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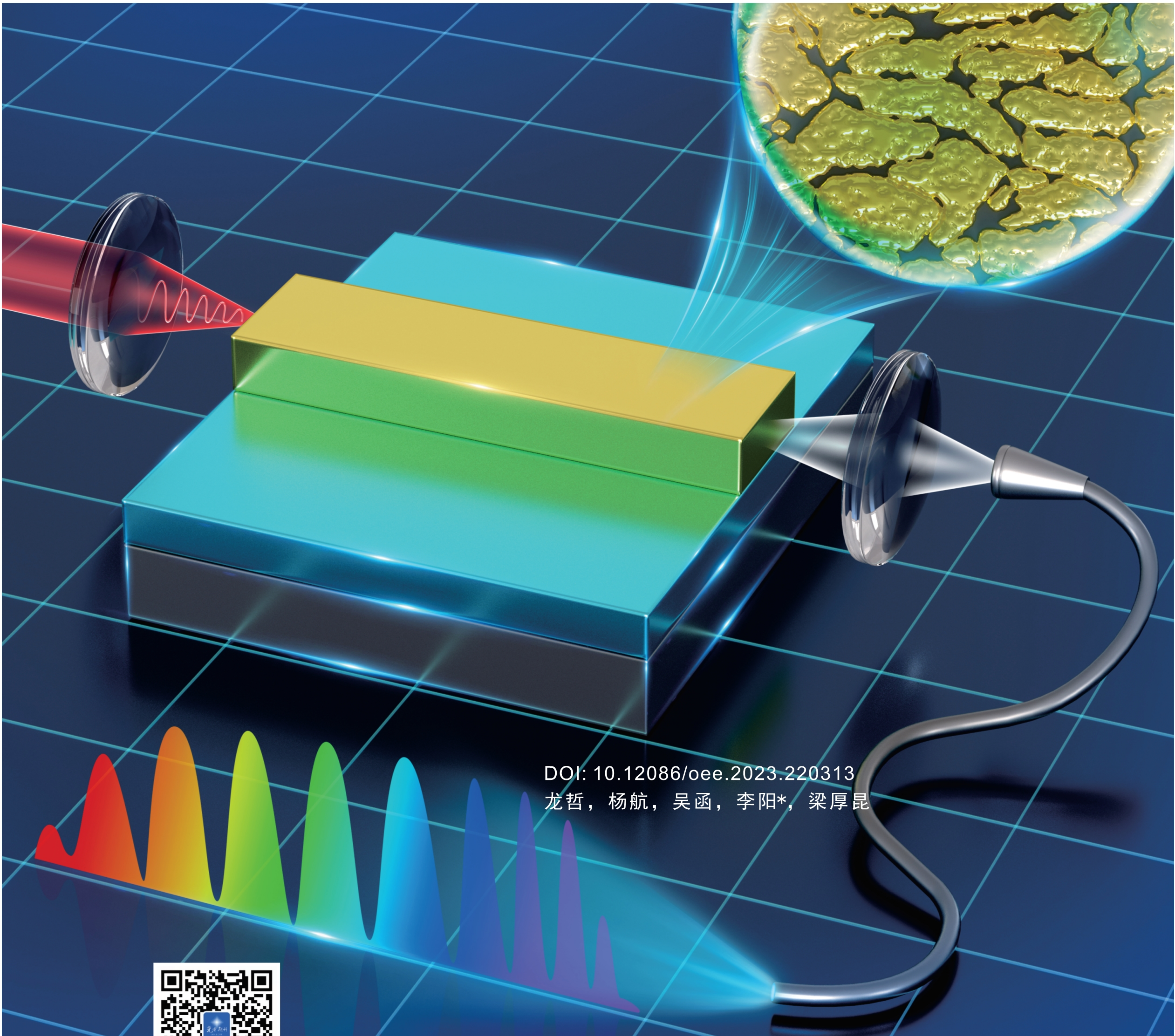
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李阳提供。



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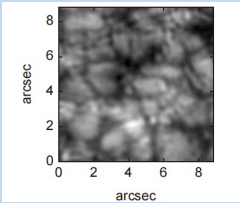


Research on dynamic variance threshold algorithm based on distributed fiber vibration sensor system

220205

Zhang Bozhi, Liu Ke, Liu Kun, Jiang Junfeng, Zhang Man, Liu Tiegeng

In order to solve the problems of weak positioning accuracy, low sensitivity, and slow response speed of the distributed fiber vibration sensor system, a dynamic variance threshold algorithm based on the phase-sensitive photosensitive time domain reflection was proposed.

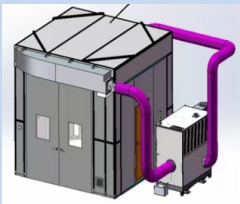


Multi-frame blind deconvolution of solar images via second-order total generalized variation

220207

Wang Shuai, He Chunyuan, Rong Huiqin, Bao Hua, Hou Jialin, Rao Changhui

In order to improve the reconstruction performance of blind deconvolution on solar (adaptive optics) images, a space-variant multi-frame blind deconvolution model based on second-order total generalized variation was proposed.

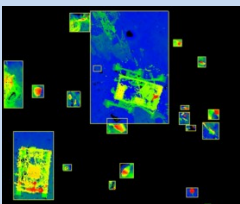


Displacement measurement analysis in distortion detection of lithography projection objective

220226

Du Jing, Liu Junbo, Quan Haiyang, Hu Song

A set of image quality detection platform was taken as an example to analyze the displacement measurement error in the distortion detection of the projection objective, and the image quality detection platform was used to measure the distortion of a projection objective. The distortion detection result was about 80 nm.

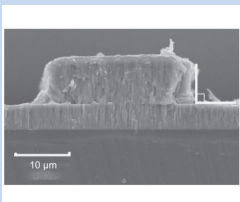


Obstacle recognition on Mars surface based on LiDAR data

220240

Chen Haiping, Li Mengyang, Cao Tingfen, Yan Han, Zhang Liang, Zhang Jinli, Wang Chengcheng

A method of identifying obstacles on the surface of Mars based on LiDAR data was proposed. Through the simulation experiment, the results showed that this method can effectively extract the obstacles on the surface of Mars from the LiDAR point cloud.



Self-phase modulation in integrated cadmium telluride polycrystalline waveguide

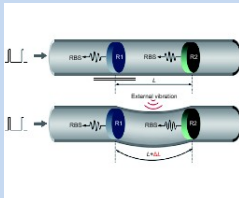
220313

Long Zhe, Yang Hang, Wu Han, Li Yang, Liang Houkun

A CdTe integrated waveguide on a low-refractive-index CdS film with a silicon substrate was designed. The simulation results solved by the nonlinear Schrödinger equation manifest that the MIR SCG covering 4.1 μm to 9.7 μm can be generated from a 1 cm CdTe waveguide pumped by a 5.5 μm femtosecond laser.

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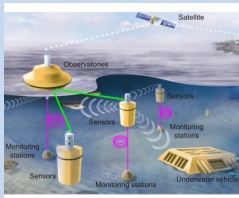


Digital signal processing and application of Φ -OTDR system

220088

Zhang Chi, Zou Ningmu, Song Jinyu, Tong Shuai, Yao Yuanyuan, Ding Zhewen, Wang Feng, Zhang Yixin, Zhang Xuping

The main digital signal processing methods and technologies of Φ -OTDR systems in signal quantization, demodulation, noise suppression, and pattern recognition in recent years were compared and analyzed.



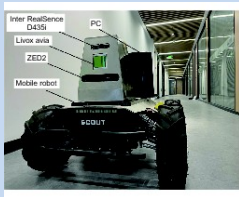
Progress on high-precision laser-based underwater frequency transfer

220149

Hou Dong, Ren Junwei, Guo Guangkun, Liu Ke

The background and significance of the underwater laser-based frequency transfer technique was introduced, and the research results of the University of Electronic Science and Technology in laser-based underwater frequency transfer were reported.

Article

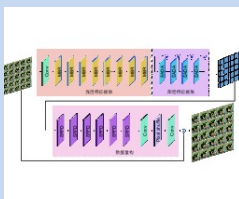


3D laser point cloud clustering method based on image information constraints

220148

Xia Jinze, Sun Haoming, Hu Shenghui, Liang Dongtai

Aiming at the requirement of fast clustering and segmentation of 3D point clouds for mobile robots in the process of perception of unknown environments, a 3D laser point cloud clustering method based on image information constraints was proposed.



Light field image super-resolution network based on angular difference enhancement

220185

Lv Tianqi, Wu Yingchun, Zhao Xianling

In order to improve the spatial resolution of the light field image, a light field super-resolution reconstruction network based on angle difference enhancement was built. The proposed algorithm obtained high-resolution light field sub-aperture images with higher PSNR and SSIM.