin films, Journal of Semiconductors, 43(1), 012801, 2022.
9. J. Uddin, Mehnaz Sharmin, M. N. Hasan, J. Podder, Influence of Ni doping on the morphological, structural, optical and electrical properties of CuO thin films deposited via a spray pyrolysis, Optical Materials, 119, 111388, 2021.
10. M. K. Alam, Mehnaz Sharmin, J. Podder, Bandgap tuning in ZnO thin films and enhanced n-type properties through Mn doping synthesized by a simple spray pyrolysis, International Journal of Modern Physics B, 35(11):2150155, 2021.
11. P. Datta, Mehnaz Sharmin, J. Podder, S. Choudhury, Influence of substrate temperature on the morphological, structural, optical and electrical properties of nanostructured CuO thin films synthesized by spray pyrolysis technique, Journal of Optoelectronics and Advanced Materials, 23(1-2), 35-42, 2021.
12. M. A. Momin, M. A. Islam, M. Nesa, Mehnaz Sharmin, M. J. Rahman and A. H. Bhuiyan, Effect of M (Ni, Cu, Zn) doping on the structural, electronic, optical, and thermal properties of CdI_2: DFT based theoretical studies, AIP Advances, 2021, 11, 055203.
13. M. Nesa, Mehnaz Sharmin and A.H. Bhuiyan, Role of Zn dopants on the surface morphology, chemical structure and DC electrical transport properties of nanostructured p-type CuO thin films, Materials Science in Semiconductor Processing, 2021, 122, 105479.
14. M. H. Babu, J. Podder B. C. Dev and Mehnaz Sharmin, p to n-type transition with wide blue shift optical band gap of spray synthesized Cd doped CuO thin films for optoelectronic device applications, Surfaces and Interfaces, 2020, 19, 100459.
15. Mehnaz Sharmin and J. Podder, Band Gap Tuning, n-type to p-type Transition and Ferrimagnetic Properties of Mg Doped α-Fe_2O_3 Nanostructured Thin Films, Journal of Alloys and Compounds, 2020, 818, 152850.
16. M. Nesa, M. A. Momin, Mehnaz Sharmin and A.H. Bhuiyan, Structural, optical and electronic properties of CuO and Zn doped CuO: DFT based First-principles calculations, Chemical Physics, 2020, 528, 110536.
17. Mehnaz Sharmin and J. Podder, Influence of Al Doping on the Structure and Properties of Fe_2O_3 Thin Films: High Transparency, Wide Band Gap, Ferromagnetic Behavior, Semiconductor Science and Technology, 2019, 34, 075033.
18. Mehnaz Sharmin and A. H. Bhuiyan, Modifications in structure, surface morphology, optical and electrical properties of ZnO thin films with low boron doping, Journal of Materials Science: Materials in Electronics, 2019, 30 (5), 4867 - 4879.
19. Mehnaz Sharmin and A. H. Bhuiyan, Influence of Substrate Temperature on the Properties of Spray Deposited Nanofibrous Zinc Oxide Thin Films, Applied Physics A, 2018,124, 57.
20. M. Nesa, Mehnaz Sharmin, K. S. Hossain and A. H. Bhuiyan, Structural, Morphological, Optical and Electrical Properties of Spray Deposited Zinc Doped Copper Oxide Thin Films, Journal of Materials Science: Materials in Electronics, 2017, 28, 12523-12534.

21. M. S. Islam, C. Das, Mehnaz Sharmin, K. M. A. Hussain And S. Choudhury, Effect of Doping Concentration on The Optical Properties of Indium-Doped Gallium Arsenide Thin Films, Journal of Bangladesh Academy of Sciences, 2016, 40(2), 179-186.
22. M. Biswas, Mehnaz Sharmin, C. Das, S. Choudhury and J. Poddar, Structural and Optical Characterization of Magnesium Doped Zinc Oxide Thin Films Deposited by Spray Pyrolysis, Dhaka University Journal of Science, 2016, 64(1), 37-42.
23. Mehnaz Sharmin, S. Choudhury and T. Begum, Electrical, Optical and Structural Properties Of p-Type Silicon, Dhaka University Journal of Science, 2015, 63(1), 37-41.
24. Mehnaz Sharmin, S. Choudhury, N. Akhtar and T. Begum, Optical and Transport Properties of p-Type GaAs, Journal of Bangladesh Academy of Sciences, 2012, 36(1), 97-107.

Conference presentations (Poster/Oral):

1. Md. Rubel Hossen, Nawshin Tithi, Farhan Labib Fahim, Mehnaz Sharmin, Structural, Optical, Morphological and Gas Sensing Properties of Ni-Doped Fe_2O_3 Thin Films, International Conference on Physics - 2026, Organized by Bangladesh Physical Society, 9-11 April 2026.
2. Taposhi Rabeya Binta Rashed Anika, Mehnaz Sharmin, Optical, Structural, and Transport Properties of Ni-doped Manganese(III) Oxide Thin Films, International Conference on Physics - 2026, Organized by Bangladesh Physical Society, 9-11 April 2026.
3. Rutaba Jania, Mehnaz Sharmin, H.N. Das, Kazi Hanium Maria, Controlled Liquid-Phase Exfoliation of Layered TMDs and Its Impact on Structural and Optoelectronic Properties, International Conference on Physics - 2026, Organized by Bangladesh Physical Society, 9-11 April 2026.
4. T.I. Prova, I. N. Esha, Mehnaz Sharmin, Kazi Hanium Maria, Mohammad Shahriar Bashar, Tuning Band Gap and Enhancing Surface Activity in Zn–Al Co-Doped CuO Thin Films for Optoelectronic and Photo-Assisted Sensing Applications, International Conference on Physics - 2026, Organized by Bangladesh Physical Society, 9-11 April 2026.
5. Farhan Labib Fahim, Mehnaz Sharmin, Effect of cobalt-doping on nickel oxide thin films for ethanol gas sensing performance, 2nd International Conference on Frontiers in Science: Innovation & Technology for Greener Industry (2nd ICFS:ITGI), 15 - 16 January, 2026, Organized by: Faculty of Science, BUET, Dhaka-1000
6. Mushfikatul Zannah, Taposhi Rabeya Binta Rashed Anika, Nawshin Tithi, Mehnaz Sharmin, Structural, optical, and gas sensing properties of Fe-doped manganese dioxide thin films, 2nd International Conference on Frontiers in Science: Innovation & Technology for Greener Industry (2nd ICFS:ITGI), 15 - 16 January, 2026, Organized by: Faculty of Science, BUET, Dhaka-1000
7. Mehnaz Sharmin, Metal Oxide Semiconducting Thin Films for Functional Devices: Fabrication, Characterization, and Key Challenges, 10^{th} Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 11 - 12 December 2025.
8. M. Zannah, T. R. B. R. Anika, N. Tithi, F. L. Fahim, Mehnaz Sharmin, Optical, electrical, and structural properties of iron-doped manganese dioxide thin films, 10^{th} Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 11 - 12 December 2025.
9. Farhan Labib Fahim, Mehnaz Sharmin, Ethanol sensing performance of cobalt-doped nickel oxide thin films, 10^{th} Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 11 - 12 December 2025.
10. Rutaba Jania, Mehnaz Sharmin, Kazi Hanium Maria, Solvent-Mediated Dispersion of TMDs: A Systematic Exploration of Strategies, Challenges, and Opportunities, 10^{th} Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic

Association, 11 - 12 December 2025.

11. T.I. Prova, Mehnaz Sharmin, Kazi Hanium Maria, Mohammad Shahriar Bashar, I. N. Esha, Role of Zn–Al Co-Doping in Tailoring the Structural Defects and Band Gap of CuO Thin Films, 10th Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 11 - 12 December 2025.
12. Farhan Labib Fahim, Mushfikatul Zannah, and Mehnaz Sharmin, The influence of cobalt doping on the structural, optical, electrical, and photoluminescent properties of nickel oxide thin films, National Conference on Physics-2025, Organized by Bangladesh Physical Society, 6 - 7 February 2025.
13. Md. Rahidul Islam, Mehnaz Sharmin, Md. Kamruzzaman, Ishtiaque M. Sayed, Structural, Optical, Morphological, Electrical, and Antimicrobial Properties of Copper-Doped Titanium Dioxide (TiO2) Thin Films Prepared by Spray Pyrolysis Deposition Technique, 9th Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 10 -11 January 2025.
14. M. J. Hosen, and Mehnaz Sharmin, Investigation of Structural, Compositional, and Optical Properties of Sol-gel Prepared MnO2/NiO Thin Films, 9th Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 10 -11 January 2025.
15. F. L. Fahim, M. Zannah, and Mehnaz Sharmin, Structural, optical and photoluminescent properties of cobalt-doped nickel oxide thin films, 9th Conference of Bangladesh Crystallographic Association, Organized by Bangladesh Crystallographic Association, 10 -11 January 2025.
16. Md. Jakaria Hosen, Mehnaz Sharmin, Jiban Podder, Harinarayan Das, Optical, photoluminescence, and electrical properties of spin coating deposited MnO_2/NiO thin films, Centennial Celebration of Bose-Einstein Statistics: A Legacy of Dhaka, Jointly organized by Department of Physics and Bose Center for Advanced Study and Research in Natural Sciences, University of Dhaka, 7 – 10 November, 2024.
17. S. A. Lucky, M. J. Hosen, M. Zannah, F. L. Fahim, Mehnaz Sharmin, and J. Podder, Structural, Morphological, Optical and Electrical Properties of Spray Pyrolysis Deposited Mn_3O_4/NiO Composite Thin Films, Summer School on Communication Skills and Research Poster Presentation, 25 October 2024, Organized by Department of Physics, Bangladesh University of Engineering and Technology, Dhaka.
18. M. J. Hosen, Mehnaz Sharmin, J. Podder, and H. N. Das, Study of structural, surface morphological, optical, and electrical properties of sol-gel deposited MnO_2/NiO thin films, International Conference on Physics-2024, Organized by Bangladesh Physical Society, 9 - 11 May 2024.
19. S. A. Lucky, Mehnaz Sharmin, and J. Podder, Investigation of methanol sensitivity of NiO and Mn-doped NiO thin films at ambient temperature, International Conference on Physics-2024, Organized by Bangladesh Physical Society, 9 - 11 May 2024.
20. S. A. Lucky, Mehnaz Sharmin, and J. Podder, Surface morphological, structural, and optical properties of MnO_x/NiO bilayer thin films, Sultan Ahmed Memorial Conference 3-4 May, 2024 at Department of Physics, University of Dhaka, Bangladesh.
21. S. K. Choudhury, K. H. Maria, H. Ferdous, R. S. Islam, and Mehnaz Sharmin, Challenges for Improving the Status of Women in Physics: Insights from Bangladesh, AIP Conference Proceedings (Reviewed and revision submitted).
22. S. A. Lucky, Mehnaz Sharmin, H. Das, and J. Podder, Surface morphological, structural, and optical properties of manganese doped nickel oxide thin films, 1st National Conference on Advances in Science and Technology, NCAST-2023, Organized by Faculty of Science, BUET,

7 - 8 December, 2023.

23. M. J. Hosen, Mehnaz Sharmin, and J. Podder, Structural, surface morphological, optical and electrical properties of nickel oxide thin film synthesized by sol–gel spin coating method, 1st National Conference on Advances in Science and Technology, NCAST-2023, Organized by Faculty of Science, BUET, 7 - 8 December, 2023.
24. A. H. Jasia, Mehnaz Sharmin, and I. N. Esha, Investigation of structural, surface morphological, electrical and optical properties of Fe-doped CuO thin films deposited by spray pyrolysis technique, 1st National Conference on Advances in Science and Technology, NCAST-2023, Organized by Faculty of Science, BUET, 7 - 8 December, 2023.
25. T. Begum, Mehnaz Sharmin, I. N. Esha and K. H. Maria, Surface morphological, structural, optical and electrical properties magnesium doped copper oxide thin films, 8th Conference of Bangladesh Crystallographic Association -2023, University of Dhaka, 24 – 25 November, 2023.
26. S. A. Lucky, Mehnaz Sharmin, and J. Podder, Structural, morphological, and optical properties of MnO_x/NiO composite thin films prepared by spray pyrolysis technique, 8th Conference of Bangladesh Crystallographic Association -2023, University of Dhaka, 24 – 25 November, 2023.
27. S. K. Choudhury, K. H. Maria, M. A. Bhuiyan, Mehnaz Sharmin, Role of female physicists during the covid-19 pandemic in Bangladesh and their career challenges and opportunities, AIP Conference Proceeding, 3040, 050004-1–050004-3, 2023.
28. S. K. Choudhury, K. H. Maria, H. Ferdous, R. S. Islam, and Mehnaz Sharmin, Challenges for Improving the Status of Women in Physics: Insights from Bangladesh, 8th International Women in Physics Conference (ICWIP) 2023 organized by International Union of Pure and Applied Physics (IUPAP), 10 - 14 July, 2023.
29. S. A. Lucky, Mehnaz Sharmin, H. Das, M. S. Bashar and J. Podder, Structural, Morphological, Optical, and Electrical analysis of Mn-doped NiO Thin films, National Conference on Physics-2023, 09-11 March 2023, Jahangirnagar University, Savar, Dhaka.
30. R. Rahaman, Mehnaz Sharmin and J. Podder, Structural, morphological, optical and electrical properties of Co doped CuO thin films, National Conference on Physics-2023, 09-11 March 2023, Jahangirnagar University, Savar, Dhaka.
31. S. A. Lucky, Mehnaz Sharmin, H. Das, and J. Podder,Investigation of structural, electrical, and optical properties of manganese-doped nickel oxide thin films, 1st International Dhaka Science Conference for Women-2023, 15 - 16 February 2023, Dhaka.
32. R. Rahaman, Mehnaz Sharmin and J. Podder, Structural, morphological and optical properties of spray pyrolyzed cobalt doped cupric oxide thin films, 1st International Dhaka Science Conference for Women-2023, 15 - 16 February 2023, Dhaka.
33. A. Barik, A. Ahad, M.H. Babu, J. Podder and Mehnaz Sharmin, Investigation of structural, optical and electrical properties of calcium substituted barium titanate thin films for various optoelectronic applications, International Conference on Physics-2022, 19-21 May 2022, Atomic Energy Centre, Dhaka.
34. Mehnaz Sharmin, A. H. Bhuiyan, J. Podder and K. S. Hossain, Evolution in surface properties, band gap tuning and reversal in electrical conductivity of ZnO thin films achieved via B doping, National Conference on Physics - 2021, 06-07 August 2021, (held in Virtual platform).
35. P. Datta, Mehnaz Sharmin, J. Podder, S. Choudhury, Modifications in structure and optical-electrical properties of cupric oxide thin films doped with manganese, 7th IUPAP International Conference on Women in Physics (ICWIP2020 Conference), Melbourne, Australia, 11 – 15 July 2021 (held in Virtual platform).
36. Mehnaz Sharmin, J. Podder and K. S. Hossain, Studies on the Topographical and

Photoluminescence Properties of Mg Doped Fe_2O_3 Thin Films, International Conference on Physics-2020, 05-07 March, 2020, Atomic Energy Centre, Dhaka, Bangladesh.

37. Mehnaz Sharmin, J. Podder and K. S. Hossain, The Effect of Al on the Structural, Morphological, Topological, Optical, Transport and Magnetic Properties of Fe_2O_3 Thin Films, National Conference on Physics-2019, 07-09 February 2019, University of Dhaka, Dhaka, Bangldaseh.
38. W. B. Tarique, Mehnaz Sharmin and J. Podder, Structural, Morphological, Optical and Electrical Properties of ZnO/SnO2 Thin Films Synthesized by Thermal Spray Pyrolysis Technique for Optoelectronic Applications, National Conference on Physics-2019, 07-09 February 2019, University of Dhaka, Dhaka, Bangldaseh.
39. Mehnaz Sharmin and J. Podder, Effect of Al Doping on Physical Properties of Sprayed α-Fe_2O_3 Nanoparticle Thin Films Synthesized for Optoelectronic Applications, International Conference on Nanotechnology and Condensed Matter Physics (ICNCMP-2018), January 11- 12, 2018, BUET, Dhaka, Bangladesh.
40. Mehnaz Sharmin, M. Zahan and J. Podder, Investigation of Structural, Morphological, Optical and Electrical Properties of Spray Synthesized Fe_2O_3 Thin Films for Optoelectronic Applications, 4th International Conference on structure, processing and properties of materials, 1 - 3 March 2018, BUET, Dhaka, Bangladesh.
41. M. Zahan, Mehnaz Sharmin and J. Podder, Effect of Cu Doping on Morphological, Structural, Optical and Electrical Properties of MnO_2 Thin Films Deposited by Spray Pyrolysis Method, 4th International Conference on structure, processing and properties of materials, 1 - 3 March 2018, BUET, Dhaka, Bangladesh.
42. Mehnaz Sharmin and J. Podder, The Influence of Al Doping on the Physical Properties of Fe_2O_3 Nanoparticle Synthesized by Chemical Spray Pyrolysis for Optoelectronic Applications, International Conference on Advances in Materials Science and Engineering for Societal Applications, 2 - 3, March 2018, Chennai, India.
43. Mehnaz Sharmin and J. Podder, Structural, Morphological, Optical and Electrical Properties of Al:Fe_2O_3 Nanoparticle Thin Films Synthesized for Gas Sensing Applications, International Conference on Physics, organized by Bangladesh Physical Society, 08-10 March, 2018, University of Dhaka, Dhaka, Bangladesh.
44. M.M. Rahaman, K.M.A. Hussain, Mehnaz Sharmin and S. Choudhury, Nanostructure and Opto-electrical Properties of Temperature Dependent Indium Doped Tin Oxide Thin Films, International Conference on Physics, organized by Bangladesh Physical Society, 08-10 March, 2018, University of Dhaka, Dhaka, Bangladesh.
45. N. Biswas, Mehnaz Sharmin and J. Podder, Sol-gel Spin Coating: A Promising Technique for Preparation of Multilayer Metal Oxide Thin Films for Optoelectronic Applications, International Conference on Physics, organized by Bangladesh Physical Society, 08-10 March, 2018, University of Dhaka, Dhaka, Bangladesh.
46. W. B. Tarique, Mehnaz Sharmin and J. Podder Versatility of Spray Pyrolysis Technique for Synthesis of Multilayer Metal Oxide Thin Films, International Conference on Physics, organized by Bangladesh Physical Society, 08-10 March, 2018, University of Dhaka, Dhaka, Bangladesh.
47. Mehnaz Sharmin and J. Podder, Wide Band Gap and High Optical Transparency in Mg Doped Fe_2O_3 Thin Films: A Suitable Candidate for Optoelectronic Devices, International Conference on Material Science and Semiconductor Devices, 07-08 September, 2018, University of Dhaka, Bangladesh.
48. Mehnaz Sharmin and J. Podder, Effect of Mg Incorporation on the Structural, Morphological, Optical, Electrical and Magnetic Properties of Ferric Oxide Nanoparticle Thin Films, International Workshop on Recent Advances in Nanotechnology and Applications (RANA- 2018), 7 - 8 September,

2018, AMET, Chennai, India.

49. M. M. Rahaman, K. M. A. Hussain, Mehnaz Sharmin, C. Das and S.Choudhury, Role of Substrate Temperature on the Opto-electrical Properties of Indium Doped Tin Oxide Thin Films, National Conference on Physics-2017, 5-7 January, 2017, Atomic energy Center, Dhaka, Bangladesh.
50. M. Nesa, Mehnaz Sharmin, K. S. Hossain and A. H. Bhuiyan, Characterization of Spray Pyrolized CuO Thin Films Depostied at Various Substrate Temperatures, National Conference on Physics-2017, 5-7 January, 2017, Atomic energy Center, Dhaka, Bangladesh.
51. Mehnaz Sharmin and A. H. Bhuiyan, Investigation of Structure, Morphology, Optical and Electrical Properties of Sprayed ZnO Thin Films Deposited at Various Substrate Temperatures, National Conference on Physics-2017, 5-7 January, 2017, Atomic energy Center, Dhaka, Bangladesh.
52. M. Nesa, Mehnaz Sharmin and A. H. Bhuiyan, Effect of Zinc Doping on Structure and Properties of CuO Thin Films Synthesized by Spray Pyrolysis Technique, International Conference on Physics-2016, 10 - 12 March, 2016, Atomic energy Center, Dhaka, Bangladesh.
53. Md. Mahafuzur Rahaman, K. M. A. Hussain, Mehnaz Sharmin & Shamima Choudhury, Effect of Substrate Temperature on Structural, Optical and Electrical Properties of Vacuum Evaporated Indium Doped Tin Oxide Thin Films, International Conference on Physics-2016, 10 - 12 March, 2016, Atomic energy Center, Dhaka, Bangladesh.
54. M. M. Rahaman, K. M. A. Hussain, Mehnaz Sharmin, C. Das and S.Choudhury, Opto-Electrical Properties of Nanostructured Indium Doped Tin Oxide Vacuum Evaporated Thin Films, Young Scientists Congress and Women Scientists: Mentee Program 2016, October, 2016.
55. M. Nesa, Mehnaz Sharmin, K. S. Hossain and A. H. Bhuiyan, Structural and Surface Morphological Properties of Spray Deposited CuO and Zinc Doped CuO Thin Films, 3rd Conference of Bangladesh Crystallographic Association-2016, 1-2 December 2016, University of Dhaka, Dhaka, Bangladesh.
56. Mehnaz Sharmin, A. H. Bhuiyan, Influence of Boron Doping on The Structural Properties of ZnO Thin Films Deposited by Spray Pyrolysis Technique, National Conference on Physics Research and Education in Bangladesh, 2015, Atomic energy Center, Dhaka, Bangladesh.
57. Mehnaz Sharmin, S. Choudhury and T. Begum, Electrical, Optical and Structural Properties of p-Type Silicon, International Conference on Physics for Energy and Environment, Dhaka, 2014.
58. A. Islam, S. Choudhury, Mehnaz Sharmin, J. Begum and T. Begum, Substrate Temperature Dependent Structural Properties of Thermal Evaporated ZnSe Thin Films, First National Conference of Bangladesh Crystallographic Association, Dhaka, 2013.
59. Mehnaz Sharmin, T. Begum, N. Akhtar and S. K. Choudhury, Electrical and Optical Properties of p-Type GaAs, Conference on Electronics and Telecommunication (Bangladesh Electronics Society), 2010, 175-179.

List of students awarded degree under the supervision:

Sl. No.	Name	Session	ID	Program
1.	Selina Akter Lucky	April-2021	0421142517	M.Sc.
2.	Md. Jakaria Hosen	April-2022	0422142507	
3.	Farhan Labib Fahim	April-2023	0423142523	

List of students awarded degree under the co-supervision:

Sl. No.	Name	Session	Roll No.	Program	Institution

1.	Afroja Helen Jasia	2020-2021	2211	M.S. in Physics	DU
2.	Tasnima Begum	2020-2021	2309		DU
3.	Md. Rahidul Islam Shadhon	2021-2022	1748		DU
4.	Tasfia Islam Prova	2022-2023	2056		DU

List of students working under the supervision:

Sl. No.	Name	Session	ID	Program
1.	Mushfikatul Zannah	April-2023	0423142519	M.Sc.
2.	Ruksana Bente Rashid	April-2024	0424142522	
3.	Md. Rubel Hossen		0424142525	
4.	Nawshin Tithi		0424142526	
5.	Farhad Bin Riaz	October-2024	1024142518	
6.	Asma Ul Husna		1024142522	
7.	Taposhi Rabeya Binta Rashed Anika	April-2024	0424143005	M.Phil.
8.	Maria Akter Mim	October-2024	1024143010	

List of students working under the co-supervision:

Sl. No.	Name	Session	Roll No.	Program	Institution
1.	Rutaba Jania	2020-2021	116	Ph.D.	DU
2.	Monika Debnath Katha	2023-2024	2091	M. S.	DU

Research Projects:

1. **Title of the project:** Synthesis of Nanostructured Metal Oxide Thin Films and Construction of a Cost-Effective Gas Sensitivity Testing Unit for Environmental Applications

   Amount: BDT. 6,84,000/- (Six Lac Eighty-Four Thousand Taka Only)

   Project duration: One and a half year **Role:** Co-investigator

   Funding organization: Committee for Advanced Studies and Research (CASR), Bangladesh University of Engineering and Technology, Dhaka-1000, Bangladesh

2. **Title of the project:** Green Synthesis and Investigation of Metal-Polymer Nanocomposites for Biomedical and Nonlinear Optical Applications

Project No.	Amount (BDT)	Duration	Financial Year
604 Phy's	3.0 lac	1 year	2021-2022
SRG-226631	4.0 lac	1 year	2022-2023
SRG-236626	2.5 lac	1 year	2023-2024

   Role: Co-investigator

   Funding organization: Ministry of Science and Technology, Government of the People's Republic of Bangladesh

3. **Title of the project:** Synthesis and characterization of nanoporous transition metal doped NiO thin films for efficient detection of flammable gases

Amount: BDT. 3,00,000/- (Three Lac Taka Only)

Project duration: One years **Role:** Principal investigator

Funding organization: University Grants Commission, Bangladesh.

4. **Title of the project:** Synthesis of MnO_2/NiO bilayer nano-porous thin films for humidity sensing application

   Amount: USD. 48,000/- (Forty-Eight Thousand USD Only)

   Project duration: Two years **Role:** Principal investigator

   Funding organization: The World Academy of Sciences (TWAS) and UNESCO, ICTP Campus, Triesle, Italy.

5. **Title of the project:** Low temperature growth of metal-oxide nanostructured thin films for photocatalytic applications

   Amount: BDT. 6,00,000/- (Six Lac Taka Only)

   Project duration: One years **Role:** Co-investigator

   Funding organization: Ministry of Science and Technology, Government of the People's Republic of Bangladesh

Training Programs:

1. Training Workshop on Learning Management System: Moodle organized by IQAC, BUET from 14-15 July 2020.
2. A Half Day Workshop on Scientific Paper Writing for High Impact Journals organized by IQAC, BUET from 16 April 2019.
3. Introductory Training Course in Nanofabrication Technologies organized by Centre for Nano Science and Engineering, IISc, Bengaluru, India from 10-28 September 2018
4. Training Workshop on Writing Learning Outcomes organized by IQAC, BUET from 23 December 2016.
5. Teachers' Appreciation Workshop organized by Directorate of Continuing Education (DCE), BUET from 27-29 January 2015.
6. Workshop on Modular Origami Learning organized by BUET and Japan Embassy, 25 September 2013.
7. Workshop on Initiative in Science Education, Research and Capacity building organized by Bangladesh Academy of Sciences and TWAS, 14-15 September 2013.
8. Workshop on Modular Origami Learning organized by BUET and Japan Embassy, 25 September 2013.
9. BAS Young Women Scientists' Workshop organized by Bangladesh Academy of Sciences, 24-25 March 2012, Dhaka, Bangladesh.

Reviewer at the following Journals

Applied Physics A, AIP Advances, Materials Technology: Advanced Performance Materials, JOAM-Journal of Optoelectronics and Advanced Materials, Optical Materials, Inorganic Chemistry Communications, Journal of Magnetism and Magnetic Materials, Modern Physics Letter B, Journal of Materials Science: Materials in Electronics, Applied Research, Micro and Nanostructures, Optical and Quantum Electronics, Physica B, Physica Scripta, etc.

Personal information

Father's Name: Md. Mahbub Alam Siddiki
Mother's Name: Anjuman Ara
Husband's Name: Md. Rafiqul Islam
Nationality: Bangladeshi
Date of Birth: 26 May1985
Present Address: 30-1/D, White Campus, BUET, Dhaka-1000
Mailing Address: Department of Physics, BUET, Dhaka-1000
Permanent Address: House#49, Road#11, Sector#10, Uttara, Dhaka-1230.

Name and Address of Referees:

Prof. Dr. Abu Hashan Bhuiyan
University of Information Technology and Sciences, Holding-190, Road-5, Block J, Baridhara, Maddha Nayanagar, Vatara, Dhaka-1212 Bangladesh Contact No: 01712836384
E-mail: mahbhuiyan@gmail.com

Prof. Dr. Jiban Podder
Department of Physics, Bangladesh University of Engineering and Technology
Dhaka-1000, Bangladesh
Contact No: 01552423766
E-mail: jpodder59@gmail.com

Prof. Shamima Choudhury
Fellow, Bangladesh Physical Society (BPS)
Professor (Retd.), Department of Physics, University of Dhaka, Dhaka-1000, Bangladesh
Former Director, Bose Centre for Advanced Study and Research in Natural Sciences Former Provost, Rokeya Hall, Former Senate Member, University of Dhaka
Phone: +88 02222289596(h) +8801819188520 (cell)
E-mail: skc.phy@gmail.com

Signature

_____
Dr. Mehnaz Sharmin
Department of Physics
Bangladesh University of Engineering and Technology
Dhaka-1000, Bangladesh