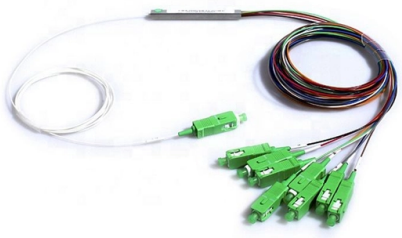
Spatial Optical Phase Modulator Complex Amplitude



Overview

This approach presents several key advantages: continuous, precise and robust modulation of complex amplitude as well as polarization-independent and broadband response, which significantly reduce constraints on the light source's property and fabrication and make it well-suited. This approach presents several key advantages: continuous, precise and robust modulation of complex amplitude as well as polarization-independent and broadband response, which significantly reduce constraints on the light source's property and fabrication and make it well-suited. We present a method for full spatial phase and amplitude control of a laser beam using a twisted nematic liquid crystal display combined with a spatial filter. By spatial filtering we combine four neighboring pixels into one superpixel. At each superpixel we are able to independently modulate the. This repository provides reference implementations and test scripts for complex modulation (amplitude and phase) using a phase-only spatial light modulator (SLM).

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Article Content

Achieving higher spatial resolution in complex amplitude modulation ...

This paper proposes a novel pixel shift-based dual-phase modulation method (PS-DPMM) designed to enhance the spatial resolution of complex amplitude modulations.

Complex modulation Diffractive Optical Elements implemented in a

In this work, we propose to generate complex modulation with a single SLM for optimizing the performance of DOEs. For that, we fill, as evenly as possible, the Argand plane, representing the

Spatial light modulator via optically addressed metasurface

A metasurface-based spatial light modulator brings the pixel size down to the submicrometre scale while demonstrating real-time complex-amplitude holography, three

Spatial amplitude and phase modulation using commercial twisted

We propose a novel modulation technique to achieve amplitude and phase modulation of light using a SLM together with a spatial filter. This technique does not pose special requirements on the SLM or

asta-me/Complex_Modulation

Complex_Modulation This repository provides reference implementations and test scripts for complex modulation (amplitude and phase) using a phase-only spatial light modulator (SLM).

Strong amplitude and phase modulation of optical

Here, we show, for the first time, large and finely tunable changes in the amplitude and phase of the complex degree of spatial coherence,

Spatial amplitude and phase modulation using commercial twisted

We experimentally demonstrate the independent phase and amplitude modulation using this novel technique. Our technique does not impose special requirements on the spatial light modulator and

Endless Spatial Optical Phase Modulation by Complex Vector

We experimentally demonstrate complex vector synthesis using LCoS. Real and imaginary components of input lights are independently controlled, appropriately giving phase offset in each quadrant.

High resolution real-time complex modulation using single spatial light ...

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In this paper, a novel and non-iterative scheme for real-time complex modulation with a high spatial resolution is demonstrated. Firstly, the desired complex amplitude field is decomposed

Broadband and polarization-independent complex

In this study, we leverage the principle of dual meta-atom interference to simultaneously modulate amplitude and phase using a single layer metasurface.

Hamamatsu LCOS-SLM (Spatial Light Modulator) X15213-19

Overview The Hamamatsu LCOS-SLM X15213-19 is a high-performance reflective pure-phase spatial light modulator engineered for precision wavefront control in mid-infrared and near-infrared optical

Structured light encompasses amplitude, phase, polarization, and time ...

Structured light refers to the light field tailored by various degrees of freedom including intensity, phase, and polarization states in both spatial and temporal domains, which may greatly ...

Optical corner detection with azimuthal Hilbert transform metasurfaces

Here, we propose a universal strategy for optical corner imaging with azimuthal Hilbert transformation metasurfaces. Multiple objects, regardless of their amplitude, phase, or angular

(PDF) High-efficiency vacuum ultraviolet geometric-phase optical ...

Vectorial structured light manipulation in the vacuum ultraviolet (VUV) regime is essential for applications in lithography, attosecond science, and precision optical metrology. To date,

Superpixel-based complex amplitude modulation hologram for

Superpixel-based complex amplitude modulation hologram for compensating the fringing field effect of phase-only spatial light modulators Chenxiao Wei, Chao Li, Xin Huang, Yongtian Wang, and Juan Liu

Schematic illustrations of the detour phase. The phase difference ...

Optical metasurfaces, as a booming research field, have provided new methods for modulating the amplitude, phase, and polarization of light through artificial birefringent structures or structural ...

OPTICAL MODULATOR/DETECTOR BASED ON

Solgaard, et al., in “Deformable Grating Optical Modulator”, Optics Letters 17, 9 (1992) describe a deformable light grating modulator based on electrically controlling the amplitude of a micromachined

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Real-time inference of vortex beam modes in time-varying

These distorted wavefronts are processed by a cascaded DONN comprising multiple phase-modulation layers. Each layer spatially modulates the complex optical field through

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