



IEEE Open Journal of Antennas and Propagation

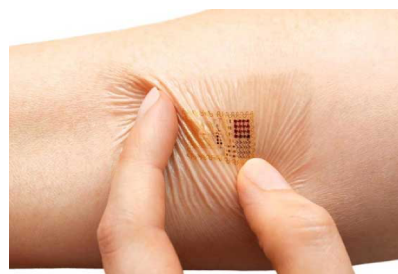
Call for Papers for the Special Section on
Body-Friendly Antennas: Emerging Materials, Manufacturing Techniques,
and Design Strategies



Body-Friendly Antennas: Emerging Materials, Manufacturing Techniques, and Design Strategies

Submission deadline: 31 May 2021

Aims & Scope: Driven by the growing integration and miniaturization of wearable wireless sensors, antennas for body area networks are becoming largely adopted in many different contexts, such as health monitoring, physical wellness, sport, rehabilitation, surgery, ambient assisted living and telemedicine. For this reason, the antenna design requirements are gradually becoming complex, besides application-oriented. Indeed, in addition to the customary electromagnetic optimization, one of the challenges of the modern antenna designer is to fulfill the compatibility between antenna and human body. In this scenario, the introduction of innovative bio-compatible and bio-degradable materials or metamaterials joined to advanced realization techniques and design strategies brings to the definition of novel well-performing “body-friendly” antennas. The new concepts of conformability, flexibility, adaptability, stretchability are mixed with the classical concepts of efficiency, reliability, and robustness with the aim of designing antennas that are both “transparent” for the body and unobtrusive for the daily activities. Conductive fabrics, flexible 3D printed substrates, conductive nanoparticle silver inks, as well as copper, textile tapes and Fusion Deposition Molding (FDM) are just a few examples of innovative materials and techniques that help in realizing comfortable wearable, implantable and epidermal body-friendly antennas. Recently, nanotechnologies have also been used to design small antennas, on-chip antennas, and biodegradable structures (i.e. tattoo antennas) for body area networks.



The aim of this focused Special Section is to join experts all over the world thus stimulating a discussion about this topical scientific challenge. Authors are invited to submit new full research and/or review articles reporting recent advances on body-friendly antennas. In addition to the design, compared analyses and systematic reviews aimed at evaluating both physical and electromagnetic performance of this kind of antennas in real-life contexts are encouraged as well.

Accepted papers will immediately appear on IEEE Xplore®, forming an expanding collection of reference material on Body-Friendly Antennas.

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