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Materials for Sources and Detectors in the GIGA-TERA-MIR Range 2020

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Message from the Guest Editor

Recent advances in sources and detectors in the TERA-MIR field: THz (0.3 THz to 10 THz) and Mid Infrared (10 THz to 100 THz) have shown that there are a large number of applications in physics, electrical engineering and technology, applied chemistry, materials sciences, and medicine/biology that would benefit from spectroscopy and imaging with frequencies in both ranges. Even more recently, novel devices in the GIGA range from 0.1 THz to slightly below 0.3 THz, notably in medical diagnostics based on sensitive gas detection and imaging, make a review on materials, sources, and detectors for the GIGA-TERA-MIR range timely to help identify common aspects within a synergetic approach. The main emphasis of this Special Issue will be on new fundamental material properties, concepts and device designs that are likely to open the way for new products or the exploitation of new technologies in the fields of sensing, healthcare, biology, and industrial applications. The topics covered in this Special Issue will be of interest to research centers, academic institutions, and well-established and start-up companies and hospitals.



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Special Issue



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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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