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# Experience

Associate Professor, Department of Electrical and Electronic Engineering (EEE)

### Bangladesh University of Engineering and Technology (BUET)

Assistant Professor, Department of Electrical and Electronic Engineering (EEE)

### Bangladesh University of Engineering and Technology (BUET)

Lecturer, Department of Electrical and Electronic Engineering (EEE)

### Bangladesh University of Engineering and Technology (BUET)

Lecturer, Institute of Information and Communication Technology (IICT)

### Bangladesh University of Engineering and Technology (BUET)

July 2022 – to date June 2013 – July 2022

Jan 2010 – June 2013

Nov 2009 – Jan 2010

# Education

**Ph.D. Purdue University**, West Lafayette, IN, USA School of Electrical and Computer Engineering

* **Ph.D. Thesis:** WAVEFRONT MANIPULATION WITH META- SURFACES BASED ON NEW MATERIALS
* **Ph.D. Co-supervisor(s):** Alexandra Boltasseva and Alexander Kildishev

### M.Sc. Bangladesh University of Engineeing and Technology (BUET)

Department of Electrical and Electronic Engineering

* **M.Sc. Engg. Thesis:** Design of a Fractal Antenna based on Hexaflake Fractal Structure
* **M.Sc. Engg. Supervisor:** Dr. M. A. Matin

### B.Sc. Bangladesh University of Engineeing and Technology (BUET)

Department of Electrical and Electronic Engineering

* CGPA: 3.94/4.0
* **Undergraduate Thesis:** Design and Analysis of a Multiband Dual Feed Axially Symmetric Cassegrain Antenna System
* **Undergraduate Supervisor:** Dr. M. A. Matin
  + 1. **Notre Dame College**, Dhaka
       - GPA: 5.00/5.00

### Udayan Uchchya Madhyamic Bidyalaya, Dhaka

* + - * GPA: 5.00/5.00

Aug 2013 – Aug 2019

Aug 2011 – 2013

Dec 2004 – Aug 2010

2004

2002

# Details of Publications from 20/05/2024 to 21/05/2025

# Details of Publications since last appointment

# Details of Important design/research projects from 20/05/2024 to 21/05/2025

**Postgraduate thesis supervised**

* Md Asif Hossain Bhuiyan, M.Sc. Engg. (May 2025) **Polarization Insensitive Electrically Reconfigurable Metasurface For Metalensing At Near Infrared Waveband**
* Md. Mahfuzul Haque, M.Sc. Engg. (Jan 2025) **Design Of Silicon-carbide Based Single-quantum-well White LED**
* Md. Ehsanul Karim, M.Sc. Engg. (June 2024) **Phase Change Material Based Broadband Multifunc- tional Metasurface for the Visible Range**
* Shamima Akter Mitu M.Sc. Engg. (May 2023) **Design of an All-optical Plasmonic Modulator for Two Micrometer Waveband**

# Complete List of Publications

## Publications Metrics

* 1. �Google Scholar Metrics

Total Citations 1133

h-index 13

i10-index 10

220

165

�Citations

110

55

0

2018

2019

2020

2021

2022

2023

2024

2025

* 1. �Google Scholar Citations per Year

## Journal Articles

[J26] M. M. Haque, M. R. Islam, and S. M. Choudhury. “Investigation of the physical properties through strain effect of monolayer silicon carbide material: DFT analysis”. In: *Physica B: Condensed Matter* 697 (2025),

p. 416670. doi: [10.1016/j.physb.2024.416670 External-Link-Alt](https://doi.org/10.1016/j.physb.2024.416670). SJR **Q2**(IF **2.4**).

[J25] M. E. Karim, M. R. Karim, and S. M. Choudhury. “Synergizing deep learning and phase change materials for four-state broadband multifunctional metasurfaces in the visible range”. In: *Optics & Laser Technology* 181 (2025), p. 111730. doi: [10.1016/j.optlastec.2024.111730 External-Link-Alt](https://doi.org/10.1016/j.optlastec.2024.111730). �Citations: **1**, SJR **Q1**(IF **5.2**).

[J24] S. Sarkar and S. M. Choudhury. “Efficiency enhancement of c-Si/TiO2 heterojunction thin film solar cell using hybrid metal-dielectric nanostructures”. In: *Solar Energy* 296 (2025), p. 113535. doi: [10.1016/j.](https://doi.org/10.1016/j.solener.2025.113535) [solener.2025.113535 External-Link-Alt](https://doi.org/10.1016/j.solener.2025.113535). url: <https://www.sciencedirect.com/science/article/pii/S0038092X25002981>. SJR **Q1**(IF **6.47**).

[J23] A. Sarker and S. M. Choudhury. “Concentric annular-hexagonal plasmonic resonator with nanorod vertices for dual-band absorption in NIR and MIR for sensing applications”. In: *Opt. Continuum* 4.5 (May 2025),

pp. 1159–1173. doi: [10.1364/OPTCON.558501 External-Link-Alt](https://doi.org/10.1364/OPTCON.558501). url: [https://opg.optica.org/optcon/abstract.cfm?](https://opg.optica.org/optcon/abstract.cfm?URI=optcon-4-5-1159) [URI=optcon-4-5-1159](https://opg.optica.org/optcon/abstract.cfm?URI=optcon-4-5-1159). SJR **Q3**(IF **1.1**).

[J22] M. A. H. Bhuiyan, P. Das, and S. M. Choudhury. “Polarization insensitive electrically reconfigurable meta- lens for the 2 *µ*m wavelength”. In: *Opt. Mater. Express* 14.12 (Dec. 2024), pp. 2830–2843. doi: [10.1364/](https://doi.org/10.1364/OME.540435) [OME.540435 External-Link-Alt](https://doi.org/10.1364/OME.540435). SJR **Q2**(IF **2.8**).

[J21] M. E. Karim and S. M. Choudhury. “Sb2S3/AlGaAs based Reconfigurable Metasurface for Dynamic Po- larization and Directionality Control of Quantum Emitter Emission”. In: *RSC Advances* 40 (2024). doi: [10.1039/D4RA03726J External-Link-Alt](https://doi.org/10.1039/D4RA03726J). SJR **Q1**(IF **3.9**).

[J20] P. Mahmud, K. F. Supti, and S. M. Choudhury. “Lithium niobate photonic topological insulator-based multi-wavelength optical demultiplexer with piezoelectric switch-off”. In: *Opt. Express* 32.26 (Dec. 2024),

pp. 45786–45800. doi: [10.1364/OE.541271 External-Link-Alt](https://doi.org/10.1364/OE.541271). SJR **Q1**(IF **3.2**).

[J19] M. H. Himel, B. Sikder, T. Ahmed, and S. M. Choudhury. “Biomimicry in Nanotechnology: A Comprehen- sive Review”. In: *NanoScale Advances* 5 (2023), pp. 595–614. doi: [10.1039/D2NA00571A External-Link-Alt](https://doi.org/10.1039/D2NA00571A). �Citations: **22**, SJR **Q1**(IF **5.6**).

[J18] M. E. Karim and S. M. Choudhury. “Reconfigurable Broadband Metasurface with Switchable Functionalities in the Visible Range”. In: *Optical Materials Express* 13.5 (2023), pp. 1409–1423. doi: [10.1364/OME.489981](https://doi.org/10.1364/OME.489981)

[External-Link-Alt](https://doi.org/10.1364/OME.489981). �Citations: **5**, SJR **Q2**(IF **2.8**).

[J17] M. A. H. Bhuiyan, S. A. Mitu, and S. M. Choudhury. “TiN-GST-TiN all-optical reflection modulator for the 2*µ*m wave band reaching 85% efficiency”. In: *Applied Optics* 61 (2022), pp. 9262–9270. doi: [10.1364/](https://doi.org/10.1364/AO.470247) [AO.470247 External-Link-Alt](https://doi.org/10.1364/AO.470247). �Citations: **3**, SJR **Q2**(IF **2.08**).

[J16] H. Roy, E. Karim, S. Mondal, and S. M. Choudhury. “Custom Gold-Patterned Rewritable Optical Disc based Plasmonic Sensor for Blood Hemoglobin Detection”. In: *Optics Continuum* 1.10 (2022). doi: [10.](https://doi.org/10.1364/OPTCON.473106) [1364/OPTCON.473106 External-Link-Alt](https://doi.org/10.1364/OPTCON.473106). �Citations: **1**, SJR **Q3**(IF **1.1**).

[J15] Y. F. Abed, M. A. H. Bhuiyan, and S. M. Choudhury. “T Grating on Nano-Cavity Array based Refractive Index Sensor”. In: *J. Opt. Soc. Am. B* 39.9 (2021). doi: [10.1364/JOSAB.426526 External-Link-Alt](https://doi.org/10.1364/JOSAB.426526). �Citations: **1**, SJR **Q2**(IF **2.18**).

[J14] M. M. Hassan, F. S. Sium, F. Islam, and S. M. Choudhury. “A Review on Plasmonic Nano-biosensors for Virus Detection with a Focus on Coronavirus”. In: *Sensing and Bio-Sensing Research* 33 (2021), p. 100429. doi: [10.1016/j.sbsr.2021.100429 External-Link-Alt](https://doi.org/10.1016/j.sbsr.2021.100429). �Citations: **69**, SJR **Q2**(IF **4.42**).

[J13] A. Sarker, S. A. Mitu, P. Das, and S. M. Choudhury. “Structurally Tunable Gear-Shaped Plasmonic Sensor”. In: *Optics Express* 28.24 (2020), pp. 36070–36083. doi: [10.1364/OE.410123 External-Link-Alt](https://doi.org/10.1364/OE.410123). �Citations: **13**, SJR **Q1**(IF **3.67**).

[J12] H. Jiang, S. M. Choudhury, Z. A. Kudyshev, D. Wang, P. Xiao, Y. Jiang, and A. V. Kildishev. “Enhancing sensitivity to ambient refractive index with tunable few-layer graphene/hBN nanoribbons”. In: *Photonics Research* 7.7 (2019), pp. 815–822. doi: [10.1364/PRJ.7.000815 External-Link-Alt](https://doi.org/10.1364/PRJ.7.000815). �Citations: **36**, SJR **Q1**(IF **7.37**).

[J11] H. Jiang, H. Reddy, D. Shah, Z. A. Kudyshev, S. M. Choudhury, D. Wang, Y. Jiang, and A. V. Kildishev. “Modulating Phase by Metasurfaces with Gated Ultra-thin TiN Films”. In: *Nanoscale* 11 (2019), pp. 11167– 11172. doi: [10.1039/C9NR00205G External-Link-Alt](https://doi.org/10.1039/C9NR00205G). �Citations: **10**, SJR **Q1**(IF **6.62**).

[J10] O. Quevedo-Teruel, H. Chen, A. Díaz-Rubio, G. Gok, A. Grbic, G. Minatti, E. Martini, S. Maci, G. V. Eleftheriades, M. Chen, N. I. Zheludev, N. Papasimakis, S. M. Choudhury, Z. A. Kudyshev, S. Saha,

H. Reddy, A. Boltasseva, V. M. Shalaev, A. V. Kildishev, D. Sievenpiper, C. Caloz, A. Alù, Q. He, L. Zhou, G. Valerio, E. Rajo-Iglesias, Z. Sipus, F. Mesa, R. Rodríguez-Berral, F. Medina, V. Asadchy, S. Tretyakov, and C. Craeye. “Roadmap on metasurfaces”. In: *Journal of Optics* 21.7 (2019), p. 073002. doi: [10.1088/2040-8986/ab161d External-Link-Alt](https://doi.org/10.1088/2040-8986/ab161d). �Citations: **278**, SJR **Q2**(IF **2.66**).

[J9] M. Song, D. Wang, S. Peana, S. M. Choudhury, P. Nyga, Z. A. Kudyshev, H. Yu, A. Boltasseva, V. M. Shalaev, and A. V. Kildishev. “Colors with plasmonic nanostructures: A full-spectrum review”. In: *Applied Physics Reviews* 6 (2019), p. 041308. doi: [10.1063/1.5110051 External-Link-Alt](https://doi.org/10.1063/1.5110051). �Citations: **215**, SJR **Q1**(IF **16.30**).

[J8] S. M. Choudhury, D. Wang, K. Chaudhuri, C. DeVault, A. V. Kildishev, A. Boltasseva, and V. M. Shalaev. “Material platforms for optical metasurfaces”. In: *Nanophotonics* 7.6 (2018), pp. 959–987. doi: [10.1515/](https://doi.org/10.1515/nanoph-2017-0130) [nanoph-2017-0130 External-Link-Alt](https://doi.org/10.1515/nanoph-2017-0130). �Citations: **167**, SJR **Q1**(IF **8.09**).

[J7] S. M. Choudhury, U. Guler, A. Shaltout, V. M. Shalaev, A. V. Kildishev, and A. Boltasseva. “Pancharat- nam–Berry Phase Manipulating Metasurface for Visible Color Hologram Based on Low Loss Silver Thin Film”. In: *Advanced Optical Materials* 5 (2017), p. 1700196. doi: [10.1002/adom.201700196 External-Link-Alt](https://doi.org/10.1002/adom.201700196). �Citations: **83**, SJR **Q1**(IF **8.70**).

[J6] V. A. Zenin, S. M. Choudhury, S. Saha, V. M. Shalaev, A. Boltasseva, and S. I. Bozhevolnyi. “Hybrid plas- monic waveguides formed by metal coating of dielectric ridges”. In: *Optics Express* 25.11 (2017), pp. 12295– 12302. doi: [10.1364/OE.25.012295 External-Link-Alt](https://doi.org/10.1364/OE.25.012295). �Citations: **37**, SJR **Q1**(IF **3.67**).

[J5] J. Kim, S. M. Choudhury, C. DeVault, Y. Zhao, A. V. Kildishev, V. M. Shalaev, A. Alù, and A. Boltasseva. “Controlling the Polarization State of Light with Plasmonic Metal Oxide Metasurface”. In: *ACS Nano* 10.10 (2016), pp. 9326–9333. doi: [10.1021/acsnano.6b03937 External-Link-Alt](https://doi.org/10.1021/acsnano.6b03937). �Citations: **75**, SJR **Q1**(IF **15.82**).

[J4] S. M. Choudhury and M. Matin. “Multiport Analysis of Hexagonal Patch Antenna”. In: *IJECCT* 3.3 (2013).

url: <https://journal.uniten.edu.my/index.php/ijecct/article/view/58>. �Citations: **1**,

[J3] M. Gaffar, M. Zaman, S. Choudhury, and M. A. Matin. “Design and optimisation of a novel dual-band circularly polarised microstrip antenna”. In: *IET Microwaves and Antennas & Propagation* 5.14 (2011),

pp. 1670–1674. doi: [10.1049/iet-map.2010.0050 External-Link-Alt](https://doi.org/10.1049/iet-map.2010.0050). �Citations: **10**, SJR **Q2**(IF **2.70**).

[J2] M. Zaman, S. Mamun, M. Gaffar, S. Choudhury, M. M. Alam, and M. Matin. “Phased Array Synthesis Using Modified Particle Swarm Optimization”. In: *Journal of Engineering Science & Technology Review*

4.1 (2011). doi: [10.25103/jestr.041.10 External-Link-Alt](https://doi.org/10.25103/jestr.041.10). �Citations: **18**, SJR **Q3**(IF **1.6**).

[J1] M. A. Zaman, M. Gaffar, M. M. Alam, S. A. Mamun, S. M. Choudhury, and M. Matin. “Approximate Closed-Form Expression of the Electric Field of a Conical Horn Antenna”. In: *International Journal of Computer and Electrical Engineering* 3.1 (2011), p. 48. url: <http://ijcee.org/papers/291-E337.pdf>.

## Conference Proceedings

[C22] M. T. Alam, Y. Mahmud, Z. J. Nikita, and S. M. Choudhury. “Gesture Controlled Bot with Temperature & Humidity (TH) Sensing Features”. In: *2024 2nd International Conference on Information and Commu- nication Technology (ICICT)*. 2024, pp. 36–40. doi: [10.1109/ICICT64387.2024.10839649 External-Link-Alt](https://doi.org/10.1109/ICICT64387.2024.10839649).

[C21] M. A. H. Bhuiyan, S. A. Mitu, and S. M. Choudhury. “VO2-based All-optical Reflection Modulator for 2*µ*m Wave Band”. In: *2023 IEEE Photonics Conference (IPC)*. 2023, pp. 1–2. doi: [10.1109/IPC57732.](https://doi.org/10.1109/IPC57732.2023.10360477) [2023.10360477 External-Link-Alt](https://doi.org/10.1109/IPC57732.2023.10360477)�Citations: **1**,

[C20] S. A. Khan, S. T. Azad, T. Mondal, A. J. Bin Iqbal, and S. M. Choudhury. “Development of an Internet of Things based Bangla Calendar Clock”. In: *2023 26th International Conference on Computer and Information Technology (ICCIT)*. 2023, pp. 1–6. doi: [10.1109/ICCIT60459.2023.10441436 External-Link-Alt](https://doi.org/10.1109/ICCIT60459.2023.10441436).

[C19] A. Mukit, M. S. H. Bijoy, S. M. Choudhury, and M. T. Mahmud. “Discrete Modulated Continuous-Variable Quantum Key Distribution: Security and Noise Tolerance Enhanced by Decoy States and Effective Error Correction Protocol Integration”. In: *2023 IEEE International Conference on Telecommunications and Photonics (ICTP)*. 2023, pp. 1–5. doi: [10.1109/ICTP60248.2023.10490525 External-Link-Alt](https://doi.org/10.1109/ICTP60248.2023.10490525).

[C18] K. R. Pritom, M. E. Karim, and S. M. Choudhury. “A Polarization Insensitive Achromatic Metalens Operat- ing at Two Wavelengths in Visible Regime”. In: *2023 IEEE International Conference on Telecommunications and Photonics (ICTP)*. 2023, pp. 01–05. doi: [10.1109/ICTP60248.2023.10491019 External-Link-Alt](https://doi.org/10.1109/ICTP60248.2023.10491019)�Citations: **1**,

[C17] S. Sarkar and S. M. Choudhury. “Design and Performance Analysis of a c-Si Thin-Film Solar Cell Us- ing Plasmonic Ag Nanostructures”. In: *2023 IEEE International Conference on Telecommunications and Photonics (ICTP)*. 2023, pp. 01–05. doi: [10.1109/ICTP60248.2023.10490886 External-Link-Alt](https://doi.org/10.1109/ICTP60248.2023.10490886).

[C16] Z. A. Kudyshev, L. J. Prokopeva, M. Song, S. M. Choudhury, and A. V. Kildishev. “Bi-anisotropic homog- enization for efficient metasurface design (invited)”. In: *2018 International Applied Computational Electro- magnetics Society Symposium (ACES)*. 2018, pp. 1–2. doi: [10.23919/ROPACES.2018.8364134 External-Link-Alt](https://doi.org/10.23919/ROPACES.2018.8364134).

[C15] S. M. Choudhury, V. A. Zenin, S. Saha, V. M. Shalaev, S. Bozhevolnyi, and A. Boltasseva. “Novel Hard Mask Fabrication Method for Hybrid Plasmonic Waveguide and Metasurfaces”. In: *Frontiers in Optics 2017*. Optica Publishing Group, 2017, JTu2A.12. doi: [10.1364/FIO.2017.JTu2A.12 External-Link-Alt](https://doi.org/10.1364/FIO.2017.JTu2A.12).

[C14] S. M. Choudhury, A. Shaltout, V. M. Shalaev, A. V. Kildishev, and A. Boltasseva. “Experimental Real- ization of Color Hologram Using Pancharatnam-Berry Phase Manipulating Metasurface”. In: *Conference on Lasers and Electro-Optics*. Optica Publishing Group, 2016, FF1D.8. doi: [10.1364/CLEO\_QELS.2016.](https://doi.org/10.1364/CLEO_QELS.2016.FF1D.8) [FF1D.8 External-Link-Alt](https://doi.org/10.1364/CLEO_QELS.2016.FF1D.8)�Citations: **2**,

[C13] S. M. Choudhury, A. Shaltout, V. M. Shalaev, A. Boltasseva, and A. V. Kildishev. “Color Hologram Gener- ation Using a Pancharatnam-Berry Phase Manipulating Metasurface”. In: *CLEO: 2015*. Optica Publishing Group, 2015, JTu5A.89. doi: [10.1364/CLEO\_AT.2015.JTu5A.89 External-Link-Alt](https://doi.org/10.1364/CLEO_AT.2015.JTu5A.89)�Citations: **3**,

[C12] P. Ahmmed, Z. Ahmed, M. I. J. Rafee, M. A. Awal, and S. M. Choudhury. “Self-localization of a mobile robot using monocular vision of a chessboard pattern”. In: *8th International Conference on Electrical and Computer Engineering*. 2014, pp. 753–756. doi: [10.1109/ICECE.2014.7026828 External-Link-Alt](https://doi.org/10.1109/ICECE.2014.7026828)�Citations: **7**,

[C11] J. Kim, B. Memarzadeh, A. Dutta, S. M. Choudhury, A. V. Kildishev, H. Mosallaei, and A. Boltasseva. “GZO/ZnO Multilayered nanodisk metasurface to engineer the plasma frequency”. In: *CLEO: 2014*. Optica Publishing Group, 2014, FW1K.4. doi: [10.1364/CLEO\_QELS.2014.FW1K.4 External-Link-Alt](https://doi.org/10.1364/CLEO_QELS.2014.FW1K.4)�Citations: **2**,

[C10] J. Kim, Y. Zhao, A. Dutta, S. M. Choudhury, A. V. Kildishev, A. Alu, and A. Boltasseva. “Nanostructured Transparent Conducting Oxide Films for Polarization Control with Plasmonic Metasurfaces”. In: *CLEO: 2014*. Optica Publishing Group, 2014, FF2C.2. doi: [10.1364/CLEO\_QELS.2014.FF2C.2 External-Link-Alt](https://doi.org/10.1364/CLEO_QELS.2014.FF2C.2)�Citations: **2**,

[C9] S. M. Choudhury and M. A. Matin. “Effect of FSS ground plane on second iteration of hexaflake fractal patch antenna”. In: *2012 7th International Conference on Electrical and Computer Engineering*. 2012,

pp. 694–697. doi: [10.1109/ICECE.2012.6471645 External-Link-Alt](https://doi.org/10.1109/ICECE.2012.6471645)�Citations: **5**,

[C8] S. M. L. Kabir, M. S. Hussain, S. M. Choudhury, and A. H. Chowdhury. “Developing A Low-Cost Mul- tiple Motor Switched Photovoltaic Powered Irrigation System”. In: *Proceedings of the 3rd International Conference on Water and Flood Management (ICWFM-2011)*. Vol. 2. 2011, pp. 577–581.

[C7] S. M. Choudhury, M. A. Zaman, M. Gaffar, and M. A. Matin. “A Novel Approach for Changing Bandwidth of FSS Filter Using Gradual Circumferential Variation of Loaded Elements”. In: *Proceedings of Progress in Electromagnetic Research Symposium PIERS, Cambridge, USA*. 2010�Citations: **8**,

[C6] S. M. Choudhury, M. Gaffar, M. A. Zaman, and M. A. Matin. “Design of an X band aperture matched horn antenna by optimization of back-lobe and cross-polarization level”. In: *International Conference on Electrical & Computer Engineering (ICECE 2010)*. 2010, pp. 550–553. doi: [10.1109/ICELCE.2010.5700751](https://doi.org/10.1109/ICELCE.2010.5700751)

[External-Link-Alt](https://doi.org/10.1109/ICELCE.2010.5700751)�Citations: **1**,

[C5] M. Gaffar, S. M. Choudhury, M. A. Zaman, M. I. Momtaz, M. S. Alam, and M. A. Matin. “Sensitivity analysis of a circularly polarized U-slot microstrip antenna”. In: *International Conference on Electrical & Computer Engineering (ICECE 2010)*. 2010, pp. 546–549. doi: [10.1109/ICELCE.2010.5700750 External-Link-Alt](https://doi.org/10.1109/ICELCE.2010.5700750).

[C4] M. A. Zaman, M. Gaffar, S. M. Choudhury, and M. A. Matin. “Optimization and analysis of a Ka band Pickett Potter horn antenna with low cross polarization”. In: *International Conference on Electrical & Computer Engineering (ICECE 2010)*. 2010, pp. 542–545. doi: [10.1109/ICELCE.2010.5700749 External-Link-Alt](https://doi.org/10.1109/ICELCE.2010.5700749)�Citations:

**12**,

[C3] M. Matin, M. A. Zaman, S. M. Choudhury, and M. Gaffar. “Analysis of a conical corrugated horn operating in the K-band with low cross-polarization and high aperture efficiency, and observing its radiation patterns”. In: *2009 IEEE Antennas and Propagation Society International Symposium*. 2009, pp. 1–4. doi: [10.1109/](https://doi.org/10.1109/APS.2009.5171493) [APS.2009.5171493 External-Link-Alt](https://doi.org/10.1109/APS.2009.5171493)�Citations: **4**,

[C2] M. A. Zaman, S. M. Choudhury, M. Gaffar, and M. A. Matin. “Modeling the illumination function of a cassegrain reflector for a corrugated horn feed and calculation of the far field pattern”. In: *2009 Loughborough Antennas & Propagation Conference*. 2009, pp. 101–104. doi: [10.1109/LAPC.2009.5352533 External-Link-Alt](https://doi.org/10.1109/LAPC.2009.5352533)�Citations: **6**,

[C1] S. M. Choudhury. “Design and implementation of a low cost Power Factor Improvement device”. In: *TEN- CON 2008 - 2008 IEEE Region 10 Conference*. 2008, pp. 1–4. doi: [10.1109/TENCON .2008.4766529](https://doi.org/10.1109/TENCON.2008.4766529)

[External-Link-Alt](https://doi.org/10.1109/TENCON.2008.4766529)�Citations: **21**,

## Patents

[P2] E. Marinero-Caceres, A. Toppo, S. Choudhury, U. Guler, Z. Kudyshev, J. Pekny, S. Pol, H. Reddy, and

V. Shalaev. “Thermophotovoltaic system and method of making the same”. US20210234498A1. July 29, 2021. url: <https://patents.google.com/patent/US20210234498A1/en>.

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# Membership / Fellowship of Learned Societies, Professional Institutions and Other Noteworthy Affiliations

### Senior Member, Institute of Electrical and Electronic Engineers (IEEE)

* Secretary, IEEE Bangladesh Section (July 2021 - May 2022)
* Chair, IEEE Young Professionals Bangladesh (Mar 2020 - Apr 2022)
* Chair, IEEE Graduates of the Last Decade (Jan 2013 - Dec 2013)
* Vice -Chair, IEEE Graduates of the Last Decade (Jan 2011 - Dec 2012)
* Student Activities Coordinator, IEEE Bangladesh Section (Jan 2011 - Dec 2012)
* Chair, IEEE BUET Student Branch (Jan 2008 - Aug 2009)
* Treasurer, IEEE BUET Student Branch (Jan 2007 - Dec 2008)

### Member, IEEE Photonics Society

* Vice Chair, IEEE Photonics Society Bangladesh (April 2022 – to date)
* Founding Chair, IEEE Photonics Society Bangladesh (Mar 2021 – Apr 2022)

### Member, The Optica

* Founding President, Optica Bangladesh Section May 2022 – to date
* Founding Moderator, BUET Optical and Photonics Society July 2022 – to date
* Treasurer, OSA Purdue Chapter, USA Jun 2016 – May 2017

**Member, National Young Academy of Bangladesh (NYAB)**, April 2021 – to date

**Life Member, American Alumni Association of Bangladesh (AAAB)** , April 2024 – to date

**Life Member, Association of BUET Alumni**, April 2021 – to date

**Student Activities at Purdue University**, West Lafayette, IN, USA

* President, **Nanotechnology Student Advisory Council (NSAC)** (Jun 2017 – May 2018)
* Vice-President, **Nanotechnology Student Advisory Council (NSAC)** (Jun 2016 – May 2017)
* Treasurer, SPIE Purdue Chapter, USA (Jun 2015 – May 2016)
* President, Bangladesh Students Association (**Purdue BDSA**), USA (Jul 2017 – Jun 2018)
* Treasurer, Bangladesh Students Association (**Purdue BDSA**), USA (Jul 2015 – Jun 2017)

# References

Available upon request