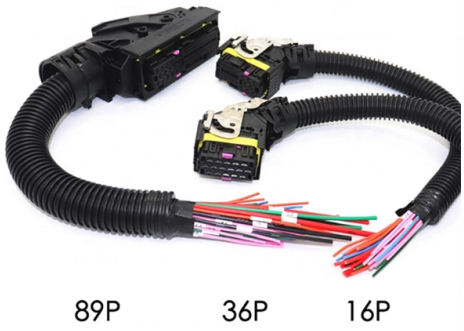
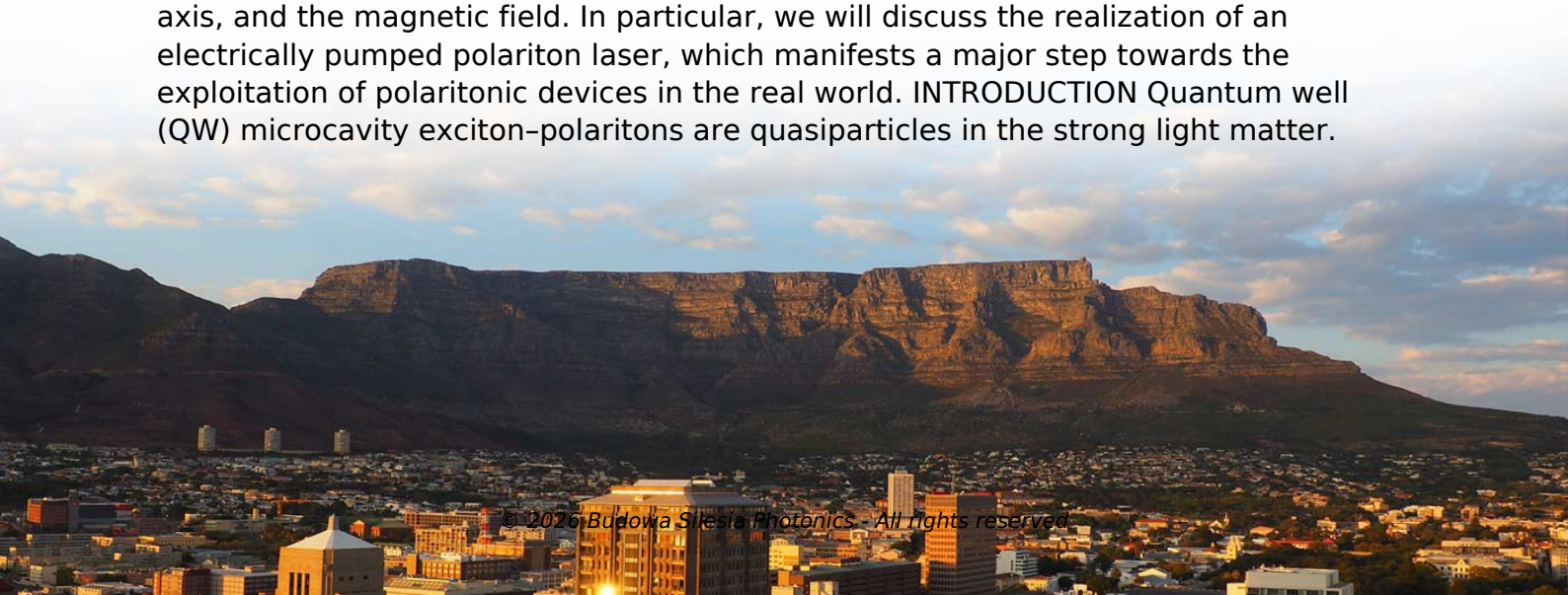
Budowa Silesia Photonics

Polarization direction of excitation diode laser



Overview

It is shown that a highly randomlike behavior of light polarization states in the output of a free-running laser diode, covering the whole Poincar´e sphere, arises as a result from a fully deterministic nonlinear process, which is characterized by a hyperchaotic dynamics of. It is shown that a highly randomlike behavior of light polarization states in the output of a free-running laser diode, covering the whole Poincar´e sphere, arises as a result from a fully deterministic nonlinear process, which is characterized by a hyperchaotic dynamics of. This work presents evidence that by tuning the excitation laser energy to specific resonance values the excitation efficiency can be enhanced, resulting in relative increase of photoluminescence intensity by up to an order of magnitude. The resonances can be selectively addressed with linearly. The polarization multiplexing (PM) of high-power laser beams is of utmost importance because it allows both their optical power and brightness addition [1, 2]. Highly polarized input beams are, however, required by PM in order to avoid significant optical losses. In the simplest case, a light beam is linearly polarized, which means that the electric field oscillates in a certain linear direction perpendicular to the beam axis, and the magnetic field. In particular, we will discuss the realization of an electrically pumped polariton laser, which manifests a major step towards the exploitation of polaritonic devices in the real world. INTRODUCTION Quantum well (QW) microcavity exciton–polaritons are quasiparticles in the strong light matter.



Article Content

Laser Polarization: A Complete Guide | Edmund Optics

While most laser sources are linearly polarized, other classifications of polarization can also be generated, such as circular, elliptical, and radial polarization.

Polarization of Light

The direction of polarization is taken to be the direction of the electric field oscillations (not the magnetic ones). For example, a laser beam propagating in z direction may have the electric field oscillations in …

Excitation polarization angle-resolved single-laser dual-polarization ...

Abstract A quick and robust approach for the simultaneous detection of donor and acceptor anisotropies and FRET efficiency is presented based on changing the angle of polarization …

Hyperchaotic Dynamics for Light Polarization in a Laser Diode

Because of its specific geometry, the VCSEL can emit light with different polarizations. The additional polariza-tion mode adds extra degrees of freedom in the solitary laser diode, enabling a very rich …

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Polarization of Laser SourcesPolarization-Dependence of ReflectancePolarization-Dependence F Laser FocusingThe state of a laser''s polarization is determined by several anisotropic mechanisms of either the laser gain media or the resonator. "Anisotropic" refers to properties whose values vary in different directions. A laser gain medium may be polarization-dependent, as is the case with some anisotropic laser crystals and semiconductor optical amplifiers...See more on edmundoptics Author: Hayden KimSCD A - SemiConductor Devices

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However, we discovered that laser diodes (LDs) have variable degrees of polarization, which depends both on the operating current and far-field divergence. We present data to show angle-resolved …

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The control of polarization of laser diodes

In this experiment, the significance of a gap distance between the two laser diodes is confirmed clearly, where the two laser diodes interact with each other through the light beam. The mode-competition ...

Efficient Quasi-Resonant, Polarization-Selective Excitation of GaN ...

The data is consistent with excitation via localized vibrational modes associated with point-defect complexes, establishing a practical quasi-resonant route to brighter, polarization-addressable ...

Degree of Polarization of High-Power Laser Diodes: Modeling and ...

A statistical experimental investigation of the characteristic changes associated with the degree-of-polarization reduction of high-power laser diodes is reported.

Exciton-polariton laser diodes

We can clearly discriminate our prototype device from a conventional VCSEL laser by studying its response to an applied magnetic field, yielding unambiguous evidence of the persistence of the ...

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