

ESI Hot Papers in March 2024

- 1. Photonic matrix multiplication lights up photonic accelerator and beyond**
Hailong Zhou, Jianji Dong, Junwei Cheng, Wenchan Dong, Chaoran Huang, Yichen Shen, Qiming Zhang, Min Gu, Chao Qian, Hongsheng Chen, Zhichao Ruan & Xinliang Zhang
Light Sci Appl **11**, 30 (2022). DOI: 10.1038/s41377-022-00717-8
- 2. Deep learning in optical metrology: a review**
Chao Zuo, Jiaming Qian, Shijie Feng, Wei Yin, Yixuan Li, Pengfei Fan, Jing Han, Kemao Qian & Qian Chen
Light Sci Appl **11**, 39 (2022). DOI: 10.1038/s41377-022-00714-x
- 3. Blue LED-pumped intense short-wave infrared luminescence based on Cr³⁺-Yb³⁺-co-doped phosphors**
Yan Zhang, Shihai Miao, Yanjie Liang, Chao Liang, Dongxun Chen, Xihui Shan, Kangning Sun & Xiao-Jun Wang
Light Sci Appl **11**, 136 (2022). DOI: 10.1038/s41377-022-00816-6
- 4. Advanced liquid crystal devices for augmented reality and virtual reality displays: principles and applications**
Kun Yin, En-Lin Hsiang, Junyu Zou, Yannanqi Li, Zhiyong Yang, Qian Yang, Po-Cheng Lai, Chih-Lung Lin & Shin-Tson Wu
Light Sci Appl **11**, 161 (2022). DOI: 10.1038/s41377-022-00851-3
- 5. Dielectric metalens for miniaturized imaging systems: progress and challenges**
Meiyan Pan, Yifei Fu, Mengjie Zheng, Hao Chen, Yujia Zang, Huigao Duan, Qiang Li, Min Qiu & Yueqiang Hu
Light Sci Appl **11**, 195 (2022). DOI: 10.1038/s41377-022-00885-7
- 6. Towards higher-dimensional structured light**
Chao He, Yijie Shen & Andrew Forbes
Light Sci Appl **11**, 205 (2022). DOI: 10.1038/s41377-022-00897-3
- 7. Fundamentals and comprehensive insights on pulsed laser synthesis of advanced materials for diverse photo-and electrocatalytic applications**
Jayaraman Theerthagiri, K. Karuppasamy, Seung Jun Lee, R. Shwetharani, Hyun-Seok Kim, S. K. Khadheer Pasha, Muthupandian Ashokkumar & Myong Yong Choi
Light Sci Appl **11**, 250 (2022). DOI: 10.1038/s41377-022-00904-7

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8. [Optical synaptic devices with ultra-low power consumption for neuromorphic computing](#)
Chenguang Zhu, Huawei Liu, Wenqiang Wang, Li Xiang, Jie Jiang, Qin Shuai, Xin Yang, Tian Zhang, Biyuan Zheng, Hui Wang, Dong Li & Anlian Pan
Light Sci Appl **11**, 337 (2022). DOI: 10.1038/s41377-022-01031-z
9. [Phase-controlled van der Waals growth of wafer-scale 2D MoTe₂ layers for integrated high-sensitivity broadband infrared photodetection](#)
Di Wu, Chenguang Guo, Longhui Zeng, Xiaoyan Ren, Zhifeng Shi, Long Wen, Qin Chen, Meng Zhang, Xin Jian Li, Chong-Xin Shan & Jiansheng Jie
Light Sci Appl **12**, 5 (2023). DOI: 10.1038/s41377-022-01047-5
10. [Angular momentum holography via a minimalist metasurface for optical nested encryption](#)
Hui Yang, Peng He, Kai Ou, Yueqiang Hu, Yuting Jiang, Xiangnian Ou, Honghui Jia, Zhenwei Xie, Xiaocong Yuan & Huigao Duan
Light Sci Appl **12**, 79 (2023). DOI: 10.1038/s41377-023-01125-2
11. [Photonic structures in radiative cooling](#)
Minjae Lee, Gwansik Kim, Yeongju Jung, Kyung Rok Pyun, Jinwoo Lee, Byung-Wook Kim & Seung Hwan Ko
Light Sci Appl **12**, 134 (2023). DOI: 10.1038/s41377-023-01119-0
12. [Intervalence charge transfer of Cr³⁺-Cr³⁺ aggregation for NIR-II luminescence](#)
Shengqiang Liu, Jingxuan Du, Zhen Song, Chonggeng Ma & Quanlin Liu
Light Sci Appl **12**, 181 (2023). DOI: 10.1038/s41377-023-01219-x