



# 中国激光

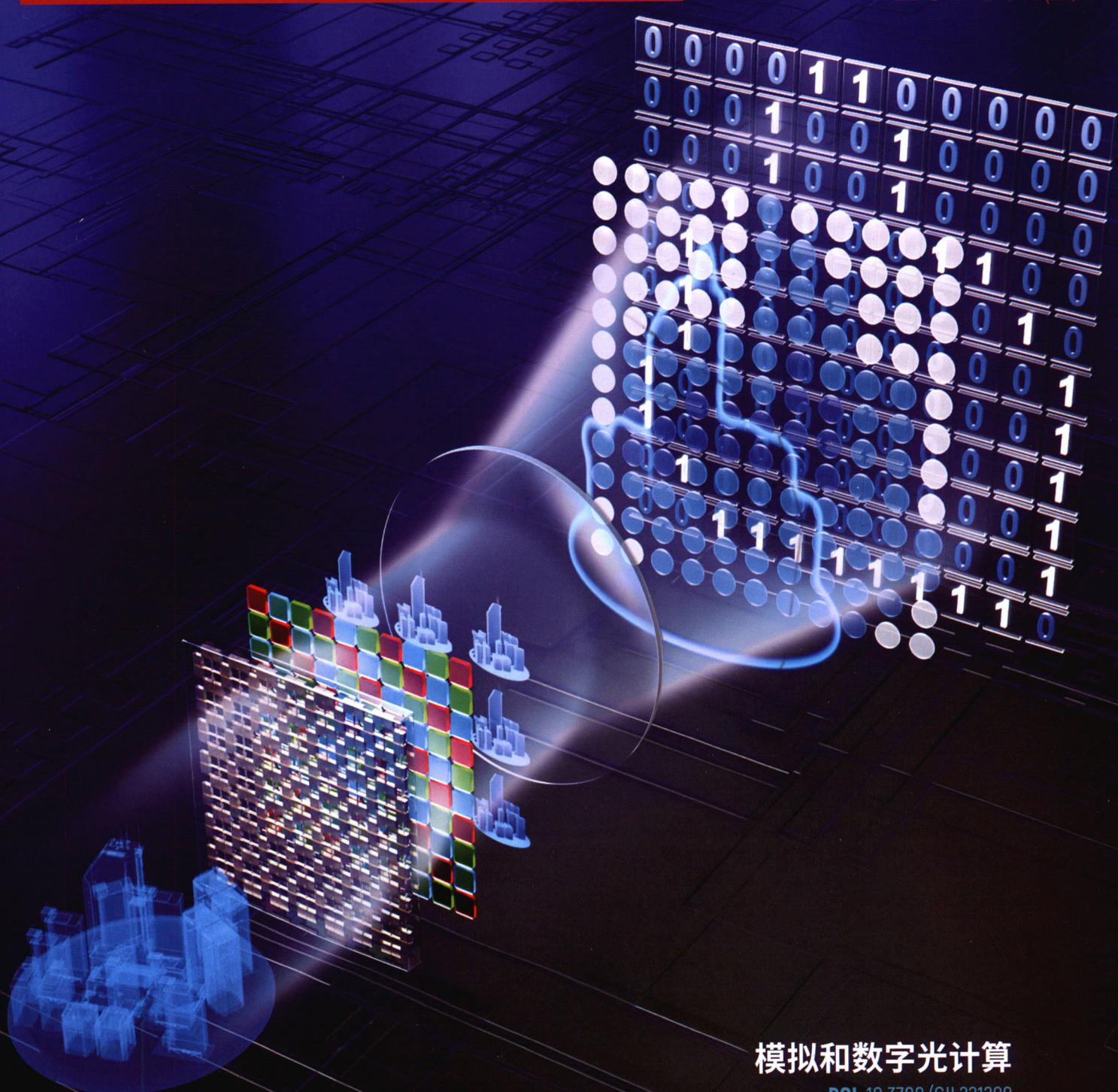
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模拟和数字光计算

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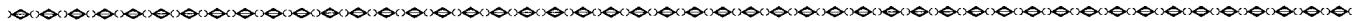
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## 封面 解 读

封面展示了一种基于衍射光学元件空间角谱复用和高密度光互连能力构建的光学矩阵计算系统。首先, 将来自真实场景的光线输入到特殊设计的衍射光学元件中, 实现空间角谱复用, 其中每个衍射级次都携带真实场景的全部信息。然后, 这些信息经过多通道编码和空间光调制器调制后, 在光域中对其进行高速并行处理。最后, 利用透镜对处理后的光信号进行会聚求和, 即得到矩阵计算结果。进一步地, 通过采用合适的编码和解码方案, 该系统有望同时兼顾模拟光计算和数字光计算的优势, 实现高算力、高精度和高能效比的光学矩阵计算, 并且有望直接对自然真实场景进行光速预处理。

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万方数据

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