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Atomic and Molecular Optics

- Phase dependence of third-order harmonic generation in gases induced by two-color laser field [Editors' Pick] *Congsen Meng, Pan Song, Zhihui Lyu, Xiaowei Wang, Dongwen Zhang, Zengxiu Zhao, and Jianmin Yuan* 050201

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- High gain optical amplification and lasing performance of the Bi/P co-doped silica fiber in the O-band *Jinmin Tian, Mengting Guo, Fan Wang, Cheng Wu, Lei Zhang, Meng Wang, Yafei Wang, Jun Chen, Chunlei Yu, and Lili Hu* 050601
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A snapshot full-polarization hyperspectral imaging method based on convolutional neural network (CNN) reconstruction is proposed. In the imaging system, a quarter-wave plate is combined with a liquid crystal tunable filter to encode full-polarization information. Meanwhile, the liquid crystal tunable filter flexibly selects spectral bands of interest. Finally, a CMOS detector captures the total light intensity image after full-polarization encoding. In the reconstructed model, a two-layer CNN reconstructs four full-polarization images from one full-polarization encoded image. The cover image shows the main components of both the full-polarization hyperspectral imaging system and the CNN reconstruction model.

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The color images are shown online.