

# CURRICULUM VITAE OF DR. M. ABDUL MOMIN

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## **CURRENT POSITION:**

Professor  
Dept. of Electrical and Electronic Engineering  
Islamic University, Kushtia-7003,  
Bangladesh, Mobile: +8801712563878  
E-mail: [amomin\\_iu@yahoo.com](mailto:amomin_iu@yahoo.com)



## **EDUCATION:**

### **Doctor of Philosophy [PhD] (2019)**

Nanostructure Laboratory  
Dept. of Electrical & Electronic  
Engineering  
Faculty of Engineering & Technology  
Islamic University, Kushtia-7003,  
Bangladesh  
**Title of PhD Thesis:** “Structural and  
Optical Properties of Silver (Ag)  
Nanoparticles Protected by  
Biomimetic Materials.”

### **Master of Philosophy [M. Phil] (2009)**

Department of Applied Physics, Electronics & Communication  
Engineering Faculty of Applied Science and Technology  
Islamic University, Bangladesh  
**Title of M .Phil. Thesis:** “A Study on Optical Properties of Ag Nanoparticles”

### **Master of Science [With Thesis] (2003)**

Department of Electronics and Applied Physics  
Islamic University, Kushtia-7003, Bangladesh  
Result: First Class 7<sup>th</sup> (Acc. Merit.)  
Medium of instruction: English  
**Title of MS Dissertation:** “Electrical Properties of PbS Thin Films Prepared by Spray  
Pyrolysis Technique.”

### **Bachelor of Science (Hons.) (2001)**

Department of Electronics and Applied Physics  
Islamic University, Kushtia-7003, Bangladesh  
Result: First Class 8<sup>th</sup> (Acc. Merit.)  
Medium of instruction: English

## **SCHOLARSHIP/FELLOWSHIP/AWARD:**

1. Bangladesh Ministry of Science and Technology (NST) Scholarship for PhD degree.
2. Bangladesh Ministry of Science Information and Communication Technology fellowship for M.Phil. degree
3. Bangladesh Government Higher Education Authority stipend for B. Sc. (Hon.) result

**PROFESSIONALEXPERIENCE:**

<b>Position</b>	<b>Department &amp; Institute</b>	<b>Course taught</b>
<b>Professor</b> (07/12/18 to till date)	Dept. of Electrical and Electronic Engineering Islamic University Kushtia-7003, Bangladesh	i. VLSI Design ii. Nanotechnology iii. Microelectronics iv. Electronics device and Circuits
<b>Associate Professor</b> (05/04/2013 to 06/12/2018)	Dept. of Electrical and Electronic Engineering Islamic University Kushtia-7003, Bangladesh	i. Electromagnetic Waves and Propagation ii. Materials Characterization Technology ii. VLSI Design v. Photonics and Photovoltaic
<b>Assistant Professor</b> (15/09/2007 to 04/04/2013)	Dept. of Electrical and Electronic Engineering Islamic University Kushtia-7003, Bangladesh	i. Fundamental of Computer ii. Advance Solid State Physics iii. Communication Engineering iv. Microprocessor and Computer Peripheral Interfacing
<b>Lecturer</b> (15/9/2004 to 14/9/2007)	Dept. of Electrical and Electronic Engineering Islamic University Kushtia-7003, Bangladesh	i. Basic Electronics ii. Optical fiber communication iii. Digital Electronics iv. Modern Physics

**ADMINISTRATIVE POSITION**

**Member Editorial Board:** Journal of Applied Science and Technology, Islamic University

**House Tutor:** Islamic University, Kushtia 7003, Bangladesh: Shahid Ziaur Rahman Hall-02 Years

Lalon Shah Hall- 01 Year and Saddam Hossain Hall- 01 Year

**PERSONAL INFORMATION:**

Name: **Prof. Dr. Md. Abdul Momin**

Date of birth: January 14, 1976

Father's Name: Md. Omar Ali

Mother's Name: Mst. Morzina Khatun

Marital Status: Married,

Health: Excellent (Non-smoker)

Nationality: Bangladeshi

**LANGUAGE PROFICIENCY**

Reading, writing and speaking fluently in Bengali and English

Reading and writing Arabic

**RESEARCH INTEREST:**

- Nanomaterials/nanoparticles (Organic/Biomimetic) synthesis/processing via electrochemical technique and their characterization/metrology for drudge applications.
- Thin and thick film deposition via Physical Vapor Deposition (PVD), Chemical Vapor Deposition (CVD), Spray Pyrolysis Technique and their characterization.
- Especially green synthesis of silver nanoparticles using medicinal plant extract and their antibacterial activity..

### **EXPERIMENTAL TECHNIQUES KNOWN:**

1. **Growth/Synthesis:** Metal and Semiconductor Nanoparticles via Biosynthesis, Electrochemical and chemical techniques.
2. **Film deposition:** Thin and Thick films deposition using Physical Vapor Deposition (PVD) and Spray Pyrolysis Technique.
3. **Characterization:**
  - (a) **Optical Property:** UV-Vis Spectroscopy, FTIR Spectroscopy, Micro Raman spectroscopy, Room temperature and Low temperature Photoluminescence(PL) spectroscopy with UV (325 and 364 nm) and Argon Ion Laser
  - (b) **Structural Property:** X-Ray Diffraction (XRD), Scanning Electron Microscopy (SEM), Atomic Force Microscopy (AFM) and Optical Microscopy
  - (c) **Electrical Property:** Four point Probe, Semiconductor analyzer, Hall Effect, DLTS and Ocean Optics miniature spectrometer for electroluminescence (EL)
  - (d) **Chemical Composition:** X-ray photoelectron spectrometer (XPS), energy dispersive X-ray analysis (EDX),
4. **Computer Skill:** Matlab, C, C++, PSpice, Windows, Linux. Ocean Optics application software application and its analysis.

### **PUBLICATIONS:**

#### **(a) Articles published in International journals:**

01. Rapid Biological Synthesis of Silver Nanoparticles from *Ocimum sanctum* and Their Characterization. M.Z.H. Khan, F.K. Tarek, M. Nuzat, **M.A. Momin** and M.R. Hasan, *Journal of Nanoscience*, (2017)
02. M.R.A. Bhuiyan, M.M. Alam, **M.A. Momin**, Hayati Mamur, “Characterization of Al doped ZnO nanostructures via an electrochemical route” *International Journal of Energy Applications and Technologies*, **4 (1)** (2017) 28-33.
03. Two Steps Soft Chemical Method for the Synthesis of NiO Nanoparticles and its Characterization. M. Jalal Uddin, Rokshana Khatun, M. Nasir Uddin Khan, **M.A. Momin**, M. Khairul Islam, M. Helal Uddin and M.M. Alam, *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, Vol. 3 Issue 1,(2016). 3712-3715.
04. A review on the influence of applied potential on different electrical properties of Self-assembled monolayers (SAMs) of alkanethiols on gold (Au) surface. M. Jalal Uddin, **M. Abdul Momin**, M. Abdur Razzaque, M. Shahinuzzaman, M. Khairul Islam, Wayesh Qarony, and Ismail Hossain, *International Journal of Material and Mechanical Engineering (IJMME)*, Volume 4, (2015), 55-65.
05. A study on Volumetric and Viscometric Properties for the Mixtures of DMF and Other Alcohols from Temperatures ranges 303.15K to 323.15K. Md. Helal Uddin, M. Z. H. Khan, Md. Shahrul Islam, G.M. Arifuzzaman Khan, Md. Abdullah-Al-Muhit, Jannatul Ferdaus, **Md. Abdul Momin**, and SK. Shahinur Rahman, *Journal of Advances in Natural Sciences*, Vol. 2, No. 2(2014) 133-148
06. M. R.A. Bhuiyan, M. M. Alam, **M. Abdul Momin**, M K Rahman, D K Saha “*Growth and Characterization of CuInSe<sub>2</sub> Nanoparticles for Solar Cell Applications*”; *Journal of Alternate Energy Sources and Technologies*, **5** (2014) 13
07. M. R. A. Bhuiyan, M. M. Alam, **M.A. Momin**, M. J. Uddin and M. Islam; “Synthesis and Characterization of Barium Titanate Nanoparticles(NP)” *International J. Material and Mechanical Engineering*, **1** (2012) 21
08. M. R. A. Bhuiyan, M. M. Alam, **M. Abdul Momin**; “*Effect of Substrate Temperature on the Optical Properties of Thermally Evaporated ZnS Thin Films*” *Turk J. Phys.* **34** (2010) 43

#### **(c) Articles published in National journals:**

01. Time and pressure dependent of microcontact printing ( $\mu$ CP) of self-assembled monolayers of thiol. M. Jalal Uddin, **M. Abdul Momin**, M. Helal Uddin, Wayesh Qaronyr, Mohammad I. Hossain, *J. Bangladesh Electronics Society*, Vol. 15, No.2, (2015)

02. Structural and Optical Evaluation of Cadmium Sulfide (CdS) Nanoparticles Synthesized by Chemical route. M. Mahbub Alom, **M. Abdul Momin**, M. Jalal Uddin and M. Islam. *J. Bangladesh Electronics Society*, Vol. 15, No-2,( 2015).
03. One step Synthesis and Optical Evaluation of Copper Oxide (CuO) Nanoparticles. Momtazul Islam, Roksana Pervin, M. Jalal Uddin, G.M. Arifuzzaman and **M. Abdul Momin**, *J. Bangladesh Electronics Society*, 10(1-2); (2010) 57-63.
04. Influence of the Thickness on the Electrical Properties of CdS Thin Films. **M. Abdul Momin**, M.A. Islam, M. Alauddin Al Azad, M.S. Ali and M.R.A. Bhuiyan, *J. Appl. Sci. Tech.* Vol.7, No.1(2010) 49-53.
05. I-V Characteristics of Ag/P-AgGaSe<sub>2</sub> Thin Film Schottky Diode. M. Alauddin Al Azad, **M. A. Momin**, M.K. Rahman, M.R.A. Bhuiyan; *J. Appl. Sci. Tech.* Vol.7, No.1(2010) 37-39.
06. Influence of Thickness on the Structural and Optical Properties of ZnSe Thin Films. M.A.H. Miah, J. Begum, M.Jalal Uddin, **M.A. Momin** and M.R.A. Bhuiyan, *J. Appl. Sci. Tech.* Vol.7, No.1(2010) 27-32.
07. M. M. Alam, **M. A. Momin** and M. Islam, "Spectroscopic and Structural Characterization of TTAB Capped Electrochemical Grown ZnO Nanoparticles" Jahangir Nagar University Journal of Science, 32 (2009) 69
08. **M. A. Momin**, M. M. Alam and M. Islam, "Electrochemical synthesis and optical evaluation of tetradecyltrimethyl ammonium bromide capped Ag Nanoparticles" *Journal of Bangladesh Electronics Society* 8 (2008) 79
09. **M. A. Momin**, M. A. Islam, M. M. Alam, T. Parvin and M. Islam, "Synthesis and Photoluminescence Evaluation of TTAB Capped ZnO/Ag Nanoparticles" *Journal of Bangladesh Electronics Society*, 9 (2009) 89.
10. Structural and Magnetic Properties of Mn-Zn Mixed Spinel Ferrites. M. Manjurul Haque, **M. Abdul Momin**, M. Khirul Islam, *J. Bangladesh Electronics Society*, 9(1-2) (2009) 45-51.
11. Link Budget: A Proposed Model for Cellular Mobile Communication System in Dhaka City. M.K.Rahman, M.H.Kabir, **M.A.Momin** and M.A.H.Shahriar, *J. Bangladesh Electronics society*, 8(1-2) (2008) 15-20.
12. TEXT-DEPENDENT SPEAKER RECOGNITION USING A TEMPLATE MODEL. Md. Tariquzzaman, T.K. Godder, Md. Nazim Uddin, Md. Abdur Razzaque, **M. A. Momin**, *J. Appl. Sci. Tech.* Vol.5, No.1 (2007) 49-54.
13. Properties of Lead Sulphide Thin Films Prepared by a Low Cost Technique. **M.A. Momin** and M.S.Ali, *J. Bangladesh Electronics Society*.7 (1-2) (2007) 23-26

**(d) Paper published in International Conference:**

01. M M. Alom, M.A. Momin, M. Jalal Uddin and M. Islam; " Structural and Optical Evaluation of Cadmium Sulfide(CdS) Nanoparticles Synthesized by Chemical route", International Conference on Physics for Energy and Environment, March, 2014, Proceeding NM-VII-B 03.
02. M. Islam, M. Mehedi Hasan, M.Julfiker Haider and M.A Momin; *Structural and Optical Characterization of Chemically Synthesized ZnS Nanoparticles*, International workshops on Nanotechnology, September 2012, Proceeding PO-37.
03. M. A. Momin, and M. Islam, "Electrochemical synthesis and optical evaluation of tetradecyltrimethyl ammonium bromide (TTAB) capped Ag Nanoparticles; International Conference on Magnetism and Advanced Materials, march 2010. Proceeding NC-2.

**SUPERVISION OF M. Sc. THESIS STUDENT:**

1. Amit Kumar Shah, "Green Synthesis and Characterization of Silver nanoparticles Using *Ocimum sanctum* (Tulsi) Leaves Extracts, M. Sc. Thesis, 2012

**PRIOR EXPERIENCE IN IMPLEMENTING RESEARCH PROJECT:**

TITLE OF THE PROJECT/RESEARCH ACTIVITY	DONOR/SPONSOR	POSTION IN THE PROJECT	YEAR	
			FROM	TO
Green Synthesis and Optical Characterization of Starch Capped CdS Nanoparticles	Islamic University, Kushtia	Principal Investigator	2012	2013
Synthesis and Characterization of Copper Selenide Quantum Dots (QDs)	Ministry of Science and Technology, Bangladesh	Deputy Principal Investigator	2017	2018
Biosynthesis of Silver Nanoparticles Uging Mint Leaf Extract and Their Antibacterial Activity	Islamic University, Kushtia	Principal Investigator	2018	2019

**OTHER PROFESSIONAL EXPERIENCE & SKILL:**

1. External Expert Member for Syllabus and examination committee for University of Chittagong, National University, Jessore University of Science & Technology, etc Bangladesh.
2. Convener of 1<sup>st</sup> year & member of 4<sup>th</sup> year & M. Sc examination committee: Dept. of Applied Physics, Electronics and Communication Engineering, Islamic University, Kushtia, Bangladesh

**REFEREES:**

**01.** Prof. Momtazul Islam  
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**02.** Professor Dr. Md. Monjarul Alam  
Professor & Chairman  
Dept. of Electrical and Electronic Engineering,  
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[Prof. Dr. MD. ABDUL MOMIN]