

Special Issue on
**Metamaterials, Metasurfaces, and Artificial Dielectrics:
Theory and Applications to the Next-Generation
Telecommunication Platforms**

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In recent years, wireless telecommunication providers have faced a significant expansion in the number of services demanded by their customers, which requires radiators with increasingly exceptional performances in terms of bandwidth, radiation patterns, space occupancy, and multifunctionality.

Simultaneously, metamaterials, metasurfaces, and artificial dielectrics have revolutionized electromagnetism, improving the performance of existing devices and enabling a huge number of new applications. Wideband electrically small metamaterial-inspired antennas, multiple-input and multiple-output antenna systems, multiantenna platforms with invisibility cloaks exhibiting low mutual coupling and reduced blockage between elements, and highly directive low-profile metasurface-based antennas are just some of the novel marvels enabled by this technology.

The aim of this special issue is to provide a timely and high-quality collection of metamaterial and metasurface applications in the telecommunication field, with particular emphasis on components, devices, and systems to be employed in mobile communication towers, satellite payloads, aircrafts, radars, and ship masts. We invite researchers to contribute original research articles as well as review articles.

Potential topics include but are not limited to the following:

- ▶ Electrically small metamaterial-inspired antennas
- ▶ Nonfoster, nonreciprocal, or nonlinear radiating elements
- ▶ Devices, systems, and feed networks exhibiting exceptional bandwidth, size, reconfigurability, or other advanced functionalities
- ▶ Metamaterials and metasurfaces for antenna radomes, beam manipulation, and/or polarization control
- ▶ Reduction of mutual blockage and mutual coupling effects in antenna systems
- ▶ Electromagnetic analysis and simulation techniques of artificial materials and metamaterials

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