Adam Tas Corridor Energy

Fluorescent planar waveguide layer

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(PDF) Fluorescent immunosensors using planar waveguides

Fluorescent immunosensors using planar waveguides May 1993 Proceedings of SPIE - The International Society for Optical Engineering 1885:28-39 DOI: 10.1117/12.144735

A symmetric planar waveguide chip for uorescence microscopy

Abstract The fluorescence imaging properties of a planar symmetric waveguide chip where the cladding layer is index matched to that of biological samples are investigated. A well in the top cladding layer

Fluorescent Waveguide Lattices for Enhanced Light Harvesting and

We present the properties and performance of fluorescent waveguide lattices as coatings for solar cells, designed to address the significant mismatch between the solar cell's spectral

Core Waveguide

Planar Waveguides Waveguides formed on a flat substrate are called planar waveguides. These are typically made by stepwise deposition of

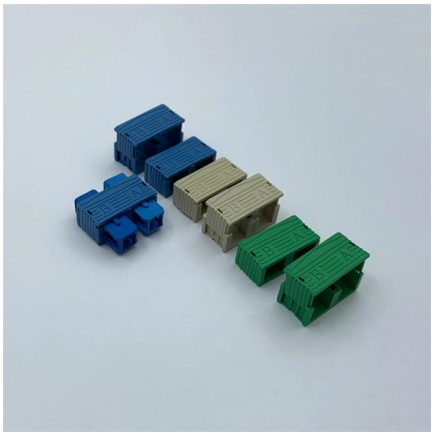
films of dielectric materials (typically glass). The waveguide

Integrated planar optical waveguide interferometer biosensors: A

Abstract Integrated planar optical waveguide interferometer biosensors are advantageous combinations of evanescent field sensing and optical phase difference measurement

Evanescent-wave fluorescence microscopy using

We describe a new evanescent-wave fluorescence excitation method, ideally suited for imaging of biological samples. The excitation light propagates in



Planar waveguide devices (Chapter 5)

How to analyze the generalized planar guided waves has already been discussed in Section 1.2.5. A distinct feature of planar waveguide devices is the utilization of the diffraction, focusing and

Evanescent-wave fluorescence excitation in aqueous solutions using

sample, substrate and waveguide materials, as well as the thickness of the waveguide layer. In this paper, we will present a new type of planar waveguide structure developed specifically for fluo

Fluorescence based fiber optic and planar waveguide biosensors. A

This paper focuses on the working principles and configurations of fluorescence-based fiber optic and planar waveguide biosensors and will review biological recognition elements, sensing schemes, as

Observation of Fano line shape in directional

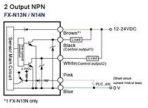
A sample containing only one fluorescent waveguide layer showed a highly directional emission spectrum with a Lorentzian line shape caused by the

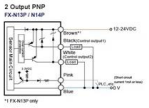
3D nanoprinted fiber-interfaced hollow-core waveguides

The fiber-interfaced hollow-core waveguide concept offers significant potential for applications in bioanalytics, environmental sciences, quantum

PLANAR WAVEGUIDES FOR FLUORESCENCE BIOSENSORS

The leading methods for fluorescence-based, multianalyte detection are based on total internal reflection fluorescence (TIRF). TIRF excitation of planar waveguides is the most utilized optical configuration.



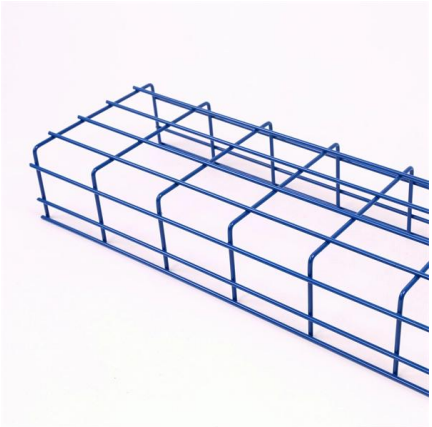


Planar Waveguides for Fluorescence-Based Biosensing

Abstract--Optimization of planar waveguides for fluorescence biosensing is presented in this paper. In particular, the authors show that optical (refractive index) and geometrical parameters have

Analysis of planar waveguides with a thin overlayer and nonlinear

The aim of this paper is to analyse a planar optical waveguide with Kerr-type nonlinear cladding and a thin linear overlayer separating the cladding and the guiding core.



Direct characterization of planar waveguide modes by Fourier

(b) Fourier plane image of the fluorescence from RhB molecules doped in the waveguide. The four bright rings represent four WMs (TE0, TM1, TE1 and TM2) excited by emission from RhB molecules at the

Laser direct writing glass-based planar waveguide for fluorescence

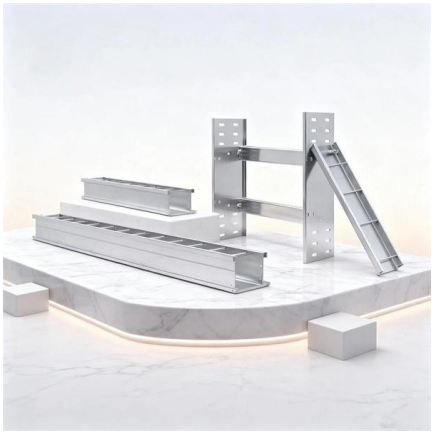
In this paper, a planar waveguide type fluorescence microscope device based on picosecond laser direct writing is designed, which uses picosecond laser to etch the glass surface to

Efficiency of fluorescence coupling into planar waveguides

Using planar waveguides as a platform for optical biosensors allows an efficient and selective fluorescence excitation in close proximity to the waveguide surface. Usually, the

Structures of 3-layer planar waveguide where core field can

Theoretical analysis and numerical results for typical examples are presented for three-layer planar waveguides with nonlinear claddings to find the appropriate structures in which the core electric field



Efficiency of fluorescence coupling into planar waveguides

Due to the vicinity of the fluorescent molecules to the interface of the waveguide layer, a substantial part of the fluorescence light is coupled back into and collected by the waveguide. The coupling efficiency

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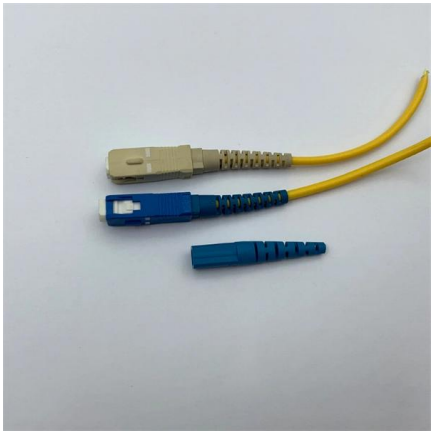
Planar Waveguides as High-Performance Sensing Platforms for

16-Mer and 22-mer oligonucleotide capture probes with an amino function at the 5'-end were covalently immobilized on (3-glycidoxypropyl)trimethoxysilane (GOPTS) silanized planar

Coupling efficiency of fluorescent molecules to a sensing waveguide

A laser source is coupled via a grating coupler into a thin (single-mode) planar waveguide. The evanescent field of the guided mode excites fluorescent molecules in close vicinity to the surface.



Planar Waveguides

As photonics technology continues to evolve, planar waveguides are likely to remain a key component, driving innovations in optical communications, sensing, and

Analysis of planar waveguides with a thin overlayer and nonlinear

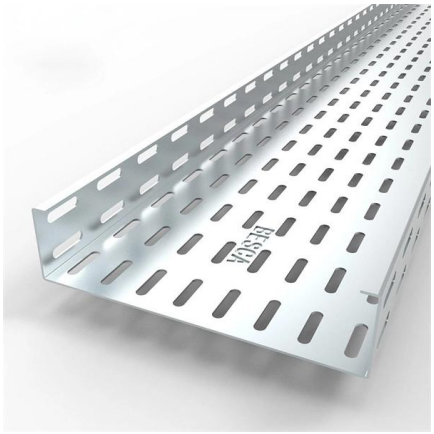
The aim of this paper is to analyse a planar optical waveguide with Kerr-type nonlinear cladding and a thin linear overlayer separating the cladding and the guiding core. The results of

Seven-layer analysis model of an optical waveguide

An optical waveguide evanescent field fluorescence microscopy is studied in this paper. Considering the existence of cells, a seven-layer theoretical

Planar Waveguides for Fluorescence-Based Biosensing: Optimization

Optimization of planar waveguides for fluorescence biosensing is presented in this paper. In particular, the authors show that optical (refractive index) and geometrical parameters have a strong influence



Free-standing millimeter-range 3D waveguides for on-chip optical

The presented waveguides are suitable for on-chip out-of-plane light coupling as well as non-connected 3D crossings, needed for high density optical circuits.

Waveguide-PAINT offers an open platform for large field

TIRF imaging is limited by the size and uniformity of the illumination. Here the authors present a waveguide solution to create a large area of uniform

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