

CURRICULUM VITAE

DR. JYOTI PRASAD GOGOI



Personal Information:

Name: Dr. Jyoti Prasad Gogoi
Designation: Assistant Professor
Department: Physics
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Academic qualification

[Ph.D (Physics), Tezpur University, 2013]
[M. Sc (Physics), Tezpur University, 2007]
[B. Sc (Physics), Sibsagar College, Dibrugarh University, 2005]
[HSSLC Science, Sibsagar College, AHSEC, 2001]
[HSLC, G B M E High School, Sivasagar, SEBA, 1999]

Area of Specialization:

- Multiphase Dielectric Microwave Absorber, Metamaterial X-band absorber, High Temperature Microwave absorber

Work/Teaching Experience:

SL no	Organization / Institution	Position held	Duration of work
1	DKD college, Dergaon	Assistant Professor	01/01/2021 to till date
2	The Assam Kaziranga University, Jorhat	Assistant Professor	26/8/2013-24/12/2020
3	Tezpur University, Tezpur	Senior Research Fellow (DIT project)	07/07/2010-06/07/2013

List of Courses Taught

Subjects Taught	Level (UG/PG)
Physics	B.TECH (UG)
Quantum Mechanics	M.SC (PG)
Statistical Mechanics	M.SC (PG)
Microwave Electronics	M.SC (PG)
Fiber Optics and Optoelectronics	M.SC (PG)
Modern Physics	INTEGRATED M.SC (UG)
Electricity and Magnetism	INTEGRATED M.SC (UG)
Electromagnetism	M.SC (PG)
Electricity and Magnetism	UG
Mechanics	UG
Mathematical Physics	UG

Professional responsibilities/College committee assignments:

- i) **Coordinator (in charge) computer center, DKD College**
- ii) **Coordinator of skill development programme, DKD College**
- iii) **Nodal Officer, Samarth Portal, DKD College**
- iv) **Coordinator, PM USHA (RUSA), DKD College, Dergaon**
- v) **Assistant Coordinator, IQAC. DKD college, Dergaon**
- vi) **Convenor Admission committee 2024**
- vii) **Assistant Registrar (Academics), School of Basic Science, The Assam Kaziranga University, Jorhat**

Awards/Fellowships/ Distinctions/Achievements:

Qualified SLET NE_2017, (Roll No 1701340171)

Research Experience

PhD project: 'Expanded Graphite-Novolac Phenolic Resin Based Electromagnetic Interference (EMI) Shielding Material over the X-Band: Synthesis, Characterization, Analysis and Design Optimization' from Department of Physics, Tezpur University, 2013

- The project included synthesis of light weight expanded graphite - novolac phenolic resin (EG-NPR) composites in different weight ratios and characterized for dielectric microwave absorbing materials.
- Design optimization of conductor backed single, double and triple layer microwave absorber are performed using an in-house developed MATLAB program based on transmission line model.
- Fabrication of designed microwave absorber using simple technique of mechanical mixing and thermal treatment with a pressure of ~ 1.5 tons and free space microwave absorption testing of the developed samples.

- A spot focusing horn lens is design and developed for free space testing.
- Geometrical modification on the best microwave absorbing EG-NPR composites by circular perforation in triangular lattice pattern are studied for enhancement of absorbing bandwidth in the frequency ranges 8.2-12.4GHz.

Present research project working on

- Multiphase Dielectric Microwave Absorber
- Cement based EMI shielding

Supervision PhD scholar:

Awarded two research scholars on

1. Thesis Title “Design and Development of EMI shielding using Carbon based Material for X-band Applications” Awarded to U J Mahanta on 19th December 2019 from The Assam Kaziranga University.
2. Thesis Title “Development of Metamaterial Based Flexible X-band microwave absorber” Awarded to Pankaj Bora on 26/10/21 from The Assam Kaziranga University.

Research, Scholarly, Professional and Scientific Activity:

Research publications in peer-reviewed journals (UGC approved journals)			
SL No.	Title of the Paper/Publication Year/Page No	Journal Name (ISSN)	Impact Factor
1	Expanded Graphite - Phenolic Resin Composites based Double Layer Microwave Absorber for X-band Applications, 116, 204101, (2014)	Journal of Applied Physics: (ISSN:0021-8979)	3.2
2	Single layer microwave absorber based on expanded graphite–novolac phenolic resin composite for X-band applications” Vol. 58 pp. 518–523, (2014)	J. Composites Part B: Engineering, (ISSN: 1359-8368)	12.7
3	Synthesis and microwave characterization of expanded graphite/novolac phenolic resin composite for microwave absorber applications” Vol.42 pp.1291–1297, (2011)	J. Composites Part B: Engineering, (ISSN: 1359-8368)	12.7
4	Synthesis of expanded graphite filled polyaniline composites and evaluation of their electrical and electrochemical properties Vol 22, Issue 8, pp 1154-1161, August 2011.	J. Materials Science: Materials in Electronics, (ISSN: 1573-482X)	2.4
5	Dielectric characterization and Microwave Absorption of Expanded Graphite Integrated Polyaniline Multiphase Nanocomposites in X-Band” Vol. 26, No. 1;, pp.194-201, 2019	IEEE Transactions on Dielectrics and Electrical Insulation, (ISSN: 1558-4135)	2.9
6	Design Optimization and Fabrication of Wideband Microwave Absorber Based on Dual Phase Dielectric-Semi Metallic Nanocomposite”, Vol. 127, pp- 202-212, 2019	Journal of Physics and Chemistry of Solids,(ISSN: 0022-3697)	4.3

7	High Performance Broadband Microwave Absorber using Multilayer Dual-Phase Dielectric Composites, 48, pp 2438–2448, 2019,	Journal of Electronic Materials, Springer, (ISSN 1543-186X)	2.2
8	A review on porous polymer composite materials for multifunctional electronic applications” 2018, VOL. 00, NO. 00, 1–42, doi:10.1080/03602559.2018.1542729, ,	Polymer-Plastics Technology and Engineering, Taylor and Francis, (ISSN 1525-6111)	2.7
9	Synthesis, Optimization and Applications of ZnO/Polymer Nanocomposites, 98 , 1210-1240, 2019	Materials Science & Engineering C, (ISSN 1873-0191)	8.4
10	Design of Four Layer Microwave Absorber Based on Polyaniline-Expanded Graphite Composites: Role of Layer Interfaces in Impedance Matching, 9, 103005, 2020	ECS J. Solid State Sci. Technol. (ISSN : 2162-8777)	1.8
11	X-band metamaterial absorbers based on reduced graphene oxide-silicon carbide-linear low density polyethylene composite, vol , 7, 8 , 1-7, 2020	EPJ Appl. Metamat. (ISSN 2272-2394)	1.5
12	Estimation of Microwave Absorption Properties of RGO-SiC-LLDPE Composites., 1165 , 87-97, , 2021	Advanced Materials Research (ISSN: 1662-8985)	--
Book Published			
1	Development of X-band EMI shielding Using Carbon Based Material: Expanded Graphite Integrated Polyaniline Dual Phase Dielectric X-band Microwave	LAP LAMBERT Academic Publishing (May 26, 2020) (ISBN:978-620-2-56439-7)	--
Book Chapters			
1	Hollow and Dense (Nonhollow) Carbon Nanospheres, in book Handbook of Functionalized Carbon Nanostructures , 2024 pp 1–39 https://doi.org/10.1007/978-3-031-14955-9_11-1	Springer Nature (ISBN 978-3-031-14955-9)	--
2	High temperature electromagnetic Interference shielding materials in Book " Materials for Potential EMI Shielding Applications , 2020 PP. 379-390	Elsevier (ISBN: 9780128175903)	
3	Biopolymer Composites for Electromagnetic Interference Shielding in Book title: Biopolymer Composites in Electronics , PP. 255-275, 2017	Elsevier, (ISBN: 9780128092613)	
4	Combination of Shape-Memory Polymers and Metal Alloys in Book Shape Memory Composites Based on Polymers and Metals for 4D Printing , 2022 pp 311–339 https://doi.org/10.1007/978-3-030-94114-7_14	Springer Nature Switzerland AG 2022 (ISBN 978-3-030-94116-1)	

5	Meta-Material Microwave Absorber: An approach to Mitigate Electromagnetic Interference, 2024, PP 172	JOYA GOGOI COLLEGE (ISBN 978-81-965169-8-7)	
Conference Proceedings			
1	Ni _{0.5} Zn _{0.5} Fe ₂ O ₄ / Bamboo Charcoal/Titania LDPE Composites as viable Microwave Absorbing Materials, doi:10.1109/AEMC.2009.5430638	IEEE proc.2009	
2	Microwave absorbing properties of CoFe ₂ O ₄ / bamboo charcoal/titania –LDPE polymer composite, doi: 10.1109/AEMC.2009.5430636	IEEE proc. ,2009	
3	EMI shielding characteristics of expanded graphite/novolac phenolic resin composite for applications in wireless communication”, doi: 10.1109/ICDECOM.2011.5738512	IEEE proc.,2011	
4	Expanded Graphite/Novolac Phenolic Resin Composite as Single Layer Electromagnetic Wave Absorber for X-Band Applications,” Proc. of SPIE Vol. 8760 876005-1, 2013	SPIE, 2013	
5	Microwave absorption properties of graphite flakes-phenolic resin composite,” Proc. of SPIE Vol. 8760 87600K-1, 2013	SPIE, 2013	
6	Study of LDPE/Al ₂ O ₃ composite material as substrate for microstrip antenna,” Proc. of SPIE Vol. 8760 876020-1, 2013	SPIE, 2013	
7	Design and Fabrication of Perforated Microwave Absorber based on EG-NPR Composite for Applications in Wireless Electronic Devices, International Conference on Emerging Trends in Electronics, Electrical and Computing Technologies (ETEECT), New Delhi, 2014	ETEECT),2014	
8	Microwave Attenuation Properties of PAEG-NPR Composite” XI PANE Conference 2018	XI PANE Conference 2018	
9	Perforated Dallenbach Microwave Absorber Based on Dielectric Polyaniline – Phenolic Resin composite for X-band applications” XI PANE Conference,2018	XI PANE Conference 2018	
Conference Presentation			
1	Development of Dye Sensitized Solar Cell based on DYE extracted from Giant Exhibition Palisandra leaves	International conference on Crystal Ball Vision on Science & Engineering for Societal Upliftment, Goa, 2017	
2	X Band Microwave Absorber Based on Expanded Graphite Nanocomposites	National Thematic Workshop on Advances in Nanostructured Materials: Applications and Perspectives	

		(ANMAP), 2016, The Assam kaziranga university	
3	Role of Dielectric Spacer in Metamaterial Microwave Absorption Frequency Shifting	National Conference On Physical Science (NCPS -22), DHSK COLLEGE, DIBRUGARH	
4	Design of Triple layer microwave absorber based on dual phase PANI-Expanded graphite dielectric composite	Recent Advances in Applied Sciences (RAAS'2019), Gauhati University	
5	Microwave Characterization of Expanded Graphite/Phenolic Resin Composite for Strategic Applications	Progress In Electromagnetics Symposium-2012 Kuala Lumpur, Malaysia	
6	Design of Broadband Microwave Absorber Based on Perforated Double Layered Expanded Graphite-Phenolic Resin Composites,	National Conference on Physics Frontiers- 2024: Bridging Theories and Experiments, Department of Physics, Bhawanipur Anchalik College Date:2-4 July, 2024	
Invited talks/lectures at professional or scientific meetings and conferences			
1		National Thematic Workshop on Advances in Nanostructured Materials Applications and Perspectives (ANMAP) 2016 at Kaziranga University	
2	Displacement Current	Undergraduate Physics Lecture Series (UPLS), 2021, on 19th July 2021 at Department of Physics Bahona College, Jorhat, Assam	
3	Blueprint for a Resilient Ecosystem: Integrating Sustainability into Everyday Practices	International Conference on Energy, Sustainability and Climate Change (2024) organized by The Assam Kaziranga University, Jorhat in support of AICTE- Vibrant Advocacy for Advancement and Nurturing of Indian Language	

Research projects (ongoing/completed)

NIL

Intellectual Property Right (patents/copyright)

NIL

Membership of professional bodies:

1. Life member of Indian Geotechnical Society since 2014
2. Life member of Carbon Society of India since 2017
3. Reviewer of Journal of Composite B: Engineering, Elsevier
4. Reviewer of Journal of Physics and Chemistry of Solid, Elsevier
5. Reviewer of IETE Journal of Research, Taylor and Francis online
6. Reviewer of Journal Construction and Building Materials, Elsevier

I hereby declare that the information given above is true to the best of my knowledge.

Date:

Place: Dergaon

Jyoti Prasad Gogoi

Signature of the Candidate