

Conference:

Terahertz Optics & Biophotonics IV

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The main goal of the Conference covers recent developments in terahertz science and technology for biomedical applications and its further advances and possibilities. The main topics will cover fundamental and applied aspects of this area, such as computational and experimental problems of terahertz technology, terahertz spectroscopy, imaging, and endoscopy for medical

diagnosis, therapy and exploration of biological tissues. The conference will also focus on development and fabrication of innovative terahertz optical and electronic components, interaction of terahertz radiation with living tissues and cells. Special attention will be paid to application of terahertz technology in noninvasive, least invasive and intraoperative diagnosis of malignant and benign neoplasms with different ontologies and localizations.

Topics:

- Fundamental problems of terahertz sources and detectors
- Interaction of terahertz radiation with biological and chemical objects
- Terahertz exposure of biological molecules, tissues and cells
- Terahertz materials and optical components
- Terahertz plasmonic devices and systems
- Terahertz waveguides and fiber optics technology
- Terahertz in vivo and in vitro spectroscopy, imaging and microscopy of biomedical samples
- Broadband dielectric spectroscopy and high-resolution terahertz imaging
- Overcoming the Abbe diffraction limit in the terahertz range
- Terahertz technologies for medical diagnosis
- Applications of terahertz technology in oncodiagnosis and regenerative medicine