

光学学报



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任意结构无衍射光束

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封面解读

封面形象地展示了基于焦散工程的任意无衍射结构光场的简洁、高效产生方法。一束光经过特制的环形相位掩模版调制后,在透镜的后焦面产生一个特殊的心形结构光场;在光场分布曲线的每一个点上,都有一条光线与之相切,这就是光学焦散线。基于焦散工程设计任意结构的无衍射光束的中心思想为:将光场强度最大值路径与光学焦散线联系起来,进而分析形成焦散线所需的光线模型,最终构造初始场分布。此外,所设计的相位具有特殊的环形结构,可使得产生的目标光束具有无衍射特性。

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