



Adam Tas Corridor Energy

Swiss Supercomputing Center Uses Low-Temperature Resistant Arrayed Waveguide Gratings





Overview

Consequently, CSCS operates cutting-edge computer systems as an essential service facility for Swiss researchers. These computers aid scientists with diverse issues and requirements - from the pure calculation of complex problems to analysis of complex data.



Swiss Supercomputing Center Uses Low-Temperature Resistant Arr



Low-Loss Compact Silicon Nitride Arrayed Waveguide

A high-performance 32-channel silicon arrayed waveguide grating (AWG) with 100 GHz spacing is designed and fabricated using 180-nm

Subwavelength grating devices in silicon photonics

Subwavelength grating (SWG) waveguides in silicon-on-insulator are emerging as an enabling technology for implementing compact, high-performance photonic integrated devices and



A Scalable, Low-Latency, High-Throughput, Optical Interconnect

The proposed architecture, Hierarchical Lightwave Optical Interconnect Network (HLION), leverages wavelength routing in arrayed waveguide grating routers (AW-GRs), and computing nodes (or

fphy-2022-1018589 1..8

A low-crosstalk compact arrayed waveguide grating integrated with a tunable micro-ring resonator is demonstrated on silicon-on-insulator



platform, The side-lobe of the silicon nanowire
AWG, introduced

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Swiss National Supercomputing Centre

OverviewNational Supercomputing
ServiceBuildingDedicated HPC ServicesResearch
and development

Run as a user lab, CSCS promotes and encourages top-notch research. Simulations created on supercomputers yield completely new insights in science. Consequently, CSCS operates cutting-edge computer systems as an essential service facility for Swiss researchers. These computers aid scientists with diverse issues and requirements - from the pure calculation of complex problems to analysis of complex data. The pool of national high-performance computers is available to its users as a so-called

Low-Loss Compact Silicon Nitride Arrayed Waveguide Gratings for

The arrayed waveguide gratings (AWGs) are one of the key enabling technologies of dense-wavelength-division-multiplexing (DWDM) applications such as telecommunications, datacom, optical sensing,



A fully hybrid integrated erbium-based laser , Nature Photonics



A fully hybrid integrated erbium-doped photonic integrated waveguide laser with wide tuning of 40 nm, side-mode suppression ratio of >70 dB and output power up to 17 mW is

CSCS Swiss National Supercomputing Centre

MISSION Founded in 1991, CSCS, the Swiss National Supercomputing Centre, develops and provides the key supercomputing



Temperature-insensitive arrayed waveguide grating

To improve demodulation accuracy, this paper presents a type of AWG demodulation algorithm with temperature compensation.



At CSCS, energy efficiency is a key priority, even at high

Energy efficiency is therefore a central consideration in the procurement and use of supercomputers at the Swiss National Supercomputing





Hybrid Graphene-Silicon Arrayed Waveguide Gratings

The solution is based on a hybrid silicon-graphene photonic chip, which could be used for controlled spectrometry in low-cost devices. The device

**1 2 1 3 arXiv:1403.7706v1
[physics.optics] 30 Mar 2014**

In this paper the experimental demonstration of a Silicon-on-Insulator Reflective Arrayed Waveguide Grating (R-AWG) is reported. The device employs one Sagnac loop mirror per arm in the array, built



4 Arrayed Waveguide Gratings

Other advantages of CVD processes in silica waveguide fabrication are both lower stress (reduced birefringence) in waveguide layers and higher layer uniformity over large wafer areas, and these



CSCS SKA Day 2019 GPP

The existing power supply allows the computer centre to operate computers with an output of about 11 megawatts and this could even be extended to operate up to 25 megawatts.



Temperature-insensitive arrayed waveguide grating

As the output characteristics of arrayed waveguide grating (AWG) can be affected by temperature, the output spectrum central wavelength λ_i of every



Temperature Resistant Fiber Bragg Gratings for On-Line

This paper details the development of temperature-resistant wavelength-multiplexed fiber Bragg gratings for temperature and strain



Overview

With them, researchers can demonstrate science that was never possible with theory and experimentation alone. The centre operates the very latest supercomputers and works with the





(PDF) Hybrid Graphene-Silicon Arrayed Waveguide

The device is based on a silicon-on-insulator (SOI) platform on which an arrayed waveguide grating (AWG) is designed for operation at the center

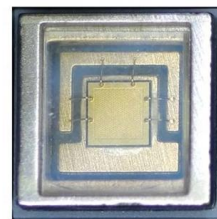


Room-temperature waveguide-integrated photodetector using

This work demonstrates a room-temperature waveguide-integrated mid-infrared ($>4 \mu\text{m}$) photodetector on a Ge-on-insulator platform using the bolometric effect. It achieves

Temperature-insensitive arrayed waveguide gratings on InP

In this presentation, by extending the principle of the TIOF to arrayed waveguide grating, we propose a novel temperature-insensitive arrayed waveguide grating and show its highly feasible filtering



PLC-Based Arrayed Waveguide Grating Design for Fiber

A fiber Bragg grating (FBG) interrogator is a scientific instrument that converts the wavelength change of FBG sensors into readable electrical signals.



Advanced Photonics Research revised_CLEAN

Keywords: arrayed waveguide grating (AWG), bandwidth, cascading, high resolution, flat-top response Abstract: Arrayed waveguide gratings (AWGs) are key optical components of various new

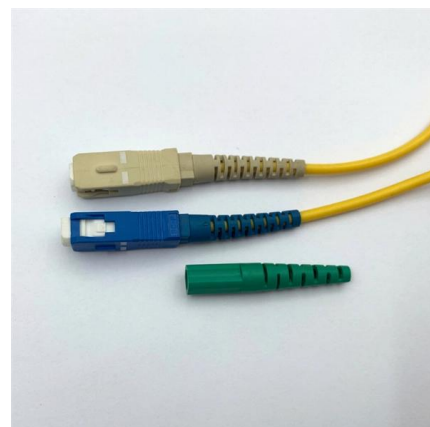


Design and fabrication optimization of low-crosstalk silicon arrayed

A silicon arrayed waveguide grating (AWG) with low channel crosstalk was demonstrated by using ultra-short parabolic tapers to connect the AWG's free propagation regions and single-mode

Low crosstalk silicon arrayed waveguide gratings for on-chip optical

In this work, we report on the modeling and the experimental characterization of a 64x400 GHz silicon Arrayed Waveguide Grating (AWG). The design of the device is based on





About CSCS , CSCS

Founded in 1991, CSCS, the Swiss National Supercomputing Centre, develops and provides the key supercomputing capabilities required to solve important problems to science and/or society.



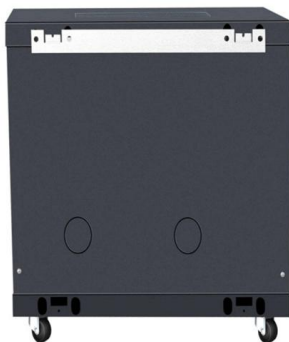
Fiber Bragg Gratings with Micro-Engineered Temperature Coefficients

Fiber Bragg gratings (FBGs) are intrinsically responsive to temperature and strain simultaneously. In this research, low-loss FBGs with micro-engineered temperature coefficients are



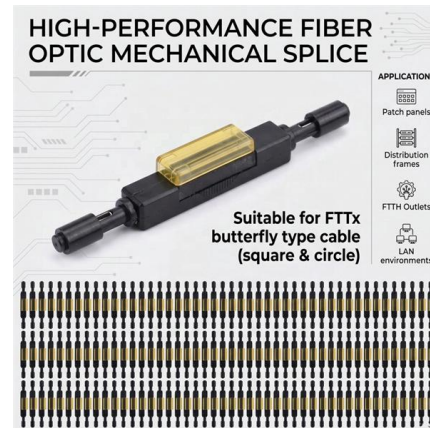
High power mm-wave loss measurements of ITER ex

Prototype mitre bends of the ex-vessel waveguide system for the ITER upper launcher: Thermal hydraulic simulations and experiments with off



for greater efficiency at the Swiss National Supercomputing Centre

chnologies that are becoming increasingly important to their work. The computing center was specifically designed with sufficient capacity to accom-modate all the supercomputing infrastructure nece.



About CSCS , CSCS

On behalf of the Swiss Confederation, CSCS runs a User Lab, where researchers in Switzerland can apply for computational resources that are free at the point of use.

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