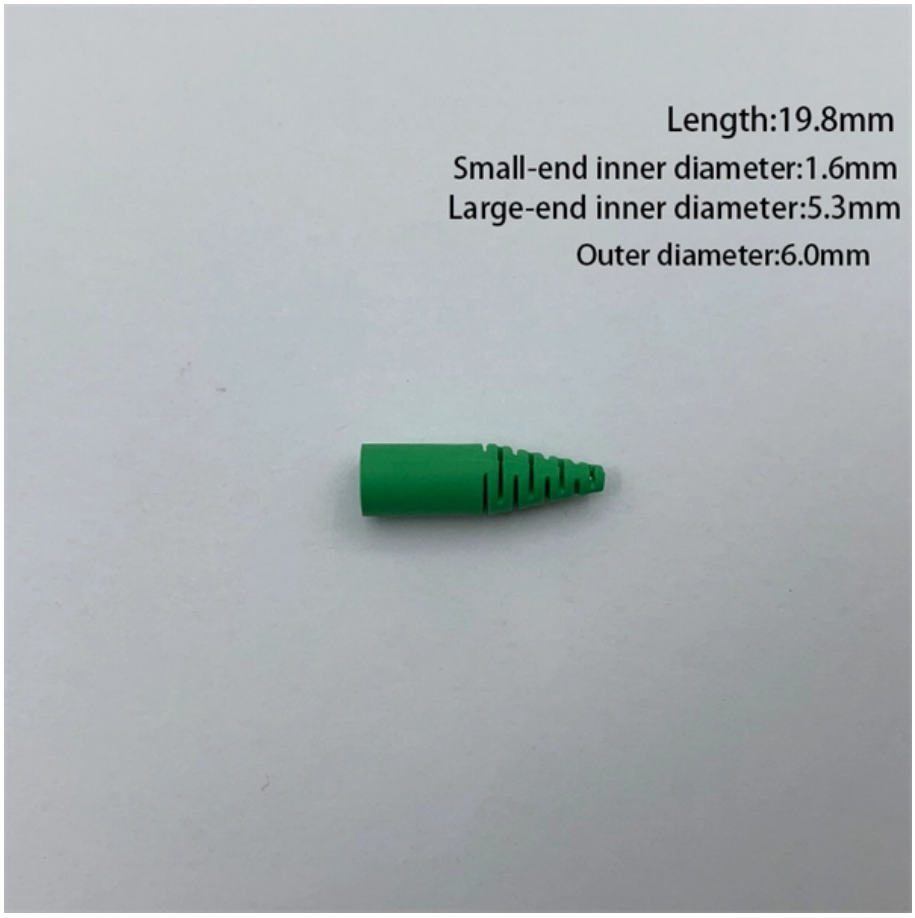
EIT Opto-Routing

Fiber Array Imaging Spectroscopy



Surface-Enhanced Absorption Spectroscopy for Optical Fiber Sensing

The implementation of surface-enhanced infrared absorption spectroscopy on fibers for NIR spectroscopy could expand the aforementioned areas of use: for example, in online fiber-based

The Large Fiber Array Spectroscopic Telescope: fiber feed and

The Large Fiber Array Spectroscopic Telescope: fiber feed and spectrometer conceptual design Chad Bender, J. Roger Angel, Joel Berkson, Peter Gray, Samuel Halverson, et al.

Single-Pixel Multimode Fiber Spectrometer via Wavefront Shaping

In this article, we develop a high-resolution single-pixel multimode fiber spectrometer and demonstrate its ability to reconstruct arbitrary spectra. The single-pixel detection is achieved by

2d Fiber Array Optic Assemblies, Custom Design And

Ideal for high-density fiber arrangement in optical cross-connection, spectroscopy, astronomy and biomedical imaging. Get to know the submicron arrangement of

Hyperspectral Imaging Lidar Fiber Array Focal Plane

The doctoral dissertation focuses on the design and initial testing of an airborne hyperspectral imaging lidar receiving system utilizing fiber array focal plane

Optical fiber interferometer array for scanless Fourier

We report a spatial heterodyne Fourier-transform spectrometer implemented with an array of optical fiber interferometers. This configuration

Fiber array based hyperspectral Raman imaging for chemical selective

Fiber bundle imaging was combined with laser-induced breakdown spectroscopy , absorption spectroscopy , and fluorescence spectroscopy , . A combination with Raman

Characterization on Imaging Properties of Optical Fiber Array Based

The imaging qualities of optical fiber array were discussed in this paper by characterization with various self-developed instruments based on machine vision. The basic processes include extracting clear

Integrated copper-halide activated scintillator fiber array

Different imaging modalities based on a flat-plate scintillators, b flat-plate array scintillators, and c active fiber array scintillators inside the confined space (e.g., hollow iron spheres

Photon-counting Raman spectroscopy at a MHz spectral rate for

The use of Raman spectroscopy in biochemical applications has been hindered by several limitations. Here, the authors present a fiber-array Raman engine, termed FIRE. This tool

OpEx_Hexa_11_corrected

Hexabundles: imaging fibre arrays for low-light astronomical applications Joss Bland-Hawthorn*1,2, Julia Bryant1, Gordon Robertson1, Peter Gillingham3, John O'Byrne1, Gerald Cecil4, Roger Haynes3,5,

Fiber Array

Fiber-optic scintillator arrays are popular as detectors of nuclear radiation in several fields including medical imaging, large-area surface detectors, neutron imaging, and particle physics.

Multimode-Fiber Imaging Using a Wavelength-Scanned Integrated

We present a high spatial-resolution multimode fiber imaging system, using an integrated optical phased array with only 8 phase shifters. By scanning wavelengths in a 10 nm span, an equivalent spatial

Fiber-Array-Based Raman Hyperspectral Imaging for

The potential of fiber-array based Raman spectroscopic imaging was presented as in-process control for rapid, chemically selective, and simultaneous analysis of

Side-Polished Coherent Fiber Bundle Assemblies: A Pathway to Large

To address this limitation, this work presents a new fabrication approach for increasing the core count. This approach involves mechanically reshaping multiple existing circular bundles into hexagonal-like

Multimode Fiber Speckle Imaging Using Integrated Optical Phased

High spatial resolution typically requires a large number of phase channels. In this paper, we propose and demonstrate a high-resolution wavelength-scanning multimode fiber imaging system, enabled by

Fiber array coupling based multi-spectral streak tube detection imaging

The complementary advantages of the multi-spectral technique and streak tube detection imaging technique can enrich target information with high detection accuracy. In this paper, a new

Multispectral Depth-Resolved Fluorescence Lifetime Spectroscopy

Single Photon Avalanche Diode (SPAD) arrays are increasingly exploited and have demonstrated potential in biochemical and biomedical research, both for imaging and single-point

Large Fiber Array Spectroscopic Telescope: Optical Design for a

This approach involves collecting light from astronomical targets into optical fibers at each unit telescope's focus, then recombining fibers from each telescope in the array at a single,

Nanostructured optical fibre arrays for high-density biochemical

This review is mainly concerned with optical fibre sensing platforms based on nanostructured and biofunctionalized optical fibre arrays. Optical fibre bundles constitute a very

Fiber-Array-Based Raman Hyperspectral Imaging for

Keywords: Raman spectroscopy, fiber-array, hyperspectral imaging, chemical imaging, fiber sensing, acetylsalicylic acid, acetaminophen, caffeine, particle size,

Fourier Transform Infrared Imaging and Infrared Fiber

Citation: Hanifi A, McCarthy H, Roberts S, Pleshko N (2013) Fourier Transform Infrared Imaging and Infrared Fiber Optic Probe Spectroscopy Identify

New FTIR Imaging solutions_internal presentation

Infrared 2-D Focal Plane Array Imaging Principle of Infrared Imaging FPA-FTIR detectors provide the ability to acquire a grid of spectra in the same amount of time that it takes single point detectors to

Highly Sensitive Imaging Spectrometer System Based on Areal Array

In our work, we built a three-channel imaging spectrometer system and designed a compatible special fiber bundle probe for diffusive spectral detection. The system can synchronously

Photonics

Photonics Spectra is a global photonics resource and magazine with news, products, research, and applications covering optics, lasers, imaging, and sensing.

Development of optical fiber arrays for snapshot imaging spectroscopy

Custom fiber arrays can be used to encode 3-dimensional data for snapshot imaging techniques like imaging spectrometry or volumetric spectral domain OCT. This is achieved if array's

A double-tapered fibre array for pixel-dense gamma-ray imaging

In this Article, we extend theoretical analysis and experimentally validate the possibility of achieving high-sensitivity gamma-ray imaging using a flexible, double-tapered fibre array and

Hyperspectral Imaging Lidar Fiber Array Focal Plane Spectroscopy

This article presents the design of an airborne hyperspectral imaging lidar receiving system that utilizes fiber array focal plane spectroscopy to achieve simultaneous acquisition of spatial (elevation) and

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