Dr. Maidul Islam

PhD in Physics
Indian Institute of Technology Guwahati
Researcher ID : P-6989-2019
ORCID ID : 0000-0002-9180-1238

Current position	Assistant Professor, Department of Physics, The Assam Royal Global University, since 23rd July, 2018.
Subjects taught	B.Tech : Physics - I and Laboratory B.Sc : Mathematical Physics, Optics, and Laboratory M.Sc : Mathematical Physics, Plasma Physics and Quantum Mechanics -I, and M.Sc. Laboratory
Contact Details	Physics Department, The Assam Royal Global University Betkuchi, Opposite to ISBT Guwahati, Assam, India − 781035. Phone : +918372017422, +919531622871 email : maidul.alig@gmail.com mislam@rgu.ac
Peronal Details	Father′s Name : Faizul Islam Mother′s Name : Momataj Bibi Marital Status : Married Date of Birth : 10.03.1990 Village : Malipara P.O. : Shaikhpara Dist : Murshidabad State : West Bengal India − 742308
Research Interests	Terahertz plasmonic waveguides and devices, THz metamaterials based devices, THz sensors, and Plasmonic solar cell.

Education

Doctoral Degree

Indian Institute of Technology Guwahati (IIT G), Assam, India

Ph.D., Physics, June 25, 2018

- C.P.I. : 7.08/10
- Thesis Topic : *Analytical and Simulation Modeling of Terahertz Waveguides and Sensors based upon Plasmonic and Metamaterial Structures*
- Supervisor : Dr. Gagan Kumar

Master Degree

Aligarh Muslim University, Aligarh, U.P., India

M.Sc., **Physics**, 2014

- Divison: First
- Percentage: 66.04 %

Bachelor Degree

Aligarh Muslim University, Aligarh, U.P., India

B.Sc., **Physics**, 2011

- Divison: First
- Percentage: 61.8 %

(10+2)TH Level

West Bengal Council of Higher Secondary Education, West Bengal, India

Bengali, English, and Basic Sciences, 2008

- Divison: First
- Percentage: 75.2 %

10TH Level

West Bengal Board of Secondary Education, West Bengal, India

Bengali, English, History, Geography and Introductory Sciences, 2006

- Divison: First
- Percentage: 83 %

Peer-reviewed International Journal Publications (Total = 13)

2022

1. **Maidul Islam**, Bhairov Kumar Bhowmik, K M Dhriti, Minakshi, Devendra Mohan, Amir Ahmad and Gagan Kumar, "*Thin film sensing in a planar terahertz meta-waveguide*", **Journal of Optics**, 24, 6, 1-7 (2022).

   ISSN: 2040-8986 (doi.org/10.1088/2040-8986/ac60bc)

2021

1. **Maidul Islam**, KM Dhriti, Rakesh Sarkar and Gagan Kumar,"*Tunable control of electromagnetically induced transparency effect in a double slot terahertz waveguide*", **Optics Communications**, 483, 126632, 1-6 (2021).

   ISSN: 0030-4018 (doi.org/10.1016/j.optcom.2020.126632)

2. KM Dhriti, **Maidul Islam**, Angana Bhattacharya, Amir Ahmad, and Gagan Kumar,"*Plasmon-induced transparency in an airdielectric grooved parallel-plate terahertz waveguide*", **Journal of the Optical Society of America B** , 38, 4, 1290-1296 (2021).

   ISSN: 1520-8540 (doi.org/10.1364/JOSAB.420829)

3. Roopkiranpreet Kaur, **Maidul Islam**, P. C. Agarwal, Sukhdeep Kaur, and Gagan Kumar, "*Terahertz Surface Plasmons Propagation in Semiconducting Parallel Plates Waveguide Configuration*", **Europhysics Letters**, 134, 38002(p1-p7), (2021).

   ISSN: 1286-4854 (doi.org/10.1209/0295-5075/134/38002)

2020

1. **Maidul Islam** and Mamoon Elahi Barbhuyan,"*Slow-light application using dielectrics in a metallic terahertz plasmonic waveguide*", **Journal of the Optical Society of America A**, 37, 6, 1053-1059 (2020).

   ISSN: 1520-8532 (doi.org/10.1364/JOSAA.392231)

2. KM Dhriti, **Maidul Islam**, and Gagan Kumar,"*Surface plasmon induced absorption through near field coupled resonators in a planar plasmonic terahertz waveguide* ", **Journal of Optics**, 22, 12, 1-9 (2020).

   ISSN: 2040-8986 (doi.org/10.1088/2040-8986/abc088)

2018

1. Nipon Dekha, **Maidul Islam**, Prashant K. Sarswat, and Gagan Kumar, "*Enhancing solar cell efficiency with plasmonic behavior of double metal nanoparticle system*", **Vacuum**, 152, 285-290 (2018).

   ISSN: 0042-207X (doi.org/10.1016/j.vacuum.2018.03.026)

2. Koijam Monika Devi, **Maidul Islam**, Dibakar Roy Chowdhury, Amarendra K. Sarma, and Gagan Kumar, "*Plasmon induced transparency in graphene based terahertz metamaterial*", **Europhysics Letters**, 120, 27005(p1-p6), (2018)

   ISSN: 1286-4854 (doi.org/10.1209/0295-5075/120/27005)

2017

1. **Maidul Islam**, Dibakar Roy Chowdhury, Amir Ahmad, and Gagan Kumar, "*Terahertz guided mode properties in an internally corrugated plasmonic waveguide*", **AIP: Journal of Applied Physics**, 122, 5, 053105, 1-7 (2017).

   ISSN: 1089-7550 (doi.org/10.1063/1.4997451)

2. **Maidul Islam**, Dibakar Roy Chowdhury, Amir Ahmad, and Gagan Kumar, "*Terahertz plasmonic waveguide based thin film Sensor*", has been published in **Journal of Lightwave Technology**, 35, 23, 5215-5221 (2017).

   ISSN: 1558-2213 (doi.org/10.1109/JLT.2017.2763326)

3. **Maidul Islam**, S Jagan Mohan Rao, Gagan Kumar, B. P. Pal, and Dibakar Roy Chowdhury, "*Role of resonance modes on terahertz metamaterials based thin film sensors*", **Scientific Reports**, 7, 7355, 1-8 (2017).

   ISSN: 2045-2322 (doi.org/10.1038/s41598-017-07720-9)

2016

1. **Maidul Islam** and Gagan Kumar, "*Terahertz surface plasmons propagation through periodically tilted pillars and control on directional properties*", **Journal of Physics D: Applied Physics**, 49, 43, 1-8 (2016).

   ISSN: 1361-6463 (doi.org/10.1088/0022-3727/49/43/435104)

2015

1. Dhiman Bhattacharya, Prasant K Sarswat, **Maidul Islam**, Gagan Kumar, and Michael L Free, "*Geometrical modifications and tuning of optical and surface plasmon resonance behavior of Au and Ag coated TIO_2 nanotubular arrays*", **RSC Advances**, 5, 70361-70370, (2015).

   ISSN: 2046-2069 (doi.org/10.1039/C5RA12191D)

Conference Publications (Total = 7)

2022

1. Bhairov Kumar Bhowmik, **Maidul Islam**, Gagan Kumar, "*Dual-Band Electromagnetic Induced Transparency in a Terahertz Metawaveguide Design*", 2022 Workshop on Recent Advances in Photonics (WRAP), 2022, pp. 1-2. **(doi: 10.1109/WRAP54064.2022.9758258)**
2. KM Dhriti, **Maidul Islam**, Gagan Kumar, "*Controlling the slow light properties in a corrugated parallel plate terahertz plasmonic waveguide*", 2022 Workshop on Recent Advances in Photonics (WRAP), 2022, pp. 1-2. **(doi: 10.1109/WRAP54064.2022.9758278)**

2018

1. S Jagan Mohan Rao, **Maidul Islam**, Gagan Kumar, B. P. Pal, and Dibakar Roy Chowdhury, "*Single split gap resonator based terahertz metamate-rials for refractive index sensing*", SPIE PHOTONICS WEST CONFERENCE 2018 conference proceedings, 10531, 105311K-(1-7), 2018. **(doi.org/10.1117/12.2287320)**

2017

1. **Maidul Islam**, K.M. Dhriti, Dibakar Roy Chowdhury and Gagan Kumar, "*Thin film sensing in terahertz plasmonic waveguide*", WRAP 2017, IEEE Xplore conference proceedings.

   (doi.org/10.1109/WRAP.2017.8468547)
2. Koijam Monika Devi, **Maidul Islam**, Dibakar Roy Chowdhury, Amarendra K. Sarma, and Gagan Kumar,"*Exploring plasmon induced transparency in graphene based terahertz metamaterials*", WRAP 2017, IEEE Xplore conference proceedings.

   (doi.org/10.1109/WRAP.2017.8468589)

2016

1. **Maidul Islam**, Dibakar Roy Chowdhury and Gagan Kumar, "*Terahertz guided mode propagation in a planar plasmonic waveguide and slow light properties*", PHOTONICS 2016 conference proceedings, Optical Society of America (OSA), P1A-21(2016).

   (doi.org/10.1364/PHOTONICS.2016.P1A.2)
2. **Maidul Islam** and Gagan Kumar, "*Terahertz surface plasmon polaritons propagation in slanted pillar geometries*", CCP 2015 conference proceedings in Journal of Physics: Conference Series, 759, 012053 (2016).

   (doi.org/10.1088/1742-6596/759/1/012053)

Conference / Workshop attended

2020

1. Attended **2020 Conference on Lasers and ElectroOptics ("CLEO)**, presented in an allvirtual, web conference format, 11 15 May, 2020.

2019

1. Attended in **WRAP 2019**, organized by IIT Guwahati, ASSAM, 13 - 14 December, 2019 in IIT Guwahati.

2017

1. Attended and presented a poster entitled with "*Thin film sensing in terahertz plasmonic waveguide*" in **WRAP 2017**, organized by Mahind-ra École Centrale, Hyderabad, 18 - 19 December, 2017 in Tech Mahindra.

2016

1. Attended and presented a poster entitled with "*Terahertz guided mode propagation in a planar plasmonic waveguide and slow light properties*" in **Photonics 2016**, organized by OSA and IIT Kanpur, 4 - 8 December, 2016, in IIT Kanpur.

2015

1. Attended and presented a poster entitled with "*Terahertz surface plasmon polarito-ns propagation in slanted pillar geometries*" in **CCP 2015**, organized by IIT Guwahati and IMSc Chennai, 2 - 5 December, 2015 in IIT Guwahati.
2. Attended and presented a poster entitled with "*Geometrical modifications and tuning of optical and surface plasmon resonance behaviour of Au and Ag coated TiO2 nanotube arrays*" in TEQIP organized by IIT Guwahati on 31st October, 2015 in IIT Guwahati.

Reviewer of Journals

1. Journal of Physics D: Applied Physics
2. Journal of Applied Physics
3. Physica Scripta
4. Nanotechnology

Attended FDP

2020

1. Attended Faculty development Program in ***Importance of Cross-disciplinary research in the Post COVID 19 Scenario: Social Perspective*** by Royal Global University online from 16th to 23rd June, 2020.
2. Attended Faculty development Program in ***Emerging Prospects of Stem education in Engineering and Technology*** by Royal Global University online from 21st to 28th July, 2020.

2021

1. Attended Faculty development Program in ***Including Universal Human Values in Technical Education*** by AICTE online from 21st to 25th June, 2021.

Organised Conference

2021

1. Organized ***Emerging area in Science Technology (EAST) - 2021*** in Royal Global University through online mode on 1st and 2nd June, 2021.

Other activities

Teaching Assistant-ship	• B. Tech. General Physics Laboratory	2015-2016 Session
	• M. Sc. Advanced Physics Laboratory	2016-2017 Session

Achievements

- **Departmental Merit Scholarship** in M. Sc. Physics, Physics Department, Aligarh Muslim University, 2011.
- Qualified Graduate Aptitude Test in Engineering (**GATE**) in Physics, **2014 and 2015** organized by Ministry of Human Resource and Development, Govt. Of India.

Technical Skills

- Softwares Known : Matlab, Origin, Solidworks
- Simulation software : CST Microwave studio, XFDTD, Lumerical
- Operating Systems : Windows, Linux
- Packages : Latex, Microsoft Office

References

1. Dr. Gagan Kumar
   Associate Professor
   Department of Physics
   Indian Institute of Technology Guwahati
   Assam - 781039, India
   Phone: +91-8011028735
   email: gaganphy.iitd@gmail.com

2. Dr. Dibakar Roy Chowdhury
   Professor
   Department of Physics
   Mahindra University
   Telengana - 500043, India
   Phone: +91-7658971188
   email: dibakar.roychowdhury@mechyd.ac.in

3. Dr. Amir Ahmad
   Associate Professor
   College of Information Technology
   United Arab Emirates University
   Al Ain - 17172, United Arab Emirates
   email: amirahmad01@gmail.com