

## Special Issue

# Electromagnetics with Graphene and 2D Materials: Physics, Applications and Meta-Devices

### Message from the Guest Editors

This Special Issue seeks to conduct a holistic exploration of the physics, engineering principles, and technologies associated with disruptive 2D materials for advancing electromagnetic components, devices, and microsystems. These technologies cover both guided-wave and free-space light-matter interactions, extend across a wide frequency range (from microwaves and mmWaves to THz and optical), and employ graphene and/or emerging 2D materials, such as transition metal dichalcogenides, MXenes, black phosphorus, etc. Accordingly, this Special Issue will showcase research papers, communications, and review articles that focus on the analysis, the design, and proof-of-concept demonstrations of future micro/nano devices, metasurfaces, and system architectures that integrate established technologies with graphene and 2D materials.

### Guest Editors

Dr. Alexandros Pitilakis  
Dr. Odysseas Tsilipakos  
Dr. Hamidreza Taghvaei

### Deadline for manuscript submissions

closed (30 November 2025)



## Micromachines

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### Message from the Editor-in-Chief

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### Editor-in-Chief

Prof. Dr. Nam-Trung Nguyen

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