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AUTHOR'S RELEVANT PUBLICATIONS

Journals:

1. **Sambit Kumar Ghosh,** S. Das and S. Bhattacharyya, "Terahertz Wave Conversion from Linear to Circular Polarization by Graphene Metasurface Featuring Ultrawideband Tunability," ***IEEE Journal of Lightwave Technology*****, Accepted**, DOI: 10.1109/JLT.2022.3156640.
2. **Sambit Kumar Ghosh,** S. Das and S. Bhattacharyya, "Graphene-Based Metasurface for Tunable Absorption and Transmission Characteristics in the Near Mid-Infrared Region," ***IEEE Transactions on Antennas and Propagation***, vol. 70, no. 6, pp. 4600-4612, 2022. DOI: 10.1109/TAP.2022.3140904.
3. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "Graphene-based dual functional metadevice in the THz gap," ***Appl. Opt.***, vol. 60, pp. 11247-11255, 2021. DOI: https://doi.org/10.1364/AO.444873.
4. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "Transmittive-type Triple-band Linear to Circular Polarization Conversion in THz Region using Graphene-Based Metasurface," ***Elsevier Optics Communications***, vol. 480, article no. 126480, February 2021.DOI: https://doi.org/10.1016/j.optcom.2020.126480
5. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "Graphene Based Metasurface with Near Unity Broadband Absorption in the Terahertz Gap," ***Wiley International Journal of RF and Microwave Computer-Aided Engineering***, vol. 30, issue 12, Article No. e22436, December 2020. DOI: https://doi.org/10.1002/mmce.22436
6. **Sambit Kumar Ghosh**, Vinit Singh Yadav, Santanu Das, and Somak Bhattacharyya, "Tunable Graphene Based Metasurface for Polarization-Independent Broadband Absorption in Lower Mid Infrared (MIR) Range," ***IEEE Transactions on Electromagnetic Compatibility***, Vol. 62, Issue 2, pp. 346-354, April 2020.
7. Akhlesh Lakhtakia, Somak Bhattacharyya, and **Sambit Kumar Ghosh, "Comment on: Wide incidence angle and polarization insensitive dual broad-band metamaterial absorber based on concentric split and continuous rings resonator structure,"** *IOP: Materials Research Express*, **Vol. 6, no. 8, pp. 088002, 2019.)DOI: http://dx.doi.org/10.1088/2053-1591/ab2220**
8. Vinit Singh Yadav, **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, **"Wideband Tunable Mid-Infrared Cross-polarization Converter Using Monolayered Graphene-Based Metasurface over A Wide Angle of Incidence,"** *IET Microwaves, Antennas and Propagation,* **Vol. 13, Issue 1, pp. 82-87, January 2019. DOI: 10.1049/iet-map.2018.5373**
9. Vinit Singh Yadav, **Sambit Kumar Ghosh**, Somak Bhattacharyya, and Santanu Das**, "Graphene Based Metasurface for Tunable Broadband Terahertz Cross Polarization Converter over Wide Angle of Incidence,"** *Applied Optics*, **Vol. 57, Issue 29, pp. 8720-8726, October 2018. DOI: https://doi.org/10.1364/AO.57.008720**

Conferences/Workshops/ Symposia

1. **Sambit Kumar Ghosh,** Anirban Chaudhuri, Somak Bhattacharyya, and Parama Pal, "Graphene-metasurface-based biosensor for SARS-CoV-2 detection", *Proc. SPIE 12011, High Contrast Metastructures XI*, p. 1201109, 5 March 2022, https://doi.org/10.1117/12.2609422.
2. S. Chatterjee, **Sambit Kumar Ghosh**, S. Kumar, Y. Gupta and S. Bhattacharyya, "Design of Metasurface-loaded Filtenna for Applications in Radio Astronomy," *2021 IEEE Indian Conference on Antennas and Propagation (InCAP)*, 2021, pp. 556-559, doi: 10.1109/InCAP52216.2021.9726195.
3. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "Graphene-Metal Hybrid Metasurface for Tunable Bandpass Filter in Terahertz Region," *2021 IEEE Indian Conference on Antennas and Propagation (InCAP)*, 2021, pp. 812-815, doi: 10.1109/InCAP52216.2021.9726422.
4. Meghna Mishra, **Sambit Kumar Ghosh,** and Somak Bhattacharyya, "A multiband transmittive-type linear-to-circular polarization converter," *2021 IEEE Indian Conference on Antennas and Propagation (InCAP)*, 2021, pp. 702-705, doi: 10.1109/InCAP52216.2021.9726294.
5. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "A Graphene Based Metasurface for Transmittive-type Linear to Circular Polarization Converter with Tunable Characteristics," accepted for presentation in ***URSI General Assembly 2021***, Rome, Italy, 28 August-4 September, 2021.
6. **Sambit Kumar Ghosh**, Somak Bhattacharyya, and Santanu Das, "Graphene-based metasurface for wideband linear to circular polarization conversion," in ***2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020)***, Varanasi, India, 12-14 February, 2020.
(https://ieeexplore.ieee.org/document/9113624)
DOI: 10.23919/URSIRCRS49211.2020.9113624
7. Meghna Mishra, **Sambit Kumar Ghosh**, Lavesh Nama, and Somak Bhattacharyya, "Asymmetric transmission and cross polarization conversion of linearly polarized wave through metasurface," in ***2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020)***, Varanasi, India, 12-14 February, 2020.
(https://ieeexplore.ieee.org/document/9113556)
DOI: 10.23919/URSIRCRS49211.2020.9113556
8. **Sambit Kumar Ghosh**, Somak Bhattacharyya, and Santanu Das, "Broadband Graphene Based Reflective Cross Polarization Converter Metasurface Design with Unity Efficiency in the Lower Terahertz Gap," in ***IEEE International Microwave & RF Conference*** **(*IMaRC 2019*)**, Mumbai, India, 13-15 December, 2019.
(https://ieeexplore.ieee.org/document/9118725)
DOI: 10.1109/IMaRC45935.2019.9118725
9. Tanmoy Chakrabarti, Sambuddha Sarkar, **Sambit Kumar Ghosh**, and Somak Bhattacharyya, "An Ultra-thin FSS Bandpass Filter in Terahertz Region," in ***International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW-2019)***, pp. 454-456, 22-24 May, 2019, Trichy, India.
(https://ieeexplore.ieee.org/document/8933266)
DOI: 10.1109/IMICPW.2019.8933266
10. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "A Graphene Based Broadband Metasurface Absorber in the Terahertz Region," in ***2019 URSI Asia Pacific Radio Science Conference (AP-RASC 2019)***, New Delhi, India, 9-15 March, 2019.
(https://ieeexplore.ieee.org/document/8738642/)
DOI: 10.23919/URSIAP-RASC.2019.8738642

11. Sambuddha Sarkar, Tanmoy Chakrabarti, **Sambit Kumar Ghosh**, and Somak Bhattacharyya, "A Broadband FSS Bandstop Filter in Terahertz Region," in ***2019 URSI Asia Pacific Radio Science Conference (AP-RASC 2019)***, New Delhi, India, 9-15 March, 2019.
(https://ieeexplore.ieee.org/document/8738585/)
DOI: 10.23919/URSIAP-RASC.2019.8738585

12. Sambuddha Sarkar, Tanmoy Chakrabarti, **Sambit Kumar Ghosh**, and Somak Bhattacharyya, "A Broadband Bandpass FSS Filter in Terahertz Region," in ***2019 URSI Asia Pacific Radio Science Conference (AP-RASC 2019),*** New Delhi, India, 9-15 March, 2019.
(https://ieeexplore.ieee.org/document/8738700)
DOI: 10.23919/URSIAP-RASC.2019.8738700

13. **Sambit Kumar Ghosh**, Somak Bhattacharyya, and Santanu Das, "A Graphene Based Metasurface with Wideband Absorption in the Lower Mid Infrared Region," in ***IEEE International Microwave & RF Conference*** **(*IMaRC 2018*)**, Kolkata, India, 28-30 November, 2018.
(https://ieeexplore.ieee.org/document/8877373)
DOI: 10.1109/IMaRC.2018.8877373

14. **Sambit Kumar Ghosh**, Vinit Singh Yadav, Somak Bhattacharyya, and Santanu Das, "A Graphene Based Bandwidth Enhanced Metamaterial Absorber using Circular Ring," in ***IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting***, pp. 1491-1492, 8-13 July, 2018, Boston, USA.
(https://ieeexplore.ieee.org/document/8608226)
DOI: 10.1109/APUSNCURSINRSM.2018.8608226

15. Vinit Singh Yadav, **Sambit Kumar Ghosh**, Somak Bhattacharyya, and Santanu Das, "Graphene based metasurface with tunable dual band mid-infrared cross polarization converter," in ***Eleventh Annual Conference, Antenna Test and Measurement Society***, Pune, India, 5-7 February, 2018.
(https://atmsindia.org/atms2018proceedings/Papers/44%20FULL%20PAPER%20Graphene%20Based%20Metasurface%20with%20Tunable%20Dual%20Band%20Mid-Infrared%20Cross%20Polarization%20Converter.pdf)

Book Chapters

1. Meghna Mishra, Lavesh Nama, **Sambit Kumar Ghosh**, and Somak Bhattacharyya, "A wideband transmittive-type cross polarization converter for terahertz waves," ***Computers and Devices for Communication, Springer Lecture Notes in Networks and Systems 147,*** Kolkata, India, 19-20 December, 2019, pp. 233-237, 2021.
(https://link.springer.com/book/10.1007/978-981-15-8366-7)
DOI: https://doi.org/10.1007/978-981-15-8366-7_32

2. **Sambit Kumar Ghosh**, Santanu Das, and Somak Bhattacharyya, "Recent Advancement in Graphene-Based Metasurface Structures," accepted for publication in ***Cutting-Edge Research on Low-Dimensional Nanoelectronic Devices: Physics and Material Science Aspects, Apple Academic Press***.

3. Rajan Agrahari, **Sambit Kumar Ghosh**, and Somak Bhattacharyya, "**Optical Switches**," accepted for publication in ***Optical Switching Device Technology and Application in Network, Wiley***.

Achievements

- Recipient of **Dr CJ Reddy award for best paper for young professionals (Male),** ***IEEE InCAP 2021 Indian Conference on Antennas and Propagation, December, 2021, held at MNIT Jaipur.***
- Achieved **first position** in the **Student Activity Program**, ***IEEE MTT-S International Microwave & RF Conference, December, 2019, held at IIT Bombay.***
- One of the journals (Wiley RFCAD) has been recognized as ***'Top Cited Article 2020-2021'.***