



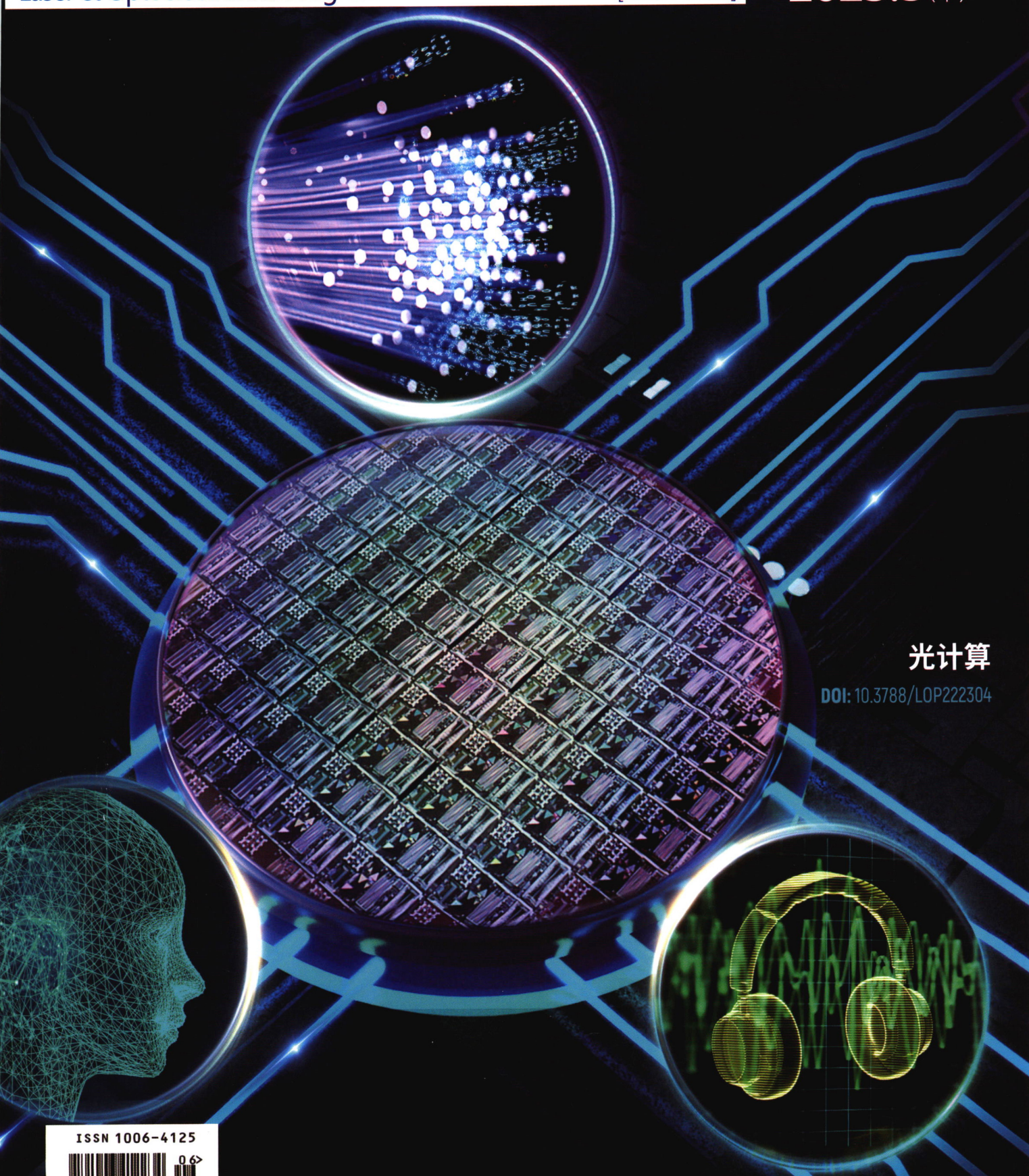
# 激光与光电子学进展

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# 激光与光电子学进展

## —— 先进成像 ——

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封面解读

本封面展示了一种基于片上集成芯片的光学神经网络架构,多输入多输出的模拟光计算发挥了高通量、高速、低延时的优势,实现了“传输即计算”,可广泛应用于图像识别、音视频解码、光通信解调等领域。

# Laser & Optoelectronics Progress

— Advanced Imaging —

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# VR/AR显示技术及应用

59卷第20期 | 2022年10月

虚拟现实(VR)与增强现实(AR)近眼显示技术是下一代新型显示技术,同时也是元宇宙的重要基础设施和入口,是继计算机、移动终端后的下一个平台级技术。目前VR/AR显示光学系统涉及微型显示图像源技术,包括LCD、OLED、LCoS、DLP、MicroLED、LBS等;VR光学系统包括非球面方案、菲涅耳方案和折射射超薄透镜方案等;AR光学系统包括光学自由曲面方案、几何阵列波导方案、浮雕光栅波导方案、全息波导及液晶全息波导方案等。不同的微显示技术与光学解决方案的组合衍生出多种技术路线。此外,为了实现临场真实感近眼显示,可通过多焦面和光场等技术来实现虚拟图像的深度可调,其中还涉及图像渲染和畸变校正等多方面的技术和内容。总体而言,VR/AR光学系统正朝着轻薄化、高清化、真三维显示等方向发展。

为进一步推动VR/AR技术发展,加强学科交流,集中展示微显示、VR/AR光学的最新研究进展,促进多学科的交叉融合,推动相关领域向纵深发展,《激光与光电子学进展》在2022年第20期推出“VR/AR显示技术及应用”专题。专题共收录19篇高质量论文,其中包括8篇特邀综述和8篇特邀研究论文,内容涵盖了VR/AR显示技术、全息技术、超表面技术、衍射光波导技术、微显示技术(激光扫描技术)、计算成像技术等方面的研究成果与最新进展。



专题官网



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### 特邀组稿专家



王涌天 教授  
北京理工大学



郑臻荣 教授  
浙江大学



程德文 教授  
北京理工大学



夏军 教授  
东南大学



李燕 副教授  
上海交通大学



### 封面文章



#### 封面文章 面向视觉舒适度的全息近眼显示研究综述

作者: 常琛亮, 戴博, 夏军, 张大伟, 庄松林  
第一单位: 上海理工大学



#### 封底文章 超表面VR/AR显示技术研究进展

作者: 罗翎豪, 董思禹, 王占山, 程鑫彬  
第一单位: 同济大学

