

Multimode fiber sorting

We present the operation and characteristics of a multimode interference (MMI)-based optical device for switching a single-mode launched at any of the four (4) few-mode fiber (FMF) input ...

In this paper, using a device referred to as an OAM mode sorter, we show that OAM modes can be (de)multiplexed over a multimode optical fiber with higher than -15 dB mode ...

As fiber lengths can exceed hundreds or even thousands of kilometers for some telecommunication systems, the power launched into a specific fiber mode is distributed among many modes of a ...

Here, we implement a simple full-field mode sorting system that can operate on any basis. For this, we leverage the complex spatial mode mixing process performed by a multimode fibre (MMF) by using a ...

Here, we investigate various interesting features of the guided modes of multimode fibers. By thoroughly looking at those, one can learn a lot about fiber optics. For this case study, we use the software RP ...

Here we demonstrate an arbitrary spatial mode sorter by harnessing the random mode mixing process occurring during light propagation in a multimode fiber by wave-front shaping.

5 transverse spatial modes of the Fourier, Laguerre-Gaussian and a random basis to an arbitrary set of positions at the output. Our approach provides a spatial mode sorter that is compact, easy. to ...

Abstract: To address the exponentially growing demand for optical fiber capacity, Mode Division Multiplexing (MDM) was proposed to break the nonlinear Shannon limit imposed by fiber nonlinearity ...



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