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\*本期封面来自研究亮点 (Highlights) 栏目《非对称光子自旋轨道相互作用》一文。

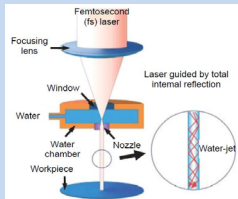
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### Focus

**Current status of water-jet guided laser cutting technology** 1039  
Boyū Sun, Hongchao Qiao, Jibin Zhao, Ying Lu and Yuebin Guo

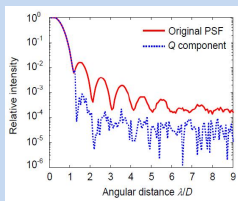
Water-jet guided laser cutting technology is a new type of cutting method which utilizes the water jet to guide the laser to the machining plane.



### Advances

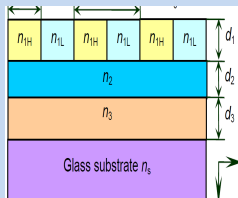
**A differential-imaging polarimeter for high-contrast exoplanet imaging** 1045  
Deqing Ren, Chao Yang, Jing Guo and Chengchao Liu

A differential-imaging polarimeter dedicated for exoplanet high-contrast imaging is proposed. The system contains a zero-order half-wave plate (HWP) located on the optical pupil plane and a Wollaston prism (WP) is used to generate two polarized images.



**Light polarization and color from guided-mode resonance filter** 1052  
Zhibin Ren, Yahui Sun, Jiasheng Hu, Mengsi Li and Kaipeng Zhang

A triple-layer GMRF is designed by using the finite difference time domain method under non-polarized light illumination.



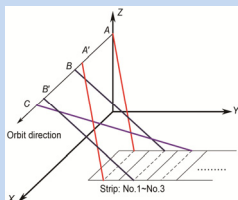
**High dynamic range imaging method based on image content adaptive matrix completion** 1056  
Dengmei Xie, Mei Yu, Zongju Peng, Fen Chen and Gangyi Jiang

A new HDR imaging method is proposed based on content adaptive matrix completion of low dynamic range (LDR) image to remove the ghosts of HDR image.



**Analysis on stitching overlap pixel threshold of one-orbit multi-strip agile remote sensing imaging** 1066  
Yue Xu, Huajun Feng, Zhihai Xu, Qi Li and Yueting Chen

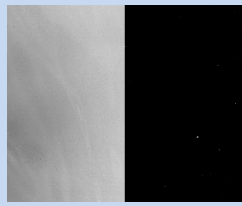
The mission model and geometric degradation model are proposed for multi-strip stitching imaging, and the criterion of overlap region width threshold is presented.



**Development and applications of small airborne polarization imaging system** 1075  
Haifeng Wang, Qiqi Hu, Jiazhu Duan, Lixian Huang, Ran Qiao, Dapeng Li, Fan Wu and Songnan Chu

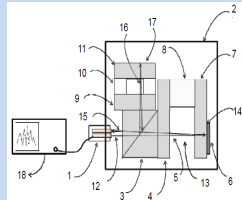
The high-precision polarization controller based on the birefringence effect of liquid crystal is developed and calibrated.





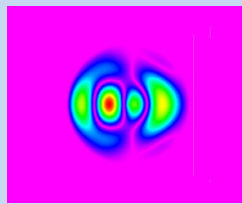
**An enhancement algorithm for low signal noise ratio of point pixel** 1083  
Zhenxing Xu, Ping Yang and Bing Xu

An enhancement algorithm for low signal noise ratio point pixel is proposed based on time and spatial correlation.



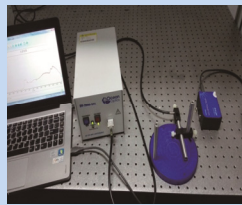
**A method to improve the stability of the optical interference system** 1089  
Qing Xiao, Qian Fu, Dalong Zhang, Xia Liu, Dapeng Zhang and Xinglong Wang

An integrated Michelson interference device is proposed to measure the thicknesses of multiple layers of optical plate, which could improve the stability of the optical interference system in a new way.



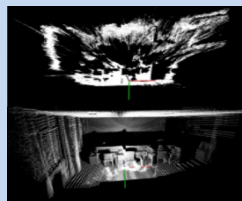
**High sensitivity strain micro-fiber sensor** 1094  
Liang Xia, Zengshan Xing, Jianhui Yu, Huihui Lu, Heyuan Guan, Yongchun Zhong and Zhe Chen

A microfiber strain sensor with arched transition region was demonstrated. By controlling the flame size and tapering speed, a novel micro fiber with arched transition region was successfully fabricated.



**Nonlinear correction of the sensor S11639 in mini-spectrometer** 1101  
Jianping Tong, Jianxun Gao, Fei Wang and Hao Yang

The nonlinear correction of S11639 in mini-spectrometer is realized by polynomial fitting with the least square method.



**Motion detection and mismatching correction by fusing laser and vision** 1107  
Qiang Zhang, Jianghai Zhao, Yawei Yuan and Shihui Fang

Aiming at the limitations of single sensor in dynamic scene perception issue, an implementation system for fusing laser and vision was designed.

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New breakthrough in laser proton scalpel research 1129

Ultrafast photonics for achieving femtosecond resolution videography technique 1129