Optoelectronic Fusion for High-Precision Quantum Communication

This work provides a foundational architecture for the complex optical control systems required to build fault-tolerant quantum computers and opens new possibilities for advanced ...

Here, we propose and experimentally demonstrate a high-speed quantum radio-frequency-over-light (RFOL) communication scheme based on QDC with an entangled state, and achieve a practical rate ...

Stanford scientists have developed an advanced optical technology that can separate and recombine thousands of extremely close light frequencies with unprecedented precision.

PHOTONICS AND QUANTUM TECHNOLOGIES AT THE 30TH ANNIVERSARY OF THE QUANTUM CASCADE LASER

Through this work, we aim to advance the understanding and practical implementation of high-dimensional fusion, an essential tool in measurement-based approaches to high-dimensional ...

Here we develop an optoelectronic memory that can generate a multilevel response to light stimuli and retain the multi-states in a nonvolatile manner.

It will allow for the multi-functional integration of communications, sensing, and computing chips, as well as optoelectronic intelligent chips, promoting innovation in ultra-broadband optical ...

From the two-dimensional wonder of graphene to the game-changing perovskite solar cells, and the precision of quantum dots to the unconventional properties of metamaterials, these ...

ormance in communication systems, sensing applications, and energy harvesting. This paper presents a comprehensive overview of recent advancements in photonic antenna design, highlighting innovative ...

Basic and applied research with our partners to support the development of doctorates in quantum-related fields. We have a very robust intern program. We are not full-time researchers. We have "day ...

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