

## **AUTHOR'S PUBLICATIONS**

### **Journals:**

1. **Nilotpai**, L. Nama, S. Bhattacharyya, P. Chakrabarti, "A metasurface-based broadband quasi nondispersive cross polarization converter for far infrared region," *Int J RF Microw Comput Aided Eng.* vol. 29, no. 7, 2019.
2. **Nilotpai**, Aman, Somak Bhattacharyya, and P. Chakrabarti, "Frequency- and time-domain analyses of multiple reflections and interference phenomena in a metamaterial absorber," *J. Opt. Soc. Am. B*, vol. 37, pp. 586-592, 2020.
3. **Nilotpai**, Somak Bhattacharyya, and P. Chakrabarti "Mathematical interpretation of wave propagation, standing wave resonance, and absorption in a metasurface absorber," *Optical Engineering* , vol. 59, no. 10, October2020.
4. **Nilotpai**, P. Chakrabarti, S. Bhattacharyya, "Structural and mathematical analyses of a dual-sided metasurface structure for the design of multifunctional and bidirectional optoelectronics devices," *Microwave Optical Technology Letters* (under review)
5. **Nilotpai**, P. Chakrabarti, S. Bhattacharyya, "Dual-Sided Metasurface Structure: An excellent candidate for the Design of Multifunctional or Bidirectional Optoelectronics Devices," *IEEE Microwave Magazine* (under review)
6. L. Nama, **Nilotpai**, S. Bhattacharyya and P. K. Jain, "A Metasurface-Based, Ultrathin, Dual-Band, Linear-to-Circular, Reflective Polarization Converter: Easing uplinking and downlinking for wireless communication," in *IEEE Antennas and Propagation Magazine*, vol. 63, no. 4, pp. 100-110, Aug. 2021,

## Publications

7. Aman, , V. Singh, **Nilotpai**, , S. Bhattacharyya, “A free space frequency-time-domain technique for electromagnetic characterization of materials using reflection-based measurement,” *Int J RF Microw Comput Aided Eng.* vol. 31, 2020.
8. Ananga Paul, **Nilotpai**, Somak Bhattacharyya, and Smrity Dwivedi, "Design and mathematical analysis of a metasurface-based THz bandpass filter with an equivalent circuit model," *Appl. Opt.*, vol. 60, pp. 6429-6437, 2021.
9. Ananga Paul, **Nilotpai**, Somak Bhattacharyya, and Smrity Dwivedi, “A digital metasurface for selective information distribution in spatial domain at THz region,” *Appl. Opt. (Accepted)*

## Conferences

1. **Nilotpai**, Abhishek Kumar Singh, Mamta Upadhyay, Rashmi Lata, Somak Bhattacharyya, and P. Chakrabarti, “A Proposed Long Wavelength Infra-red Metamaterial Absorber for THz Detection,” in *IEEE International Symposium on Antennas and Propagation and USNC/URSI National Radio Science Meeting*, pp. 2067-2068, 8-13 July, 2018, Boston, US
2. **Nilotpai**, Somak Bhattacharyya, and P. Chakrabarti, “An Ultrathin Wide Angle Polarization Insensitive Mid-Infrared Metamaterial Absorber for THz Detection,” in *IEEE International Microwave & RF Conference (IMaRC 2018)*, Kolkata, India, 28-30 November, 2018.
3. **Nilotpai**, Somak Bhattacharyya, and P. Chakrabarti, “A Simple Ultrathin Quad Band Polarization Insensitive Metamaterial Absorber for Infrared Applications in *2019 URSI Asia Pacific Radio Science Conference (AP-RASC 2019)*, New Delhi, India, 9-15 March, 2019.
4. **Nilotpai**, Somak Bhattacharyya, and P. Chakrabarti, “A wideband metamaterial absorber based on multiple interference model for mid-infrared applications,” in *2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020)*, Varanasi, India, 12-14 February, 2020.

## Publications

5. **Nilotpai**, P. Chakrabarti, and Somak Bhattacharyya, “Methodology of Designing a Bidirectional Metamaterial Absorber,” accepted for presentation in *IEEE Indian Conference on Antennas and Propagation (InCAP 2021)*, Jaipur, India, 13-16 December, 2021.
6. Bhavna B Nair, **Nilotpai**, Anu Mohamed, Chinmoy Saha, and Somak Bhattacharyya, “Wideband terahertz cross polarization converter based on parallel strip metasurface,” in *2020 URSI Regional Conference on Radio Science (URSI-RCRS 2020)*, Varanasi, India, 12-14 February, 2020.
7. Rudranil Nandi, **Nilotpai**, and Somak Bhattacharyya, “A Broadband Polarization Insensitive Cross Polarization Converter using Metasurface for Long Wavelength Infrared Region,” in *IEEE INAE Workshop on Electromagnetics (IIWE 2018), Trivandrum*, India, 6-8 December, 2018.
8. Lavesh Nama, **Nilotpai**, Somak Bhattacharyya, and P. K. Jain, “An ultra-thin X-band metasurface-based transmissive-type linear to circular polarization converter,” *Computers and Devices for Communication, Springer Lecture Notes in Networks and Systems 147*, Kolkata, India, 19-20 December, 2019, pp. 238-243, 2021.
9. Madhavi Chandra, **Nilotpai**, M Thottappan, and Somak Bhattacharyya, “A Transmissive Type Dual Band Cross Polarization Converter Metasurface for IoT Applications,” accepted for presentation in *IEEE Indian Conference on Antennas and Propagation (InCAP 2021)*, Jaipur, India, 13-16 December, 2021
10. Ananga Paul, **Nilotpai**, Somak Bhattacharyya, and Smrity Dwivedi, “A Tunable Coding Metasurface Absorber Using VO<sub>2</sub> for THz Detection,” accepted for presentation in *IEEE Indian Conference on Antennas and Propagation (InCAP 2021)*, Jaipur, India, 13-16 December, 2021.

## Publications

11. R A D S Abhijith, **Nilotpai**, and Somak Bhattacharyya, “A metamaterial based tunable terahertz bandpass filter and an algorithm to tune the resonant peak frequency,” *2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS)*, pp. 1-4, Rome, Italy, 28 August-4 September, 2021.

12. Nikhil N B, Bhavana R Nair, Ancilla Philip, **Nilotpai**, Anu Mohamed, Chinmoy Saha, and Somak Bhattacharyya, “A tunable dual band metamaterial absorber for terahertz applications,” *Computers and Devices for Communication, Springer Lecture Notes in Networks and Systems 147*, Kolkata, India, 19-20 December, 2019, pp. 288-293, 2021

## Book Chapter

1. **Nilotpai**, and Somak Bhattacharyya, “Metamaterial-based high-Performance Radar Absorbing Structure,” accepted for publication in *Handbook of Metamaterial-Derived Frequency Selective Surfaces*, Springer Nature Publications.

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