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太赫兹光场数据采集与数字重聚焦实验研究  
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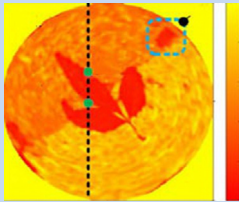
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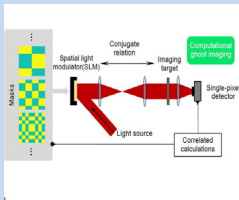
### Review



- Research progress of imaging technology based on terahertz quantum well photodetector 190667

Fu Zhanglong, Li Ruizhi, Li Hongyi, Qiu Fucheng, Tan Zhiyong, Shao Dixiang, Zhang Zhenzhen, Gu Liangliang, Wan Wenjian, Cao Juncheng

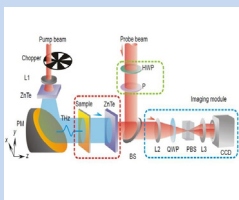
The research progress of the imaging technology based on THz QWPs was reviewed. And the factors affecting the core indicators of the imaging system were analyzed and summarized.



- THz wave computational ghost imaging: principles and outlooks 200024

Chen Sichao, Du Lianghui, Zhu Liguo

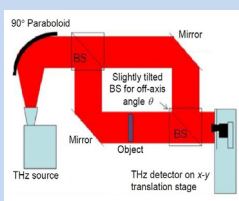
The development history of ghost imaging was reviewed. The mathematical principles of the computational ghost imaging were described in detail. The development history of computational ghost imaging within THz regime was reviewed. The prospects of THz wave ghost imaging were looked toward.



- Advancement and application of terahertz pulsed focal-plane imaging technique 190413

Wang Xinke, Zhang Yan

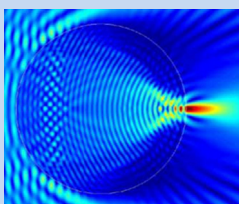
Recent technique improvements and application researches for THz pulsed focal-plane imaging were reviewed, including the spatial resolution enhancement, signal-to-noise ratio improvement, information acquiring ability and so on.



- Phase contrast imaging based on continuous-wave terahertz digital holography 190543

Shi Xiaoyu, Wang Dayong, Rong Lu, Zhao Jie, Wang Yunxin

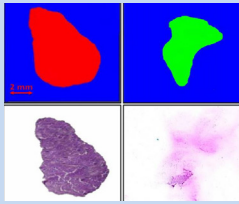
The development and status of off-axis and in-line TDH were reviewed. The influence of existing THz sources and the reconstruction algorithms on resolution and fidelity of imaging was analyzed. And the development trend of TDH was prospected in the end.



- Research advances of high-resolution THz imaging based on terajet effect 190590

Ma Xiaoming, Jiang Zaichao, Qu Qingshan, Cui Bin, Zhang Zhenwei, Yang Yuping

Firstly, a white-light nanoscopy based on photonic nanojet produced by microspheres was introduced, and then the THz microscopy based on terajet effect produced by mesoscopic dielectric structures was reviewed. Finally, the prospect of THz high resolution imaging technology based on terajet effect was presented.

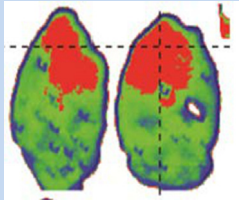


### Applications of terahertz imaging technology in tumor detection

190638

Shi Chenjun, Wu Xu, Peng Yan

Many terahertz imaging methods in tumor detection were listed and analyzed. The basic principle of these imaging methods and the works done by different groups worldwide were introduced. At last, the prospect of terahertz imaging technology applied in biomedical field was presented.



### Research progress of terahertz medical imaging

190721

Yan Zhiyao, Huang Wanxia, Huang Qingqing, Zou Yi, Zhu Ligu, Shi Qiwu

A brief introduction on the terahertz medical imaging systems and the applications of terahertz medical imaging in biological tissues from in vitro to in vivo were presented. The recent development of nanoparticle contrast agents for improving the contrast of terahertz imaging in vivo also was reviewed.

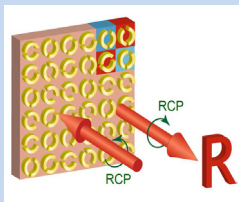


### Terahertz near-field MIMO-SAR technology for human security inspection

190682

Liu Jie, An Jianfei, Zhou Ren, Yu Yang

The application of terahertz near field MIMO-SAR technology in human body security inspection was introduced. Then the system composition and imaging algorithm were introduced, and finally a prospect of development was made.



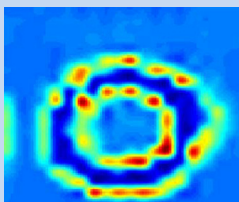
### Metasurface-based computer generated holography at terahertz frequencies

190674

Liu Xingbo, Wang Qiu, Xu Quan, Zhang Xueqian, Xu Yuehong, Zhang Weili, Han Jiaguang

A review of recent progress in metasurface-based terahertz CGH from author team was presented. A meta-hologram with simultaneous and independent phase and amplitude control over each pixel was presented. Then different responses under different incident polarization states were designed.

## Article

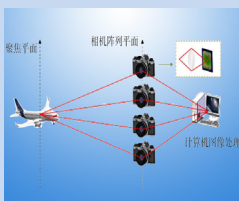


### Terahertz wave propagation and imaging detection characteristics in plasma

190075

Geng Xingning, Li Jining, Xu Degang, Liu Chang, Fan Xiaoli, Yao Jianquan

The theoretical model of ununiform plasma sheath was established based on scattering matrix method and the transmission characteristics of 0.1 THz ~ 10 THz wave were simulated.



### An experimental study on terahertz light field data acquisition and digital refocusing

190670

Yang Moxuan, Zhao Yuanmeng, Zuo Jian, Lv Nanfang, Zhang Cunlin

An experiment on the data acquisition and digital refocusing of the terahertz light field was conducted. Experimental results showed the feasibility and ability of terahertz light field imaging to improve image quality and enrich retrieval effects.