EIT Opto-Routing

Spatial Light Modulator Metamaterials

Powered by EIT Opto-Routing

Transmission-Reflection Terahertz Spatial Light Modulator Using

Transmission-reflection terahertz spatial light modulator is introduced using electrically tunable dual-mode metamaterial. Simultaneous transmissive and reflective imaging technique for differential

Spacetime Metamaterials

Metamaterial engineering, based on Maxwell's electromagnetics theory and subsequent early microwave-optical technologies, really emerged only near the end of the XIXth century and during

Four-Color Metamaterial Absorber THz Spatial Light

Figures Design and structure detail of the electronically controlled THz metamaterial absorber based spatial light modulator (MMA-SLM). (a) Image of

A spatial light modulator for terahertz beams

We design and implement a multipixel spatial modulator for terahertz beams using active terahertz metamaterials. Our first-generation device consists of a 4×4 p

Photonic Metamaterials for Light Modulation, Energy Saving

Light manipulation with metamaterial structures is a topic of utmost importance in many fields such as medical diagnostics, monitoring of industrial fabrication processes,

environmental and agricultural

Recent Progress of Terahertz Spatial Light Modulators:

In this review, we summarize the recent progress of THz spatial light modulators from the perspective of functional materials and analyze their

A route to ultra-fast amplitude-only spatial light modulation using

The device consists of a thin GeTe layer, and operates like a reconfigurable mirror where by changing the material between its amorphous and crystalline states, a gradual change of the

Liquid Crystal Metamaterial Absorber Spatial Light Modulator for THz

Abstract A terahertz (THz) spatial light modulator implemented with metamaterial absorbers (MMAs) functionalized with isothiocyanate-based liquid crystals (LCs) is experimentally

Approaching High-efficiency Spatial Light Modulation with Lossy

Theoretically, optimizing the metasurface design can effectively mitigate intrinsic material absorption and structural losses, thereby enabling high-efficiency phase modulation of the spatial light field,

Dual-color terahertz spatial light modulator for single-pixel imaging

Liquid crystal metasurface based spatial light modulator is developed for terahertz dual-color compressive imaging. Significant improvement of imaging quality and speed is demonstrated

A low-voltage high-speed terahertz spatial light modulator using active

An all solid-state metamaterial based terahertz (THz) spatial light modulator (SLM) is presented which uses high mobility 2DEG to manipulate the metamaterial resonant frequency (0.45

Nano-electromechanical spatial light modulator enabled by

Spatial light modulators (SLMs) play essential roles in various free-space optical technologies, offering spatio-temporal control of amplitude, phase, or polarization of light.

Terahertz compressive imaging with metamaterial

LetterPublished:29June2014Terahertzcompressiveimagingwithmetamaterialspatial light modulators Claire M. Watts, David Shrekenhamer, John Montoya,

Spatial light modulators

The SPIE Digital Library offers a comprehensive collection of research articles, conferencepapers,andtechnicaldocumentsfocusedonspatiallightmodulators(SLMs), reflecting the breadth and depth of

Spatial Light Modulators and Their Applications in Polarization

1. Introduction Spatial light modulators (SLMs) are electro-optical devices, pertaining to manipu-lating the fundamental characteristics, viz., amplitude, phase, and polarization state of light. SLMs have

(PDF) A low-voltage high-speed terahertz spatial light

In this review, we summarize the recent progress of THz spatial light modulators from the perspective of functional materials and analyze their

Liquid Crystal Metamaterial Absorber Spatial Light Modulator for THz

A terahertz (THz) spatial light modulator implemented with metamaterial absorbers (MMAs) functionalized with isothiocyanate-based liquid crystals (LCs) is experimentally demonstrated.

Liquid Crystal Metamaterial Absorber Spatial Light Modulator for THz

Metamaterial absorbers combined with liquid crystals are used to implement a spatial light modulator (SLM) for THz frequencies. Here a 6 × 6 pixel SLM is presented where the orientation of

Four-Color Metamaterial Absorber THz Spatial Light

A spatial light modulator with multicolor super-pixels composed of arrays of electronically controlled terahertz metamaterial absorbers is

Dual-Mode THz Spatial Light Modulator Enabled by Liquid Crystal

In the terahertz (THz) range, liquid crystal (LC) enabled active metasurfaces are crucial for wireless communication, sensing, and imaging applications, which can be used for spatial light modulators

Temporal modulation brings metamaterials into new era

Temporal modulations in photonics bring many exotic optical phenomena in the time dimension while metamaterials provide powerful ways in manipulating light in the spatial domain. The

Spatial light modulator via optically addressed metasurface

Emerging demands for dynamic wavefront modulation in holographic displays, augmented/virtual reality, and light detection and ranging require spatial light modulators (SLMs) with

A spatial light modulator for terahertz beams

We design and implement a multipixel spatial modulator for terahertz beams using active terahertz metamaterials. Our first-generation device consists of a 4 4 pixel array, where each pixel is an array

Metamaterial-enabled arbitrary on-chip spatial mode manipulation

This user-friendly metamaterial BB concept marks a quintessential breakthrough for comprehensive manipulation of spatial light on-chip by breaking the long-standing shackles on the

Recent Progress of Terahertz Spatial Light Modulators:

Overviews of reconfigurable metamaterials were provided for spectrally or spatially manipulating the intensity, phase and polarization of terahertz waves . The

Terahertz compressive imaging with metamaterial spatial light modulators

Terahertz compressive imaging with metamaterial spatial light modulators Claire M. Watts1, David Shrekenhamer1, John Montoya2, Guy Lipworth3, John Hunt3, Timothy Sleasman1,

Metasurface-assisted spatial light modulation with a large field of view

Spatial light modulators have a wide range of applications in beam generation,

wavefront shaping, and holographic display. Due to the finite pixel size, spatial light modulators struggle to achieve a large

Spatiotemporal light control with active metasurfaces

Metasurfaces have opened up a number of remarkable new approaches to manipulate light. These flat optical elements are constructed from

Photothermal spatial light modulator

We introduce a novel approach to spatial light modulators by leveraging the unique propertiesofphotothermalmetamaterialsforpolarization-independent,activewavefront modulation of transmitted

Contact Us

For datasheets, pricing, or custom optical networking solutions, please visit: https://www.entrenamientointeligente.es