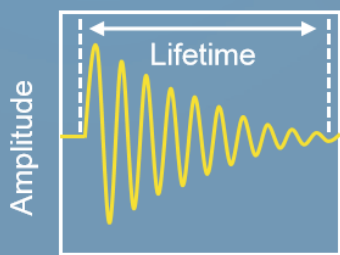
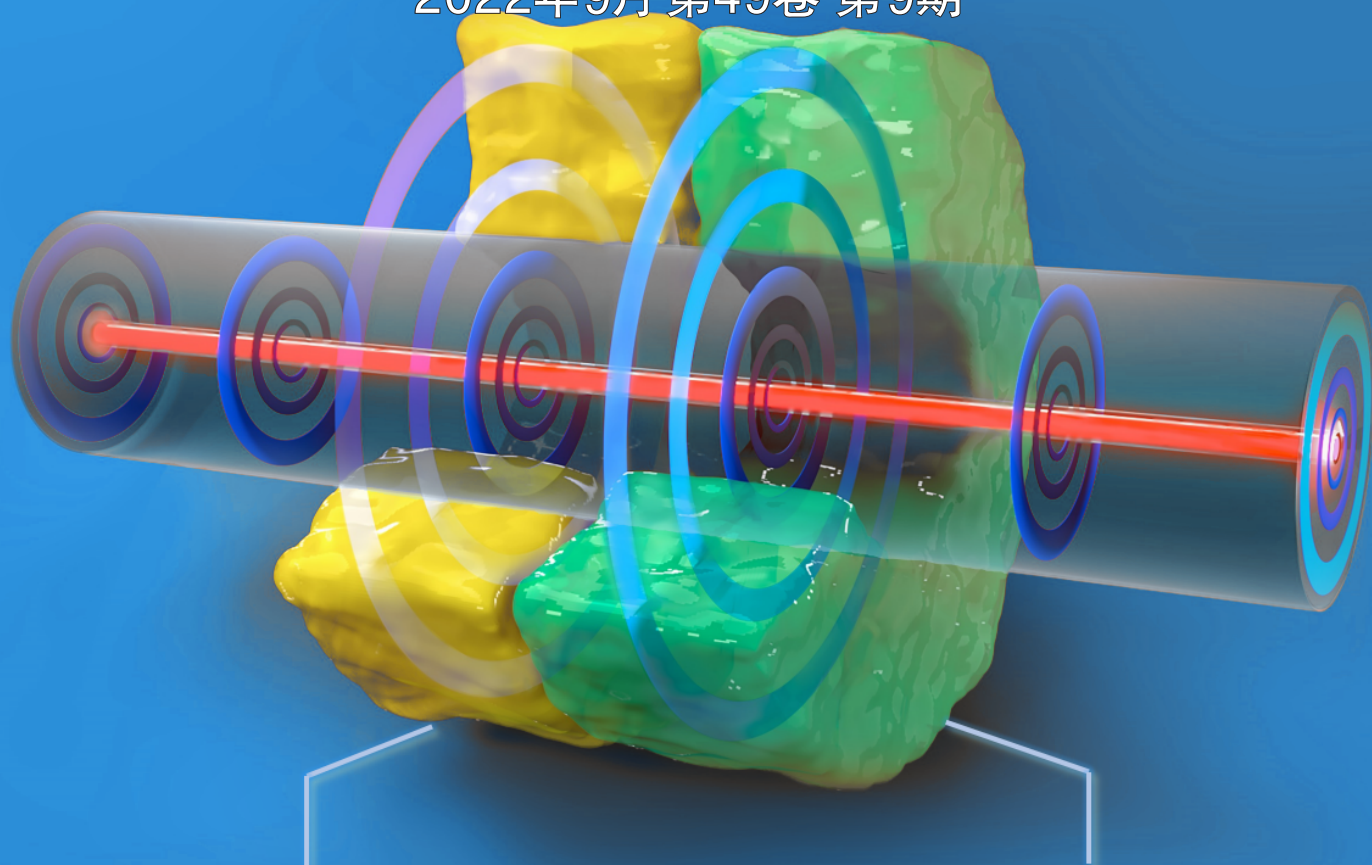


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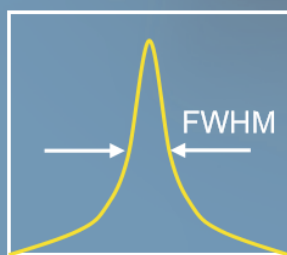


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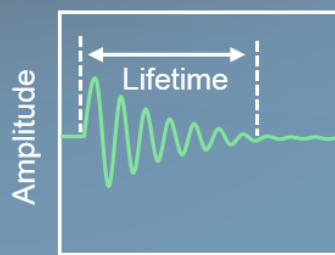
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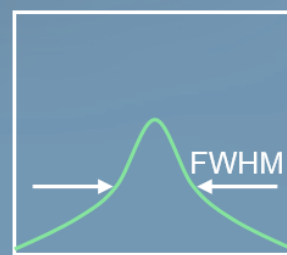
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Frequency

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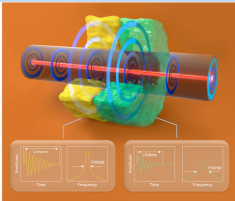
本期封面图片由哈尔滨
工业大学董永康提供。



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Review

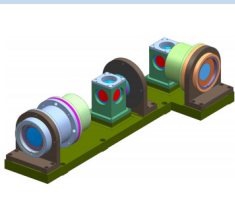


Recent progress in optical fiber sensing based on forward stimulated Brillouin scattering 220021

Li Tianfu , Ba Dexin , Zhou Dengwang , Ren Yuli , Chen Chao , Zhang Hongying , Dong Yongkang

Through research and analysis of the progress of F-SBS, the main principle and key techniques were generalized in this paper. Distributed sensing schemes based on local light phase recovery, opto-mechanical time-domain reflectometry, and opto-mechanical time-domain analysis were emphatically introduced.

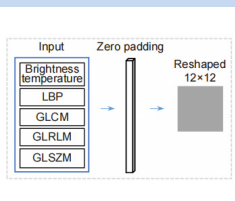
Article



Optical-mechanical system design of SAR real-time imaging optical processor 210421

Zhao Hongqiang , Zhang Xingxiang , Wang Duo , Bi Guoling , Fu Tianjiao

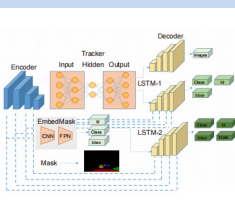
In order to further improve the real-time imaging processing ability of SAR in the face of massive echo data, the optical and mechanical system of SAR real-time imaging optical processor was designed and analyzed based on 4f optical structure.



Nighttime sea fog recognition based on remote sensing satellite and deep neural decision tree 220007

Li Tao , Jin Wei , Fu Randi , Li Gang , Yin Caoqian

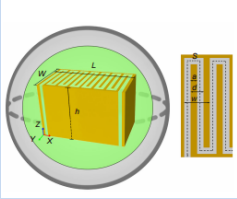
According to the needs of sea fog monitoring, the inference decision tree for sea fog monitoring was abstracted and a deep neural decision tree model was built accordingly, which could achieve high accuracy for nighttime sea fog monitoring while having strong interpretability.



Multi target tracking based on spatial mask prediction and point cloud projection 220024

Lu Kangliang , Xue Jun , Tao Chongben

A multi-target tracking algorithm combining spatial mask prediction and point cloud projection was proposed to reduce the adverse effects of the occlusion. The experimental results showed the tracking effect of this algorithm is better than other similar algorithms.

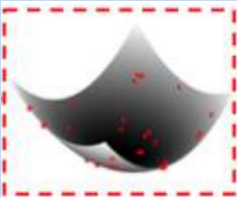


Highly confined localized spoof plasmon resonance characteristics on space-filling curvilinear meta-structures

220037

Qiao Xiaochen , Shi Tan , Song Shichao , Fu Tao , Li Xiangping , Deng Zilan

The Comb-shaped meta-structures based on space-filling curves were proposed. Theoretical analysis and numerical simulation method were used to study the near-field electromagnetic properties of these meta-surfaces.



Spatial mismatch calibration method for simultaneous slightly off-axis digital holographic microscopy system

220047

Jin Chuan , He Yu , Tang Yan , Liu Junbo , Sun Haifeng , Hu Song

A spatial mismatch calibration method for a sub-pixel-level simultaneous slightly off-axis digital holographic microscope system was proposed. Simulation results showed that the proposed method has sub-pixel accuracy, and experiment demonstrated the effectiveness of the method in the practical systems.