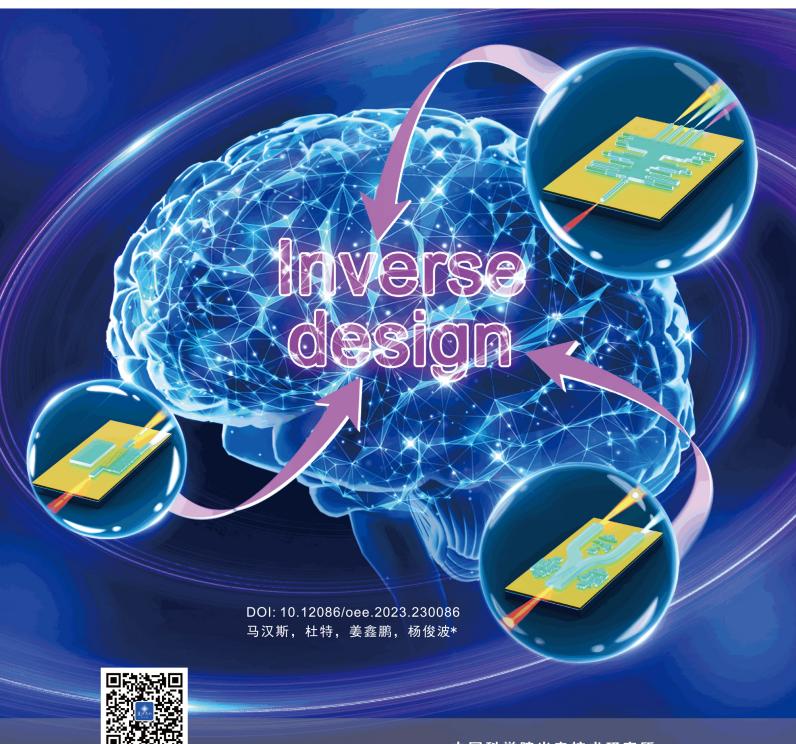
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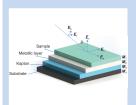
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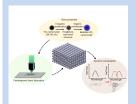


Effect of polarized laser illumination on imaging contrast of multilayer thin film structure

230089

Zhang Zijian, Wang Tianyi, Xu Xin, Wang Jixiang, Zhang Xin, Zhang Ruobing, Shi Guohua, Ye Hong

In order to further improve the imaging contrast and positioning accuracy of thin film samples, a theoretical model combining polarization illumination and OMLIT was proposed. This model was written in the matrix formalism and the propagation of polarized light through different layers with various incident angles was simulated.

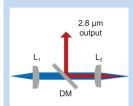


Femtosecond laser printing of vanadium dioxide based optical metastructures with tunable spectra engineering

230095

Zhu Jiaqi, Wu Shiyu, Song Shichao, Cao Yaoyu

A photosensitive polymer nanocomposite with tunable effective refractive index was prepared by incorporating VO_2 nanocrystals into methacrylate monomers, which takes advantages of the phase characteristics of VO_2 and the photopolymerization properties of the monomer.

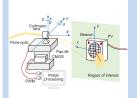


$2.8\ \mu m$ passively Q-switched mode-locked fiber laser using TiCN as saturable absorber

230107

Ye Shanshan, Huang Haibo, Chen Songyuan, Tao Junzhe, Wen Yuxuan, Gao Weiqing

A 2.8 μ m passively Q-switched mode-locked erbium-doped fluoride fiber laser based on material saturable absorption was reported in this paper. Under the pump power of 650 mW, the maximum average output power of 25.83 mW was obtained, and the slope efficiency was about 7.2%.

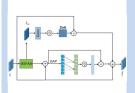


Design of alignment subsystem for laser wireless power transmission system

230109

Kang Jinsong, Zhou Yanping, Sun Liangrong, Kong Fanwei, Lv Yanting

Laser power transfer imposes high requirements on alignment accuracy, stability, and real-time performance. Therefore, a laser alignment system design method was proposed, and optimizations were made to the region of interest extraction and image preprocessing methods.



Infrared-Visible person re-identification based on multi feature aggregation

230136

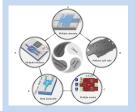
Zheng Haijun, Ge Bin, Xia Chenxing, Wu Cheng

The existing methods ignore the relationship between adjacent features and the influence of multi-scale information on global features. Here, a infrared-visible person reidentification method (MFANet) based on multi-feature aggregation was proposed to solve the shortcomings of existing methods.

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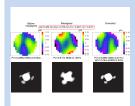
Inverse-designed silicon-based on-chip power splitters

230086

Ma Hansi, Du Te, Jiang Xinpeng, Yang Junbo

The differences and connections between the forward design and inverse design methods were outlined, and the inverse design algorithms were classified. In addition, the representative inverse-designed silicon-based on-chip power splitters in recent years were summarized.

Article

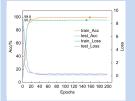


Study of off-axis telescope misalignment correction method using out-offocus spot

230040

Tian Siheng, Huang Yongmei, Xu Yangjie, Nan Xinyuan, Wu Qiongyan, Xiang Chunsheng, Tang Wei

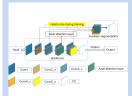
A method that uses the out-of-focus spot map of the system for infinity point targets and uses the Swin-Transformer network to calculate the amount of lateral misalignment of the secondary mirror was proposed.



Progressive multi-granularity ResNet vehicle recognition network

230052

Xu Shengjun, Jing Yang, Li Haitao, Duan Zhongxing, Liu Fuyou, Li Minghai Aiming at the problem that vehicle models are difficult to recognize due to differences in vehicle posture and viewing angles, a vehicle model recognition network based on progressive multi-granularity ResNet was proposed.



Axial attention-guided anchor classification lane detection

230079

Luo Xin, Huang Yingping, Liang Zhenming

Based on the framework of detection methods, a method that axial attention-guided anchor classification lane detection was proposed to solve two problems. The first is the problem of missing visual cues when lane lines are unclear or missing. The second problem is the lack of feature information caused by using sparse coordinates on mixed anchors, which lead to a decline of detection accuracy.

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