Dr. Md. Mohi Uddin

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Date of birth: 01 January, 1978
Nationality: Bangladeshi, **Sex:** Male, **Marital status:** Married

EDUCATION:

Degree	Thesis title	Institution	Date of awarded
Ph.D (Science)	"Gate Controlled InSb Quantum Well and its Application to Resistively Detected Nuclear Magnetic Resonance"	Tohoku University, Sendai, Japan.	September 2013
M. Phil. (Nano materials)	"The Variation of Microstructural and Magnetic Properties of $Fe_{73.5}$ Cu_1 Nb_3 $Si_{17.5}$ B_5 alloy by Partial Crystallization"	Chittagong University of Engineering & Technology (CUET), Bangladesh.	July 2008
M. Sc. (Thesis)	"Investigation of arsenic contamination in ground water and its effect on mankind of Feni district of Bangladesh by reactor based Neutron Activation Analysis (NAA)"	University of Chittagong, Bangladesh	June, 2004
B. Sc. (Hons.)		University of Chittagong, Bangladesh	November, 2002

SCHOLARSHIP:

Name	Organization name	Duration	
		From	To
JSPS Doctoral fellowship	Institute for International Advanced Research and Education (IIARE), Tohoku University, Japan	01/10/2010	30/09/2013
Researcher	ERATO Nuclear Spin Electronic Project (NSEP), Japan Science & Technology, Japan.	01/05/2011	31/03/2012
Research Assistance (RA)	WPI-AIMR, Tohoku University, Sendai, Japan.	01/11/2012	31/07/2013
G-COE Foreign Young Researcher Fellowship	Tokyo Institute of Technology, Yokohama, Japan.	21/01/2009	21/03/2009
Unilever student scholarship	Department of Physics, University of Chittagong	January, 1998	January, 1999

WORK/PROFESSIONAL EXPERIENCE:

Name of post	Organization name	Duration	
		From	To
Professor	Chittagong University of Engineering and Technology (CUET)	07/02/2018	date
Associate Professor	Chittagong University of Engineering and Technology (CUET)	29/11/2015	06/02/2018
Assistant Professor	Chittagong University of Engineering and Technology (CUET)	30/06/2009	28/11/2015
Lecturer	Chittagong University of Engineering and Technology (CUET)	12/7/2005	29/06/2009

TEACHING:

Level	Course code	Course Name
Undergraduate [Chittagong University of Engineering & Technology (CUET)]	Phy-121, 181	Engineering Physics (for EEE, ETE students)
	Phy-131	Physics-I (for ME students)
	Phy-133	Physics-II (for ME students)
	Phy-141, 171, 103	Physics (for CSE, CE and PME students)
Post-graduate (M.Sc./M.Phil./Ph.D) [Department of Physics, CUET]	Phy-6001	Condensed Matter Physics
	Phy-6117	Nanotechnology
	Phy-6114	Materials Science-I
	Phy-6115	Materials Science-II
	Phy-6110	Magnetism-I
	Phy-6111	Magnetism-II
	Phy-6301	Principles of Radiation Detection
	Phy-6109	Optical Crystallography
Post-graduate (M.Sc.) [Department of Nuclear Engineering, CUET]	NE-6105	Nuclear Reactor Materials
	NE-6114	Research Methodology
Undergraduate [Department of Electrical and Electronic Engineering (EEE), Feni University]	EEE-220	Engineering Electromagnetics
	EEE-403	Solid State Device
	EEE-446	Processing and Fabrication Technology
	EEE-309	Electrical Properties of Materials
	EEE-447	Optoelectronics
	EEE-448	Semiconductor Device Theory
	ENG 103	English-III (Scientific Writing & Communication)

RESEARCH INTEREST

- Nano materials synthesize and characterization
- Atomic layer deposition on III-V compound semiconductors (QWFET)
- Nano devices fabrication
- Quantum Hall effect, Resistively Detected Nuclear Magnetic Resonance (RD-NMR)
- Computational materials Science (DFT using CASTEP)
- Energy materials
- 2D materials (MXenes)
- DFT

PUBLICATIONS:

Sl No.	Title	Author	Journal Name, volume, page
1	Precise measurement of Arsenic in the Contaminated Groundwater of Bangladesh" Mech. Eng. Res. Journal. Vol. 5 (2005), 40-45.	M. M. Uddin, A.K.M. Harun-Ar-Rashid, S. M. Hossain, M. A. Hafiz, Kamrun Nahar, S.H. Mubin	Mech. Eng. Res. Journal. Vol. 5 (2005), 40-45.
2	Slow arsenic poisoning of the contaminated groundwater users	Uddin, M. M., Harun-Ar-Rashid, A. K. M., Hossain, S. M., Hafiz, M. A., Nahar, K. and Mubin, S.H.,	Int. J. Environ. Sci. Tech., 3 (4), 447-452.
3	Design and Comparative Study of Thermoelectric Refrigeration System	M M Uddin, M M Kamal Bhuiya, M T Islam, M S Uddin	Mech. Eng. Res. Journal. Vol. 6 (2008), 42-45.
4	Magnetocaloric effect in amorphous ribbon based on FINEMET	M M Uddin, S Manjura Hoque, Md. Sultan Mahmud, M A Hakim, F U Z Chowdhury	Indian J. Phys. 82 (11), 739-747 (2008).
5	Effect of structural parameters on variation of microstructural and magnetic properties of nanocrystalline alloy of $Fe_{73.5}Cu_1Nb_3Si_{17.5}B_5$	M M Uddin, S Manjura Hoque, Md. Sultan Mahmud, M A Hakim, F U Z Chowdhury	Indian Journal of Pure and Applied Physics, Vol. 47, April 2009, pp 289-299.
6	Characterization of InSb quantum wells with atomic layer deposited gate dielectrics	M. M. Uddin, H. W. Liu, K. F. Yang, K. Nagase, T. D. Mishima, M. B. Santos, and Y. Hirayama	Appl. Phys. Lett. 101, 233503 (2012)
7	Gate depletion of an InSb two dimensional electron gas	M. M. Uddin, H. W. Liu, K. F. Yang, K. Nagase, K. Sekine, C. K. Gaspe, T. D. Mishima, M. B. Santos, and Y. Hirayama	Appl. Phys. Lett. 103, 123502 (2013)
8	Structural, elastic, electronic and optical properties of metastable MAX phases Ti_5SiC_4 compound	M. A. Ali, M. S. Ali, M. M. Uddin	Indian Journal of Pure and Applied Physics, Vol. 54 (5) (2016).
9	Structural Properties, Impedance Spectroscopy and Dielectric Spin Relaxation of Ni-Zn Ferrite Synthesized by Double Sintering Technique	M. A. Ali, M. N. I. Khan, F.-U.-Z. Chowdhury, S. Akhter and M. M. Uddin	J. Sci. Res. 7 (3), 65-75 (2015), Bangladesh.
10	Optimized Novel Indium Antimonide Quantum Well Field Effect Transistor for High-Speed and Low Power Logic Applications	R. Islam, M. M. Uddin, M. A. Matin	ECS Transaction 69 (5), 3-8 (2015).
11	Self-Consistent Quasi Static Capacitance-Voltage Characterization of Depletion Mode InSb Quantum Well FET	R. Islam, M. M. Uddin, M. A. Matin	Accepted for publication in Advanced Materials Research.
12	Structural, Magnetic and Electrical Characterization of Cd-substituted Mg Ferrites Synthesized by Double Sintering Technique	R. Zahir, F.-U.-Z Chowdhury, M.M. Uddin and M.A. Hakim	J. Magn. Magn. Mater. 410, 55–62 (2016).

13	Effect of Sintering Temperature on Structural and Magnetic Properties of $Ni_{0.6}Zn_{0.4}Fe_2O_4$ Ferrite: Synthesized from Nanocrystalline Powders	M. A. Ali, M. N. I. Khan, F. -U. -Z. Chowdhury, D. K. Saha, S. M. Hoque, S. I. Liba, S. Akhter, and M. M. Uddin	Accepted for publication in Journal of Physics, conference series, IOP science, UK.
14	Structural, morphological and electrical properties of Sn-substituted Ni-Zn ferrites synthesized by double sintering technique	M.A. Ali, M.M. Uddin, M.N.I. Khan, F.-U.-Z. Chowdhury, S.M. Haque	J. Magn. Magn. Mater. 424,148-154 (2016).
15	Magnetic properties of Sn-substituted Ni-Zn ferrite: synthesized from nano-sized powders of NiO, ZnO, Fe_2O_3 and SnO_2	M.A. Ali, M.M. Uddin, M.N.I. Khan, F.-U.-Z. Chowdhury, S.M. Haque, and S. I. Liba	Chin. Phys. B Vol. 26, No. 7 (2017) 077501.
16	Design and Performance Analysis of Depletion-Mode InSb Quantum-Well Field-Effect Transistor for Logic Applications	R. Islam, M. M. Uddin, M. Mofazzal Hossain, and M. A. Matin	Journal of Molecular and Engineering Materials 5 (3), 1750006, (2017) (World scientific).
17	First principles study of superconducting ScRhP and ScIrP pnictides	M. T. Nasir, M. A. Ali, M. M. Hossain, M. A. Hadi, M. A. Rayhan, M. Roknuzzaman, K. Ostrikov, A. K. M. A. Islam, S. H. Naqib, M. M. Uddin	Physica Status Solidi B (2017) 1700336. DOI: 10.1002/pssb.201700336.
18	Predicted MAX phase Sc_2InC: dynamical stability, vibrational and optical properties	A. Chowdhury, M. A. Ali, M. M. Hossain, M. M. Uddin, S. H. Naqib, and A. K. M. A. Islam	Physica Status Solidi B 255 (2017) 1700235; DOI: 10.1002/pssb.201700235. Wiley Online Library.
19	First Hafnium-Based MAX Phase in the 312 Family, Hf3AlC2: A First-Principles Study	Roknuzzaman, M.; Hadi, M. A.; Ali, M. A.; Hossain, M. M.; Jahan, N.; Uddin, M. M.; Alarco, J. A.; Ostrikov, K.	Journal of Alloys and Compounds 727 (2017) 616-626. Elsevier.
20	Recently synthesized $(Zr_{1-x}Ti_x)_2AlC$ ($0 \leq x \leq 1$) solid solutions: Theoretical study of the effects of M mixing on physical properties	M.A. Ali, M.M. Hossain, M.A. Hossain, M.T. Nasir, M.M. Uddin, M.Z. Hasan, A.K.M.A. Islam, S.H. Naqib	Journal of Alloys and Compounds 743 (2018) 146-154, Elsevier.
21	Effects of transition metals on physical properties of M2BC (M = V, Nb, Mo and Ta): a DFT calculation	P. Barua, M.M. Hossain, M.A. Ali, **M.M. Uddin**, S.H. Naqib, and A.K.M.A. Islam	Journal of Alloys and Compounds 770 (2019) 523e534, Elsevier.
22	First principles study of M2InC (M = Zr, Hf and Ta) MAX phases: The effect of M atomic species	F. Sultana, **M. M. Uddin**, M. A. Ali, M. M. Hossain, S. H. Naqib, and A. K. M. A. Islam	J. Results in Physics 11, (2018) 869-876, (Elsevier). DOI:https://doi.org/10.1016/j.rinp.2018.10.044
23	First-principles study of elastic, electronic, optical and thermoelectric properties of newly synthesized $K_2Cu_2GeS_4$ chalcogenide	M. A. Ali, M. Anwar Hossain, M. A. Rayhan, M. M. Hossain, **M. M. Uddin**, M. Roknuzzaman, K. Ostrikov, A. K. M. A. Islam, and S. H. Naqib	Journal of Alloys and Compounds 781 (2019) 37-46, Elsevier. DOI: https://doi.org/10.1016/j.jallcom.2018.12.035
24	Yttrium substituted Mg-Zn ferrites: correlation of physical properties with Yttrium content	M.A. Ali, M.N.I. Khan, F.-U.-Z. Chowdhury, M.M. Hossain, A.K.M. Akhter Hossain, R. Rashid, A. Nahar, S.M. Hoque, M.A. Matin and **M.M. Uddin**	J Mater Sci: Mater Electron (2019) 30: 13258. DOI: https://doi.org/10.1007/s10854-019-01689-z.
25	Structural, electrical and magnetic properties of Yttrium substituted Co-Zn ferrites	M. Das, M.N.I. Khan, M.A. Matin and **M.M. Uddin**	J Supercond Nov Magn 32, (2019) 3569–3577 https://doi.org/10.1007/s10948-019-5104-6

26	Study of physical properties towards optimizing sintering temperature of Y-substituted Mg-Zn ferrites	M.A. Ali, M.N.I. Khan, F.-U.-Z. Chowdhury, M.M. Hossain, M.Z. Rahaman, S.M. Hoque, M.A. Matin and **M.M. Uddin**	Results in Physics 14 (2019) 102517 DOI: https://doi.org/10.1016/j.rinp.2019.102517
27	Pump-probe nuclear spin relaxation study of the quantum Hall ferromagnet at filling factor v = 2	K. F. Yang, **M. M. Uddin**, K. Nagase, T. D. Mishima, M. B. Santos, Y. Hirayama, Z. N. Yang, and H.W. Liu	New J. Phys. 21 (2019) 083004 (IOP) DOI: https://doi.org/10.1088/1367-2630/ab34ce
28	The topology and robustness of two Dirac cones in S-graphene: A tight binding approach	Arka Bandyopadhyay, Sujoy Datta, Debnarayan Jana, Subhadip Nath & **Md. Mohi Uddin**	Sci Rep 10, 2502 (2020). https://doi.org/10.1038/s41598-020-59262-2
29	Mechanical behavior, enhanced dc resistivity, energy band gap and high temperature magnetic properties of Y-substituted Mg-Zn ferrites	Md. Ashraf Ali, M N I Khan, M M Hossain, F U Z Chowdhury, Nazmul Hossain, R Rashid2, M. A. Hakim, S Manjura Hoque and **Md. Mohi Uddin**	Mater. Res. Express 7 (2020) 036101 https://doi.org/10.1088/2053-1591/ab7791
30	Electronic and optical properties of non-hexagonal Dirac material S-graphene sheet and nanoribbons	Subhadip Nath, Arka Bandyopadhyay, Sujoy Datta, **Md Mohi Uddin**, Debnarayan Jana	Physica E 120 (2020) 114087 (IF-3.176, Elesevier) https://doi.org/10.1016/j.physe.2020.114087
31	Dynamical stability, vibrational and optical properties of anti-perovskite A3BX (Ti3TlN, Ni3SnN and Co3AlC) phases: a first principles study	K. Das, M. A. Ali, M. M. Hossain, S. H. Naqib, A. K. M. A. Islam and **M. M. Uddin**	AIP Advances 10, 095226 (2020); doi: 10.1063/5.0022376
32	Influence of Yb3+on the structural, electrical and optical properties of sol-gel synthesized Ni-Zn nanoferrites	N. Jahan, M. N. I. Khan, F. -U. -Z. Chowdhury, A. K. M. Akhter Hossain, S. M. Hoque, M. A. Matin, M. N. Hossain, M. M. Hossain and **M. M. Uddin**	Results in Physics 19 (2020) 103450, Elsevier.
33	Mechanical, optical and high temperature magnetic properties of Sn-substituted Mg-Zn ferrites	M.A. Ali, M.N.I. Khan, F.-U.-Z. Chowdhury, M.M. Hossain, S.M. Hoque and **M.M. Uddin**	Phase transition 94 (1), (2021) 23-36 (Taylors & Francis).
34	$NaInX_2$ (X = S, Se) layered materials for energy harvesting applications: First-principles insights into optoelectronic and thermoelectric properties	M. M. Hossain, M. A. Hossain, S. A. Moon, M. A. Ali, **M. M. Uddin**, S. H. Naqib, A. M. K. A. Islam, M. Nagao, S. Watauchi and I. Tanaka	J Mater Sci: Mater Electron 32, 3878–3893 (2021). https://doi.org/10.1007/s10854-020-05131-7.
35	DFT insights into new B-containing 212 MAX phases: Hf2AB2 (A = In and Sn)	M. A. Ali, M. M. Hossain, **M. M. Uddin**, A. K. M. A. Islam, D. Jana, S. H. Naqib	Alloys and Compounds 860 (2021) 158408. https://doi.org/10.1016/j.jallcom.2020.158408.
36	Physical properties of new MAX phase borides M2SB (M = Zr, Hf and Nb) in comparison with conventional MAX phase carbides M2SC (M = Zr, Hf and Nb): Comprehensive insights	M. A. Ali, M. M. Hossain, **M. M. Uddin**, M. A. Hossain, A. K. M. A. Islam, S. H. Naqib,	Journal of Materials Research and Technology, 11 (2021) 1000-1018, https://doi.org/10.1016/j.jmrt.2021.01.068.
37	Comparative study of predicted MAX phase Hf2AlN with recently synthesized Hf2AlC: a first principle calculation	**M. M. Uddin**, M. A. Ali, M. M. Hossain, S. H. Naqib, A. K. M. A. Islam,	Indian J Phys (2021). https://doi.org/10.1007/s12648-021-02050-z.

38	Influence of Se doping in recently synthesized NaInS2-xSex solid solutions for potential thermo-mechanical applications	M. M. Hossain, M. A. Ali, **M. M. Uddin**, M A Hossain, M. Rasadujjaman, S. H. Naqib, M. Nagao, S. Watauchi, I. Tanaka,	Materials Today Communications, 26 (2021), 101988,
39	Impact of Sn^{4+} substitution in Mg-Zn ferrites: deciphering the structural, morphological, dielectric, electrical and magnetic properties	M.A. Ali, M.N.I. Khan, F.-U.-Z. Chowdhury, M.M. Hossain, S.M. Hoque and **M.M. Uddin**	Materials Chemistry and Physics 263 (2021) 124357.https://doi.org/10.1016/j.mtcomm.2020.101988.
40	Origin of high hardness and optoelectronic and thermo-physical properties of boron-rich compounds B_6X (X = S, Se): a comprehensive study via DFT approach	M. M. Hossain, M. A. Ali, **M. M. Uddin**, A. K. M. A. Islam, S. H. Naqib,	Journal of Applied Physics 129, 175109 (2021)
41	Physical properties of predicted MAX phase borides Hf2AB (A = Pb, Bi): a DFT insight	M. S. Hossain, M. A. Ali, M M. Hossain, **M. M. Uddin**	Materials Today Communications, 27 (2021) 102411
42	Impact of particle size on the magnetic properties of highly crystalline Yb^{3+} substituted Ni-Zn nanoferrites	N. Jahan, **M.M. Uddin**, M.N.I. Khan, F.-U.-Z. Chowdhury, M. R. Hasan, H. N. Das and M.M. Hossain	J Mater Sci: Mater Electron 32, 16528–16543 (2021).
43	Understanding the improvement of thermo-mechanical and optical properties of 212 MAX phase borides Zr2AB2 (A = In, Tl)	M. A. Ali, M. M. Hossain, **M. M. Uddin**, A. K. M. A. Islam, S. H. Naqib	Journal of Materials Research and Technology 15 (2021) 2227-2241 (Elsevier, IF-5.039, Q1)
44	Newly Synthesized Three-Dimensional Boron-Rich Chalcogenides B12X (X = S and Se): Theoretical Characterization of the Physical Properties for Optoelectronic and Mechanical Applications	Md. Mukter Hossain, Md. Ashraf Ali, **Md. Mohi Uddin**, Saleh Hasan Naqib, and A. K. M. Azharul Islam	ACS Omega 2021, 6, 49, 33899–33913 (Elsevier, IF-3.512, Q1)
45	Exploration of physical properties of newly synthesized Kagome superconductor LaIr3Ga2 using different exchange correlation functionals	M. A. Ali, M. M. Hossain, **M. M. Uddin**, N. Jahan, A. K. M. A. Islam, S. H. Naqib	Physical Chemistry Chemical Physics 24 (2022) 29640
46	Metallic boro-carbides of A2BC (A = Ti, Zr, Hf and W): a comprehensive theoretical study for thermo-mechanical and optoelectronic applications	R Islam, MM Hossain, MA Ali, **MM Uddin**, SH Naqib	RSC Adv., 12 (2022), 32994-33007
47	The rise of 212 MAX phase borides, Ti2PB2, Zr2PbB2, and Nb2AB2 [A = P, S]: DFT insights into the physical properties for thermo-mechanical applications	MA Ali, MM Hossain, **MM Uddin**, A Islam, SH Naqib	ACS Omega 2023, 8, 1, 954–968
48	High pressure mediated physical properties of Hf2AB (A = Pb, Bi) via DFT calculations	M. S. Hossain, N. Jahan, M. M. Hossain, **M. M. Uddin**, M. A. Ali,	Materials Today Communications 34 (2023) 105147
49	Impact of reaction temperatures on the particle size of V2O5 synthesized by facile hydrothermal technique and photocatalytic efficacy in dye degradation	M.A. Jalil, M.N.I. Khan, S. Mandal, F.-U.-Z. Chowdhury, M.M. Hossain, D. Jana, M.S. Alam, **M.M. Uddin**	AIP Advances 13, 015010 (2023)
50	Biologically Reduced Zinc Oxide Nanosheets Using Phyllanthus emblica Plant Extract for Antibacterial and Dye Degradation Studies	Awais Khalid, Pervaiz Ahmad, Hanadi A. Almukhlifi, Abdulaziz M. Alanazi, Mayeen Uddin Khandaker, Abdulrahman S. Bazaid, Ohoud A. Jefri, Abdu Aldarhami, **Md. Mohi Uddin**, Yosra Modafer, and Husam Qanash	"Journal of Chemistry Volume 2023, Article ID 3971686, 10 pages https://doi.org/10.1155/2023/3971686"

51	"The efficacy of rare-earth doped V2O5 photo catalyst for removal of pollutants from industrial waste water" Submitted	Mohammad Humaun Kabir, Md. Zahid Hossain, Md. Abdul Jalil, Md. Mukter Hossain, Md. Ashraf Ali, Mayeen Uddin Khandaker, Debnarayan Jana, Md. Motinur Rahman, M. Khalid Hossain, **Md. Mohi Uddin**	Submitted
52	Impact of M atomic species on physical properties of M_2TlC (M= Ti, Zr, Hf): a first principles calculation	M. Sohel, **M. M. Uddin**, M. A. Ali, M. M. Hossain, A. K. M. A. Islam and S. H. Naqib	AIP Advances 13, 065209 (2023) https://doi.org/10.1063/5.0150252
53	First principles study of mechanical, thermal, electronic, optical and superconducting properties of C40-type germanide-based MGe2 (M = V, Nb and Ta)	M.H. Kabir, M.M. Hossain, M.A. Ali, **M.M. Uddin**, M.L. Ali, M.Z. Hasan, A. K. M. A Islam, S.H. Naqib	Results in Physics 51 (2023) 106701
54	A comprehensive ab-initio insights into the pressure dependent mechanical, phonon, bonding, electronic, optical, and thermal properties of CsV3Sb5 Kagome compound	M. I. Naher, M. A. Ali, M. M. Hossain, **M. M. Uddin**, S. H. Naqib	Results in Physics 51 (2023)106742
55	Measurement of ^{222}Rn in Ground Water and NORMs in Top Soil in the Environs of Rooppur Nuclear Power Plant Site and Associated Health Hazard	Shikha Pervin, Subrata Banik, Nazneen Sultana, Shanjib Karmaker, Selina Yeasmin, Mayeen Uddin Khandaker, **Md. Mohi Uddin**	J Radioanal Nucl Chem 333 (3) (2024) 1497-1505
56	DFT approach into the physical properties of MTe3 (M= Hf, Zr) superconductors: A comprehensive study	F Rahman, MM Ali, MA Ali, **MM Uddin**, SH Naqib, MM Hossain	AIP Advances 13, 085126 (2023)
57	DFT Insights into MAX Phase Borides Hf2AB [A = S, Se, Te] in Comparison with MAX Phase Carbides Hf2AC [A = S, Se, Te]	Jakiul Islam, Md Didarul Islam, Md Ashraf Ali, Hasina Akter, Aslam Hossain, Mautushi Biswas, Md Mukter Hossain, **Md Mohi Uddin**, Saleh Hasan Naqib	ACS omega 8 (36), 32917-32930 (2023)
58	A comprehensive first-principles insights into the physical properties of binary intermetallic Zr3Ir compound	Razu Ahmed, Md. Sajidul Islam, MM Hossain, Md Ashraf Ali, **MM Uddin**, SH Naqib	Results in Materials 21, 100518 (2024)
59	DFT aided prediction of phase stability, optoelectronic and thermoelectric properties of A2AuScX6 (A= Cs, Rb; X= Cl, Br, I) double perovskites for energy harvesting technology	S Mahmud, MA Ali, MM Hossain, **MM Uddin**	Vacuum 221, 112926 (2024)
60	The efficacy of rare-earth doped V2O5 photocatalyst for removal of pollutants from industrial wastewater	MH Kabir, MZ Hossain, MA Jalil, S Ghosh, MM Hossain, Md Ashraf Ali, Mayeen U Khandaker, Debnarayan Jana, Md Motinur Rahman, MK Hossain, J Chowdhury, Mohsin Kazi, **MM Uddin**	Optical Materials 147, 114724 (2024)
61	Theoretical studies on phase stability, electronic, optical, mechanical and thermal properties of chalcopyrite semiconductors HgXN2 (X=Si, Ge and Sn): A comprehensive DFT analysis	M. M. Hossain A. Hossain, M. A. Ali, **M. M. Uddin**, S. H. Naqib	Materials Science in Semiconductor Processing 172 108092 (2024)

62	Oxysulfide perovskites: reduction of the electronic band gap of RbTaO3 by sulfur substitution	H Akter, MA Ali, MM Hossain, **MM Uddin**, SH Naqib	Phys. Scr. 99 (2024) 045950
63	Ab-initio insights into the physical properties of XIr_3 (X= La, Th) superconductors: A comparative analysis	Md Sajidul Islam, Razu Ahmed, MM Hossain, Md Ashraf Ali, **MM Uddin**, SH Naqib	Results in Materials, 22, (2024), 100568
64	Insights into the unrevealed physical properties of $Sc_2Al_2C_3$ compared with other Sc-Al-C systems via ab-initio investigation	MA Rayhan, MA Ali, N Jahan, MM Hossain, **MM Uddin**, AKMA Islam, SH Naqib	Physics Open, 19 (2024), 100217
65	An inclusive study of lead-free perovskite $CsMI_3$ materials for photovoltaic and optoelectronic appliance explored by a first principles study	M Biswas, S Ghosh, J Chowdhury, MA Ali, MM Hossain, SH Naqib, MM Uddin	Materials Today Communications, 40 (2024) 109422 https://doi.org/10.1016/j.mtcomm.2024.109422
	Review Article		
01	Emerging graphene-like 2D materials: Recent Progress, Challenges and Future Outlook	**Md. Mohi Uddin**, Mohammad Humaun Kabir, Sumit Mandal, A. Arifutzzaman, Md. Ashraf Ali, Md. Mukter Hossain, Mayeen Uddin Khandaker, and Debnarayan Jana	RSC advances 13 (47), 33336-33375 (2023)
	Proceedings		
01	"Fe/MgO tunnel barrier contact for electrical spin injection into GaAs for semiconductor spintronics application	**M M Uddin**, E. Wada, Y. Shirahata and T. Taniyama	National Conference Proceeding, Page 42-45, 08 November 2009, CUET, Bangladesh.
02	Optimization of InSb QWFET Layer Structure for High-Speed and Low Power Nano Electronics Applications	S.S Mahtab, M.J. Alam, A.M. Khan, Z. Uddm, A.A. Mamun and M.M. Uddin	Proc. of 4th International Conference of Advances in Electrical Engineering (ICAEE), 28-30 September 2017, IUB Campus, Dhaka, Bangladesh, pp 707-712, IEEE XPlore, NSPEC Accession Number: 17503979, DOI:10.1109/ICAEE.2017.8255447
03	Efficient and Stable Perovskite Solar Cell with TiO2 Thin Insulator Layer as Electron Transport	M. A. Hossain, A. A. Zaman, S. S. Mahtab, M.T. U. Khan, M. J. Alam, A.M. Khan and M.M. Uddin	Proc. of International Conference on Robotics, Electrical, Signal Processing Techniques (ICREST), 10-12 January 2019, AIUB Campus, Dhaka, Bangladesh, IEEE XPlore, INSPEC Accession Number: 18492487, DOI:

			10.1109/ICREST.2019.8644093

PRESENTATIONS

Sl No.	Title	Author	Journal Name, volume, page		
Keynote Speech					
1	"Nuclear spin relaxation in the quantum Hall ferromagnet for quantum information processing" in the International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021)	The International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021)	March 11-13, 2021	BCSIR, Dhaka	Bangladesh.
Invited Talk					
1	"Gate Controlled InSb Quantum Wells and their Applications to Next Generation High-Speed Electronics and Resistively-Detected Nuclear Magnetic Resonance"		16 October, 2015,	Homer L. Dodge Department of Physics and Astronomy, University of Oklahoma, Norman, Oklahoma	USA
2	"Characterization of Solar Cells and Thin Films" in the Seminar "Prospects of Thin-Film Solar Cells in Renewable Energy Research"	The Seminar "Prospects of Thin-Film Solar Cells in Renewable Energy Research	31 March 2016	Department of Electrical and Electronic Engineering, CUET under HEQEP CP-3200, Chittagong-4349	Bangladesh.
3	"Fabrication and Characterization of Solar Cells, Solar cells and Thin Films" in the Seminar "Nanotechnology and Solar Energy Research for Sustainable Development of Bangladesh"	The Seminar "Nanotechnology and Solar Energy Research for Sustainable Development of Bangladesh	held on 25 November 2016	Department of Electrical and Electronic Engineering, Feni University, Trunk road, Feni-3900	Bangladesh
4	MXenes: 5th Generation 2D Materials Go Beyond Graphene	National conference on Physics	6-7 August, 2021	by Bangladesh Physical Society	Bangladesh
5	MXenes: 5th Generation Emerging Graphene-like 2D materials; Recent Progress, Challenges and Future Outlook	5th ARCEBS 2023	January 31-February 5, 2023	SKBU & IAEA	India
6	"5th Generation Emerging 2D MXenes: Recent Progress, Challenges and Future Outlook"	"International Conference on The Role of Science and Technology Towards 4IR, organized by Faculty of Science, Rajshahi University"	October 5 - 6, 2023	Rajshahi University	Bangladesh

7	Expedition to Emerging 5th Generation Materials: MAX phases to MXenes	International conference on Physics	9-11 May, 2024	by Bangladesh Physical Society	Bangladesh
Oral/Poster Presentations:					
2	"Arsenic contamination of ground water and human hair of Feni district of Bangladesh" (ARC EBS04)	(ARCEBS04)	April 15-16, 2004	Saha Institute of Nuclear Physics, Kolkata	India
3	F U Z Chowdhury "Magnetocaloric effect in nanocrystalline Fe73.5Cu1Nb3Si17.5B5 alloy based on Finemet" National Conference cum Workshop on Materials Science & Technology,	National Conference cum Workshop on Materials Science & Technology	2-4 December 2007	BUET, Dhaka	Bangladesh
4	"Study of the Variation of Microstructure and Magnetic Properties of Fe based nanocrystalline alloy" Materials and Structures Laboratory, Department of Materials Science and Engineering	Materials and Structures Laboratory, Department of Materials Science and Engineering	06 February 2009	Tokyo Institute of Technology, Yokohama	Japan
5	"Influence of Microstructure on the Magnetic Properties of Fe-Based Nanocrystalline alloy" International Physical Conference	International Physical Conference	15-17 May 2009	BUET, Dhaka	Bangladesh
6	"Fe/MgO tunnel barrier contact for electrical spin injection into GaAs for semiconductor spintronics application" National Conference CUET	National Conference CUET	08 November 2009	Chittagong	Bangladesh
7	"Comparison of spin injection and detection of magnetite and Fe/MgO tunnel barrier contacts into GaAs" International Conference on Magnetism and Advanced Materials (ICMAM-2010)	International Conference on Magnetism and Advanced Materials (ICMAM-2010)	03-07 March 2010	Dhaka	Bangladesh
8	The International Symposium on Nanoscale Transport and Technology (ISNTT2011)	The International Symposium on Nanoscale Transport and Technology (ISNTT2011)	January 11 to 14, 2011,	NTT Atsugi R&D center, Kanagawa,	Japan
9	"Gate Controlled InSb Two-Dimensional Electron Gas and its Perspectives" International Workshop on Quantum Nanostructures and	International Workshop on Quantum Nanostructures and Nanoelectronics	October 3-4, 2011	University of Tokyo, Komaba, Tokyo	Japan

	Nanoelectronics (QNN2011)	(QNN2011)			
10	"Effect of Gate Dielectric on Transport Properties of InSb Two-Dimensional Electron Gas"		August 27-30, 2012,	University of California, Santa Barbara	USA.
11	"Fabrication of a Gated InSb Quantum Well towards Pump-and-Probe Measurements of Nuclear Spin Polarization"		September 5-7, 2012	2nd Summer School on Semiconductor/Superconducting Quantum Coherence Effects and Quantum Information, Nasushiobara, Tochigi	Japan
12	"Magnetotransport Properties of InSb Two-Dimensional Electron Gas with Gate Dielectric Al2O3"		September 11-14, 2012,	JSAP Autumn meeting, Matsuyama University, Ehime	Japan
13	"InSb Quantum Wells with Atomic Layer Deposited Gate Dielectrics"		January 15-16, 2013,	Tohoku-Harvard Joint Workshop (10th RIEC International Workshop on Spintronics), Sendai	Japan.
14	"InSb Quantum Wells with Excellent Gate Controllability"		March 27-30, 2013	Kanagawa Institute of Technology, Kanagawa	Japan
15	"Collective nature of quantum Hall ferromagnets revealed by a pump and probe RDNMR study"-Poster presentation, 3rd 2nd Summer School on Semiconductor/Superconducting Quantum Coherence Effects and Quantum Information	Poster presentation, 3rd 2nd Summer School on Semiconductor/Superconducting Quantum Coherence Effects and Quantum Information	September 4-6, 2013,	Nasushiobara, Tochigi	Japan
16	"Excellent Gate Controlled InSb Quantum Wells For Next-Generation High-Speed Electronics"-Oral presentation, International Conference on Physics for Energy and Environment	Oral presentation, International Conference on Physics for Energy and Environment	06-08 March, 2014,	Bangladesh Physical Society (BPS), AECD, Dhaka.	Bangladesh
17	"Optimized Novel Indium Antimonide Quantum Well Field Effect Transistor for High-Speed and Low Power Logic Applications" -Oral presentation	Oral presentation	October 11-15, 2015	228ECS Meeting, Phoenix, Arizona,	USA.
18	"Design and Performance Analysis of InSb Quantum Well Field Effect Transistor for High Speed and Low Power Electronics"-Oral presentation, International Conference on Physics	Oral presentation, International Conference on Physics	10-12 March, 2016	Bangladesh Physical Society (BPS), AECD, Dhaka.	Bangladesh

19	"Electron and Nuclear Spins Hyperfine Interaction in InSb 2DEG For Quantum Information Processing"-Oral presentation, National Conference on Physics,,	Oral presentation, National Conference on Physics	5-7 January, 2017	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh
20	"Physical properties of recently synthesized ternary carbide nanolaminate Hf2AlC: A first principle calculations" Accepted for Oral presentation, International Conference on Physics	Accepted for Oral presentation, International Conference on Physics	March 8-10, 2018	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh
21	"Gated InSb Quantum Wells and Their Applications to High-Speed Electronics and Resistively-Detected Nuclear Magnetic Resonance "-Oral presentation, 3rd Young Scientists Congress, organized by Bangladesh Academy of Sciences (BAS)	Oral presentation, 3rd Young Scientists Congress, organized by Bangladesh Academy of Sciences (BAS)	14-15 September, 2018,	National Museum of Science & Technology Bhaban, Agargaon, Dhaka.	Bangladesh
22	"Hyperfine interaction of electron and nuclear spins in InSb two dimensional electron gas towards quantum information processing" Accepted for Oral presentation, ARCEBS2018,	Accepted for Oral presentation, ARCEBS2018,	November 11-17, 2018,	Ffort Raichak, Kolkata,	India
23	"Pump-probe nuclear spin relaxation study of the simplest Ising quantum Hall ferromagnet" Accepted for Oral presentation, International Conference on Physics	International Conference on Physics	March 5-7, 2020	organized by Bangladesh Physical Society (BPS), DU & AECD, Dhaka	Bangladesh
24	Impact of rare-earth ions on the photocatalytic performance of V2O5 synthesized by facile hydrothermal technique'	International Conference on Frontiers of Science (ICFS)	November 11-12, 2022	Faculty of Science, BUET, Bangladesh	Bangladesh
Research works presented in conferences by my students/group members					
2	"Effect of sintering temperature on dielectric loss, conductivity relaxation process and activation energy in Ni0.6Zn0.4Fe2O4ferrite", National Conference on Physics Research and Education in Bangladesh, Organized by the Bangladesh Physical Society	National Conference on Physics Research and Education in Bangladesh	April 19-20, 2015	Bangladesh Atomic energy Center, Dhaka.	Bangladesh.
3	"Sintering Temperature Dependence of Structural and Magnetic Properties of Ni0.6Zn0.4Fe2O4 Ferrite", International Conference on	International Conference on Advances in Physics (ICAP-2-15)	April 3-4, 2015	Department of Physics, at Rajshahi University	Bangladesh

	Advances in Physics (ICAP-2-15)				
4	"Studies on structural, electrical, and magnetic properties of double sintering technique derived Ni0.6-x/2Zn0.4-x/2SnxFe2O4" , International Conference on Nanoscience, Nanotechnology & Advanced Materials (NANOS 2015), December 14-17, 2015, Department Of Chemistry	International Conference on Nanoscience, Nanotechnology & Advanced Materials (NANOS 2015)	December 14-17, 2015	Gitam University, Gandhinagar Campus, Rushikonda Visakhapatnam-530 045, A.P.	India
5	"Self-Consistent Quasi Static Capacitance-Voltage Characterization of Depletion Mode InSb Quantum Well FET, International Conference on Nanoscience, Nanotechnology & Advanced Materials (NANOS 2015)	International Conference on Nanoscience, Nanotechnology & Advanced Materials (NANOS 2015)	December 14-17, 2015	Department Of Chemistry, at Gitam University, Gandhinagar Campus, Rushikonda Visakhapatnam-530 045, A.P.	India
6	"First-Principles Study of Newly Synthesized Quaternary Chalcogenide BaLa2In2Se7", Poster presentation, National Conference on Physics	Poster presentation, National Conference on Physics	5-7 January, 2017	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh
7	"Structural, Elastic, Electronic and Optical Properties of Quaternary Chalcogenides BaLa2In2S7First Principle Study:", Poster presentation, National Conference on Physics	Poster presentation, National Conference on Physics	5-7 January, 2017	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh
8	"Predicted MAX phase Sc2InC: Dynamical stability, vibrational and optical properties", Acepted for Poster presentation, ICPSDT-2017, CUET	Acepted for Poster presentation, ICPSDT-2017, CUET	10-11 December, 2017	Department of Physics, CUET.	Bangladesh
9	"First principles studies of the physical properties of newly synthesized Hf3AlC2: Hf containing first 312 MAX phase belongs to Hf-Al-C system", Poster presentation, ICPSDT-2017, CUET	Poster presentation, ICPSDT-2017, CUET	10-11 December, 2017	Department of Physics, CUET.	Bangladesh
10	"Physical properties of Mo2BC: A first principle calculations" Accepted for Poster presentation, ICPSDT-2017, CUET,	Accepted for Poster presentation, ICPSDT-2017, CUET	10-11 December, 2017	Department of Physics, CUET.	Bangladesh

11	"Tetragonal phase of BC2N: A possible new superhard material" Accepted for Poster presentation, ICPSDT-2017, CUET	Accepted for Poster presentation, ICPSDT-2017, CUET	10-11 December, 2017	Department of Physics, CUET.	Bangladesh
12	"First-principles study of superconducting ScRhP and ScIrP pnictides" Accepted for Poster presentation, ICPSDT-2017, CUET	Accepted for Poster presentation, ICPSDT-2017, CUET	10-11 December, 2017	Department of Physics, CUET.	Bangladesh
13	"Topological Weyl Semimetal NbP: A First Principles Study", Accepted for Poster presentation, ICPSDT-2017, CUET,	Accepted for Poster presentation, ICPSDT-2017, CUET	10-11 December, 2017	Department of Physics, CUET.	Bangladesh
14	"Structural, elastic, electronic and optical properties of Ta2BC: A DFT calculations" Poster presentation, International Conference on Nanotechnology and Condensed Matter Physics	Poster presentation, International Conference on Nanotechnology and Condensed Matter Physics	11-12 January 2018	BUET, Dhaka	Bangladesh
15	"Recently synthesized (Zr1-xTix)2AlC ($0 \leq x \leq 1$) solid solutions: Theoretical study of the effects of M mixing on physical properties" Poster presentation, International Conference on Nanotechnology and Condensed Matter Physics	Poster presentation, International Conference on Nanotechnology and Condensed Matter Physics	11-12 January 2018	BUET, Dhaka	Bangladesh
16	"Elastic, electronic, optical and thermoelectric properties of K2Cu2GeS4 : a new chalcogenide material, Poster presentation, International Conference on Nanotechnology and Condensed Matter Physics	International Conference on Nanotechnology and Condensed Matter Physics	11-12 January 2018	BUET, Dhaka	Bangladesh
17	"Ab initio calculation of the physical properties of nanolayered ternary carbides Zr2InC" Oral presentation, International Conference on Physics	Oral presentation, International Conference on Physics	March 8-10, 2018	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh
18	"Investigation of Structural, electrical and magnetic properties of Y-substituted Co-Zn ferrites synthesized by double sintering technique" Oral presentation, International Conference on Physics,	Oral presentation, International Conference on Physics	March 8-10, 2018	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh
19	"Studies on structural, electrical, and magnetic properties of double sintering technique derived Mg0.5Zn0.5LaxFe2-xO4 "	Oral presentation, International Conference on Physics	March 8-10, 2018	Bangladesh Physical Society (BPS), DU & AECD, Dhaka.	Bangladesh

	Oral presentation, International Conference on Physics				
20	"Influence of Y3+ substitution on magnetic and electric properties of Co-Zn ferrites synthesized by solid state reaction technique" International Conference on Electronics and ICT organized by Bangladesh Electronic Society (BES)	International Conference on Electronics and ICT organized by Bangladesh Electronic Society (BES)	25-26 November 2018	Atomic Energy Centre, Dhaka.	Bangladesh
21	"Physical properties of Y substituted Mg-Zn ferrites" International Conference on Electronics and ICT organized by Bangladesh Electronic Society (BES)	International Conference on Electronics and ICT organized by Bangladesh Electronic Society (BES)	25-26 November 2018	Atomic Energy Centre, Dhaka.	Bangladesh
22	"Yttrium substituted Mg-Zn ferrites: correlation of physical properties with Yttrium content" Oral presentation, International Conference on Physics	Oral presentation, International Conference on Physics	February 7-9, 2019	organized by Bangladesh Physical Society (BPS), DU, Dhaka.	Bangladesh
23	"First principles study of M2InC (M = Zr, Hf and Ta) MAX phases: The effect of M atomic species" Poster presentation, International Conference on Physics	Poster presentation, International Conference on Physics,	February 7-9, 2019	Bangladesh Physical Society (BPS), DU, Dhaka.	Bangladesh
24	"Structural and dielectric properties of Yb substituted Ni-Zn nano ferrites by sol-gel auto-combustion technique" Accepted for Oral presentation, International Conference on Physics, organized by Bangladesh Physical Society (BPS), DU & AECD, Dhaka	Accepted for Oral presentation, International Conference on Physics	March 5-7, 2020	Bangladesh Physical Society (BPS), DU & AECD, Dhaka	Bangladesh
25	"Influence of Yb3+ on the structural, electrical and optical properties of sol-gel synthesized Ni-Zn nanoferrites" in the International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021),	The International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021)	March 11-13, 2021	BCSIR, Dhaka	Bangladesh
26	"Dynamical stability, vibrational and optical properties of anti-perovskite A3BX (Ti3TlN, Ni3SnN and Co3AlC) phases: a first principles study" in the	The International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu	March 11-13, 2021	BCSIR, Dhaka	Bangladesh

	International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021),	(ICSTB-2021)			
27	"Prospects of B-containing 212 MAX phases as their counterpart of 211 MAX phases" in the International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021),	The International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021)	March 11-13, 2021	BCSIR, Dhaka	Bangladesh
28	"Physical properties of synthesized boron-rich compounds B6X (X= S, Se): a comprehensive study via DFT approach" in the International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021),	The International Conference on Science and Technology for Celebrating the Birth Centenary of Bangabandhu (ICSTB-2021)	March 11-13, 2021	BCSIR, Dhaka	Bangladesh
29	Impact of particle size on the magnetic properties of highly crystalline Yb3+ substituted Ni-Zn nanoferrites	National Conference on Physics - 2021	06-07 August 2021	Virtual flatform	Bangladesh

COLLABORATIONS:

1. **University of Oklahoma, USA:** Department of Physics and Astronomy (Prof. M. B. Santos Group)
2. **University of Calcutta, India:** Department of Physics (Prof. D. Jana Group)
3. **Jadavpur University, India:** Department of Physics (Prof. Jaydeep Chowdhury Group)
4. **University of Sunway, Malaysia:** Applied Physics and Radiation Technologies Group (Prof. Mayeen Uddin Khandaker)
5. **Islamic University of Madinah, KSA:** Department of Chemistry (Prof. Md. Akhtaruzzaman Group)
6. **Sidho-Kanho-Birsha University, India**: Department of Physics (Dr. Sonjoy Mondal Group)

RESEARCH GRANT

Sl	Role of Project	Project Title	Project Code	Funded agency	Duration	Status
1.	Project Director	Study of structural and photocatalytic behavior of rare-earth ions (Ho, Yb, Y) doped recently synthesized high-quality V_2O_5 by hydrothermal technique for waste water treatment	Physical Science: 2022-2023/ 47	UGC, Bangladesh	2023-2024	Ongoing
2.	Leader	Investigation of energy storage capacity of Li-Ion battery using 2D emerging materials MXenes	CUET/DRE /2021-22/P HY/011	Directorate of Research & Extension (DRE), CUET	6/2023-5/2025	Ongoing
3.	Member	Development of an Advanced Computational Materials Research Laboratory (CMRL) in the Department of Physics, Chittagong University of Engineering & Technology (CUET), Bangladesh.	21-378 RG/PHYS/ AS_G	The World Academy of Science (TWAS), UNESCO 40,000 US$	2021-23	Completed
4.	Project Director	Study of photocatalytic behavior of recently synthesized high-quality V2O5 by hydrothermal technique for waste water treatment	37.01.0000. 073.07.017. 22.209	UGC, Bangladesh	2022-23	Completed
5.	Member	Anion-doped ZnO and TiO_2 nanorod in self-made ZnO seed layer for gas sensor and dye sensitized solar cell	CUET/DRE /2020-2021/ MSE/001	DRE-CUET	3/2021-3/2022	Completed
6.	Member	Assessment of radionuclides and elemental accumulation in food crops and vegetables from agricultural soils of Raozan and Rangunia Upazila by Gamma spectroscopy	CUET/DRE /2020-2021/ NE/001	DRE-CUET	3/2021-3/2023	Completed
7.	Leader	Synthesis and characterization of 2D transition metal carbides (MXenes, Ti_2C and Ti_3C_2): A theoretical and an experimental approach	CUET/DRE /2020-2021/ PHY/009	Directorate of Research & Extension (DRE), CUET	3/2021-3/2023	Completed
8.	Leader	Synthesis and Characterization of V_2O_5 using Hydrothermal Technique		DRE-CUET	7/2018-6/2020	Completed
9.	Leader	Synthesis and characterization of Y and Sn ions substituted Mg-Zn ferrites	CUET/DRE /2016-2017/ PHY/005	DRE-CUET	July 2017-June 2019	Completed

10	Leader	Study of Rate-Earth Ions Substituted Nickel-Zinc Ferrites	CUET/DRE /2016-2017/ PHY/003	DRE-CUET	July 2017-June 2019	Completed
11.	Member, SPM Team	Development of Renewable Energy Laboratory for Postgraduate Research Capability Enhancement	HEQEP CP-3200	World Bank through UGC Total amount: 04.25 Crore BDT	July 01, 2014 to June 30, 2017	Completed
12.	Leader	Study of Ni-Sn-Zn nano ferrites for high frequency electronics applications	CUET/DRE /2014-2015/ PHY/002	DRE-CUET	July 2014-June 2016	Completed
13.	Member	A Study of Microstructure and Magnetic Properties of Fe based Nanocrystalline Alloys		DRE-CUET	2009-2010	Completed
14.	Member	An investigation on the magnesium-cadmium soft ferrites for transformer cores application		UGC, Bangladesh	2010-2011	Completed

REVIEWER:

- Journal of Phase Transition, Taylor & Francis
- International Journal of Environmental Science & Technology (IJEST), Springer (IF: 1.794)
- Journal of Applied Physics (AIP)
- Journal of Sensing and Bio-sensing Research, (Elsevier)
- Journal of Review of Scientific Instruments (AIP)
- International Journal of Modern Physics B (World Scientific)
- Journal of Materials Science (Springer)
- Journal of Physics and Chemistry of Solids, (Elsevier)
- Applied Physics A (Springer)
- Philosophical Magazine & Philosophical Magazine Letters
- Journal of Electronic Materials
- Journal of Materials Today Communication
- Journal of Computational Materials Science
- Journal of Molecular Structure
- Journal of Materials Science & Engineering B

COUNTRY VISITED: India (Many), Japan (Many), USA (several), China. Saudia Arabia

MEMBERSHIP

- Life Member, Bangladesh Physical Society (BPS)
- Member, Japan Society of Applied Physics (JSAP)
- Life Member, Ex-Physics Students Association (EPSA), University of Chittagong, Bangladesh.
- Member, The Electrochemical society, USA

DEGREE AWARDED UNDER MY SUPERVISION (POST-GRADUATE):

Sl No	ID No.	Student Name	Title	Degree	Award date
1.	14PPHY007P	Md. Ashraf Ali	Synthesis and characterization of Y and Sn ions substituted Mg-Zn ferrites.	PhD	02-11-2019
2.	14PPHY008P	Nusrat Jahan	Effect of Rare-earth Ions (Yb, Ho) on the properties of Ni-Zn Ferrites	PhD	22-12-2021
3.	19PPHY002P	Md. Mahbub Alam	Evaluation of Various Treatment Planning Techniques in Radiotherapy	PhD	Thesis (Ongoing)
4.	22PPHY003P	Anie Chowdhury	--	PhD	Theory Courses (Ongoing)
5.	12MPHY003F	Farhana Sultana	Study of physical properties of machinable ternary carbides MAX phases M_2InC (M = Zr, Hf, and Ta)	M.Phil.	18-12-2018
6.	15MPHY002F	Mithila Das	Influence of Rare Earth (Y) Ion Substitution on the Structural, Electrical and Magnetic Properties of Cobalt-Zinc Ferrites	M.Phil.	19-4-2019
7.	12MPHY001P	Md. Ashraf Ali	Study of the Structural, Magnetic and Electrical Properties of Sn- Substituted Ni-Zn ferrites	M.Phil.	12-8-015
8.	14MPHY004P	Anie Chowdhury	First Principles study of MAX Phase compounds Sc_2AC (A = Al, Ga, In, Tl)	M.Phil.	12-9-2019
9.	15MPHY004P	Mohammed Sohel	Study of Physical Properties of MAX Phases M_2TlC (M = Ti, Zr, Hf): a DFT Calculation	M.Phil.	17-08-2023
10.	17MPHY001P	Md. Abdul Jalil	Studies of structural and optical properties of V_2O_5 synthesized by hydrothermal technique	M.Phil.	29-5-2022
11.	21MPHY003P	Md. Zahid Hasan	Studies of structural, photocatalytic and	MPhil	Thesis

			shielding properties of MXenes synthesized by etching technique		(Ongoing)
12.	17MSPHY001F	Kowshik Das	Study of physical properties of machinable anti-perovskite (Ti_3TlN, Ni_3SnN and Co_3AlC) phases using first principles calculations	M.Sc.	14-9-2021
13.	12MEE001P	Rabiul Islam (Department of EEE, CUET)	Design and Simulation of High Speed InSb Quantum Well Field Effect Transistor	M.Sc.	25-4-2016
14.	20MSPHY003F	Mautushi Biswas	Study of Physical Properties of Lead-free Metal Halide Perovskite Compounds $CsMI_3$ (M=Mg, Ga) for Solar Cells Applications by ab-initio Simulations	M.Sc.	03-06-2024
15.	18MME013F	Kazi Anisur Rahman	"Study of Radionuclides and Elemental Accumulation in Vegetable from the Agricultural Soils of Raozan and Rangunia Upazila	M.Sc. Engr.	09-3-2023

THESIS/PROJECT SUPERVISED AT DEPARTMENT OF EEE, FENI UNIVERSITY

Sl No.	Thesis/ Project	Title	Date of Completion
01	Project	Design and Implementation of a Maximum Power Point Tracking	24-03-2017
02	Project	Design and Implementation of a Single-Phase AC-AC Converter	24-03-2017
03	Thesis	Optimization of Barrier and Spacer Layer Thickness For High-Speed and Low Power InSb Quantum-Well Field Effect Transistor	14-04-2017
04	Thesis	Study of Quantum Well Thickness and Doping Density For High-Speed and Low Power InSb Quantum-Well Field Effect Transistor	14-04-2017
05	Project	Design A Low-Cost Controlling System To Operate Passenger Lift	08-09-2017
06	Project	GSM Based E-Health Monitoring System	08-09-2017
07	Project	Multi Stage Home Security System	08-09-2017
08	Thesis	Design and performance analysis of an high efficient perovskite solar cell	04-08-2018
09	Thesis	optimization of structural parameters for high efficient low cost OFET	04-08-2018

10	Thesis	Role of hole transport layer for further enhancement of efficiency in organic solar cells	04-08-2018
11	Thesis	Influence of Mo thin layer to achieve high efficiency of CIGS solar cell	25-01-2019
12	Project	Design and Implementation of an Industrial Line Follower Robot	25-01-2019
13	Thesis	Design and Simulation of Highly Efficient Thin CdTe solar cell by wxAMPS	22-06-2019
14	Thesis	Modeling and Simulation of Highly Efficient thin CIGS Solar Cell by wxAMPS	22-06-2019
15	Thesis	Modeling and simulation of high efficient band gap dependent CIGS solar cells mediated by barrier height	01-11-2019

SERVICE TO COMMUNITY

Post	Name of organization	Duration
Executive Member	Bangladesh Physical Society (BPS)	2024-2025
Member-Secretary	Central Admission Committee	CKRUET Combined Admission Test 2023-2024
Member	Academic Committee, CUET School & College	2022-2024
Academic Executive Committee Member	Department of Electrical & Electronic Engineering Department of Nuclear Engineering Department of Materials Science & Engineering	03 Years (two times)
Executive Committee Member (External)	Faculty of ECE, CUET Faculty of Mechanical Engineering Faculty of Engineering & Technology	03 Years
Chairman	OBE Curriculum Committee for Physics dept. CUET	February 2022 to date
Member	OBE Curriculum Review Comm. for Mathematics department, CUET	May 2022 to date
Adjunct Faculty	Dept. of EEE, Feni University	December 2014 – June 2018
Adviser-Professor	Dept. of EEE, Feni University	September 2018 to date
Head	Department of Physics, CUET	19-02-2018 to 18/02/2020
Provost	Dr. Q. K. Hall, CUET	04-10-2017 to 03/10/2019
Member	Academic Council, CUET	29-11-2015 to date.
Member	Academic Committee for Post-graduate Studies (ACPGS), Department of Physics, CUET	September 2013 to date
Member	Academic Committee for Under-graduate, Dept. of EEE, CSE (CUET)	10/20013 to date
Member	Academic Committee for Under-graduate, Dept. of MSE, NE, BME (CUET)	February 2018 to date
Member	Departmental Planning Committee (DPC), Department	10/20013 to date

	of Physics, CUET	
Member	University Disciplinary Committee, CUET,	10/2017 to 03/10/2019
Tabulator	Post-graduate level, Department of Physics, CUET	2014 to 09/03/2020
Conference Secretary	1st International Conference on "Physics for Sustainable Development & Technology (ICPSDT-2015)" organized by the Department of Physics, CUET, held on 19-20 August, 2015.	19-20 August, 2015
Conference Secretary	2nd ICPSDT-2017 at Motel Shaikat, Chittagong	10-11, December 2017
Conference Chair	3rd ICPSDT-2019 at the Department of Physics, CUET	18-19 December, 2019
Technical Chair	4th ICPSDT-2022 at Department of Physics, CUET	22-23 January, 2022
Associate Editor	International Journal of Integrated Sciences & Technology (IJIST) published by the Faculty of Engineering & Technology, CUET, Bangladesh.	6/2014 to 6/2016
Assistant Provost	Bangabhandu Hall, Chittagong University of Engineering & Technology,	09/3/2014 to 03/10/ 2017
Associate Editor	Proceedings of National Conference, published by the Department of Physics, Chittagong University of Engineering & Technology (CUET), 2010 Bangladesh.	
Secretary	National conference on 'Materials Science & Technology for sustainable development: Bangladesh perspective' 08 November 2009, (CUET), Bangladesh.	
Assistant Provost	Shahid Mohammad Shah Hall, Chittagong University of Engineering & Technology	04/10/2009 to 19/10/ 2010.
Member	Organizing Committee, Bangladesh Academy of Sciences Science Olympiad 2010, 08 January 2010, CUET center.	
Member Secretary	Election commission, CUET Teacher's Association (CUETTA) election 2009.	
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Yours truly

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