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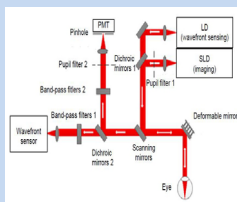
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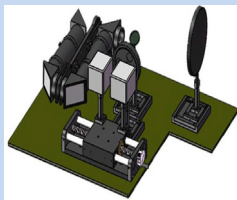


Adaptive optics scanning laser ophthalmoscopy with two sources

180137

Li Lingxiao, He Yi, Wang Yuanyuan, Wei Ling, Zhang Yudong

An adaptive optics scanning laser ophthalmoscopy with two sources was designed. The differences of the aberration of the two light sources were analyzed, the feasibility of realizing the dark field imaging by semi-circular pupil was studied, and the bright and dark field images of the artificial eye were obtained.

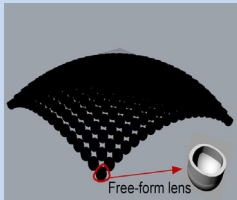


Design and error analysis of multi-spectral and multi-axis parallelism testing scheme

180219

Huang Fuyu, Li Gang, Shi Yunsheng, Zhang Xiaoliang, Zou Changfan, Yu Ye

The current methods cannot meet the actual testing needs of multi-spectral, multi-axis, high-precise and large axis space. Thus a multi-spectral and multi-axis parallelism testing scheme was put forward by adopting the designing thought of reflective type and optical axis translation.

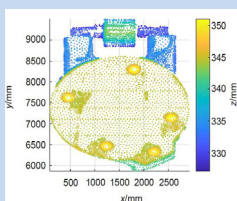


Design of arrayed multi-wavelength UVLED ink curing system

180252

Chen Zhongyu, Jiang Haibo, Sun Xiuhui, Yang Ruofu, Wu Peng, Du Chunlei, Yin Shaoyun

It is difficult to achieve the curing effect comparable to what mercury-vapor lamp can do by using UVLEDs. A design of UVLED ink curing system was presented that provides evenly mixed light with multiple wavelengths.

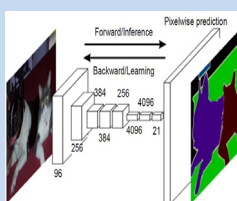


Simplification of locomotive gear three-dimensional point cloud based on non-uniform division

180269

Lan Jianxia, Wang Zeyong, Li Jinlong, Huang Qian, Gao Xiaorong

The 3D point cloud data obtained from the laser line structured light scanner has redundancy, and a point cloud simplification algorithm based on the two order non-uniform partition was designed and implemented to deal with locomotive running department.

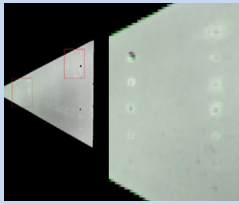


Lane recognition method based on fully convolution neural network and conditional random fields

180274

Ye Zihao, Sun Rui, Wang Huihui

Aiming at the poor adaptability of traditional lane recognition method in complex pavement, a lane recognition method based on full convolutional neural network and conditional random field was proposed, according to image segmentation technology.

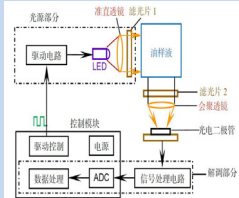


Pressure sensitive paint image registration combined with gray level information

180301

Liang Cheng, Pu Fangyuan, Liang Lei, Gao Zhisheng

In the wind tunnel test, due to the strong wind, the model will be distorted, making the wind image and the windless image difficult to register. The two-dimensional non-rigid iterative closest point (ICP) algorithm was applied to solve this problem. The point cloud method was used to make the image detail area to be effectively registered.

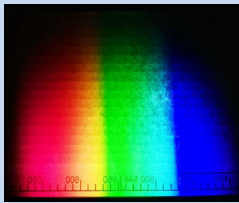


The establishment and analysis of noise model for pulse modulation dimming method and square-wave modulation dimming method

180338

Chen Jingtao, Duan Fajie, Jiang Jiajia, Huang Tingting, Ma Ling

To reduce the thermal power of light source, pulse modulation dimming method (duty ratio less than 50%) was proposed to replace square-wave modulation dimming method (duty ratio equal to 50%).



Spectrosensitometer with wide spectrum, large scale and multistep optical field

180365

Li Chaoyang, Huang Yuanshen, Sheng Bin, Zhuang Songlin

A new type of spectrosensitometer was developed, which was characterized by a wide spectrum range of 340 nm ~ 900 nm and a large exposed area of 202 mm × 90.5 mm with multi-step light intensities on it.

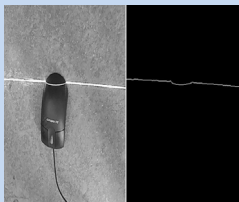


Development and analysis of large spacing axis consistency detection technology

180409

Zhang Yong, Wu Hao, Ma Sasa

The presented status quo of methods and equipment were analyzed for measuring the consistency of large spacing axes. An axis consistency detection method was proposed based on non-cooperative target image processing technology.



Sub-pixel extraction of laser stripe in complex background

180457

Gan Hong, Zhang Chao, Li Lin, Luo Wenting

The complex background and laser stripe noise affect laser stripe extraction. Adaptive double threshold segmentation method and the improved gray weight model were proposed.