

1.Publications

Expected: at least 10 in 36 months

Accomplished (M30): 11

Readiness Level: 100%

List

1. I.Marasco, C. Cantore, G. V. Bianco, G.Bruno, A. D’orazio and G.Magno, "Transparent Graphene-Based RIS for 6G Communications in the THz Spectrum," in IEEE Open Journal of Antennas and Propagation, doi: 10.1109/OJAP.2024.3487793.
2. S. Ullah, I. Marasco, A. D’Orazio and G. Magno, "Transparent antenna with reconfigurable pattern based on programmable graphene parasitic elements," *2024 24th International Conference on Transparent Optical Networks (ICTON)*, Bari, Italy, 2024, pp. 1-4, doi: 10.1109/ICTON62926.2024.10647773.
3. I. Marasco, C. Cantore, A. D’Orazio and G. Magno, "Design and analysis of a graphene-based metasurface modulator for 6G wireless communications," *2024 24th International Conference on Transparent Optical Networks (ICTON)*, Bari, Italy, 2024, pp. 1-5, doi: 10.1109/ICTON62926.2024.10647238.
4. S. Ullah, I. Marasco, A. D’Orazio, G. Magno, "Transparent Reconfigurable Dipole Antenna Based on Graphene Twin Parasitic Sectors," *Proc. of 29th European Wireless Conference 2024*, 9-11 Sept. Brno, Czech Republic.
5. I. Marasco, G. Magno, E. Cianca, A. D’Orazio, M. Grande, "Design of a Graphene-Based Reconfigurable Intelligent Surface in THz Spectrum", *Proc. of 28th European Wireless Conference 2023*, 2-4 Oct, Rome.
6. M. Asad, E. Cianca, J. Nawaz Syed, T. Rossi, M. De Sanctis, "On Characterization of Angular Dispersion and Fading Statistics of THz Communication Channels " , *Proc. of 35° IEEE PIRMC 2024 conference*, 2-5 Sept. Valencia, Spain.
7. E. Cianca, M. Asad, J. Nawaz Syed, T. Rossi, M. De Sanctis "On the Influence of Spatial Characteristics on Fading Statistics of Sub-THz Wireless Channels," *Proc. of 29th European Wireless Conference 2024*, 9-11 Sept. Brno, Czech Republic.
8. M. La Mura, D. Cassioli, M. Shundalau, E. Cianca, P. Lamberti, "Graphene Devices for Aerial Wireless Communications at THz", *Journal of Physics: Conference Series*, Volume 2716, 13th EASN International Conference on: Innovation in Aviation & Space for opening NewHorizons 5-8/09/2023 Salerno, Italy. DOI 10.1088/1742-6596/2716/1/012045
9. M. La Mura, P. Lamberti, A. S. Savoia, R. Alesii, D. Cassioli and V. Tucci, "Joint Sensing and Communication with Graphene FETs Targeting Terahertz Band," 2024

14th Internet Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Rome, Italy, 2024, pp. 406-409, doi: 10.1109/CSNDSP60683.2024.10636634.

10. R. Alesii, D. Cassioli and A. F. Molisch, “A mmWaves Channel Sounding Technique to Capture Human-induced Dynamic Multipaths,” 2024 4th URSI Atlantic Radio Science Meeting (AT-RASC), Spain, 2024, pp. 1-4, doi: 10.46620/URSIATRASC24/ZOQS9914.

11. D. Cassioli, R. Alesii, A. Piccioni, and A. F. Molisch, “A New Statistical Model of Human-Induced Multipath Dynamics in mmWaves Channels,” European Wireless 2024, Brno, Sep. 2024

2. Joint Publications

Expected: around 3 in 36 months (i.e., 30% of the total Publications)

Accomplished (M24): 3

Readiness Level: 100%

List

1. Marasco, G. Magno, E. Cianca, A. D’Orazio, M. Grande, “*Design of a Graphene-Based Reconfigurable Intelligent Surface in THz Spectrum*”, Proc. of 28th European Wireless Conference 2023, 2-4 Oct, Rome.

2. M. La Mura, D. Cassioli, M. Shundalau, E. Cianca, P. Lamberti, “*Graphene Devices for Aerial Wireless Communications at THz*”, Journal of Physics: Conference Series, Volume 2716, 13th EASN International Conference on: Innovation in Aviation & Space for opening NewHorizons 5-8/09/2023 Salerno, Italy. DOI 10.1088/1742-6596/2716/1/012045

3. M. La Mura, P. Lamberti, A. S. Savoia, R. Alesii, D. Cassioli and V. Tucci, “Joint Sensing and Communication with Graphene FETs Targeting Terahertz Band,” 2024 14th Internet Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP), Rome, Italy, 2024, pp. 406-409, doi: 10.1109/CSNDSP60683.2024.10636634.

3. Talks/Dissemination events

Expected: around 8 in 36 months

Accomplished (M24): 2

Readiness Level: >25%

List

1. Special Session 29th European Wireless Conference, EW2024 *Technological Advancements in 6G mmwaves/THz communication and sensing systems*
2. Invited talk to the Session "Propagation Channel Models and Measurement Methodologies for 6G Communication and Sensing" within ISAP2025 (International Symposium on Antennas and Propagation 2025, Oct. 27.-31 2025, Fukuoka, Japan).

4.Demo/PoC

Expected: Not originally planned. We are working on a joint activity with ITA-NTN project

5.Project Meetings

Expected: 1 progress meeting per month

Accomplished: accomplished

Readiness Level: 100%