

Energy-efficient Paraguayan optical circulator for cloud computing

Here, we propose and experimentally demonstrate an optical cloud computing system that can be seamlessly deployed across edge-metro network. By modulating inputs and models into light, a wide ...

Cloud Computing (CC) is a fundamental technology for distributed networks, enabling the execution of programs across multiple networked computers simultaneously

We present a conceptual architecture for energy-efficient new generation Clouds and early results on the integrated management of resources and workloads that evidence its potential ...

With the development of cloud computing and big data technology, the scale and complexity of data centers are increasing, and the thermal energy consumption management of ...

Various strategies, including workload optimization, resource allocation, virtualization technologies, and adaptive scaling methods, have been identified as techniques that are widely utilized by ...

But for this article, we're focusing on how photonics can enable next-generation, energy-efficient data centres integrated with quantum for far-reaching impact across the technological ...

We use this device architecture to demonstrate 4- and 6-port optical circulators with up to 14.4 dB of isolation and propose a framework to extend the design to an arbitrary number of ports.

A 6-port optical circulator using silicon photonic crystals has been designed and proposed in this paper as an essential component of an optical communication system.

This review synthesizes insights from scholarly articles, peer-reviewed journals, and academic papers to analyze the potential and challenges of leveraging optics for computational ...

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