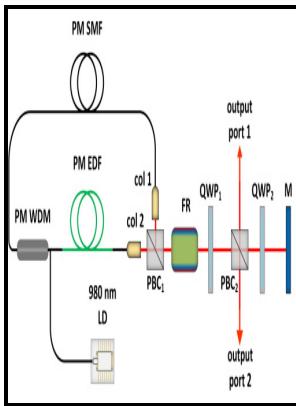


Experiment and theory of a novel, multiple wavelength, erbium-doped fiber laser.

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Description: -

-Experiment and theory of a novel, multiple wavelength, erbium-doped fiber laser.

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Experiment and theory of a
novel, multiple wavelength, erbium-doped fiber laser.

Notes: Thesis (M.A.Sc.) -- University of Toronto, 2001.

This edition was published in 2001



Filesize: 12.84 MB

Tags: #Dual

Dual

The accuracy of the optical-source-subtraction NF measurements was confirmed by independently measuring the NF using an electrical technique Loh et al.

Erbium

Optical signal to noise ratio achieved is 40. For this study, the FBG1 is stretched until a good overlap with FBG2 is obtained.

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It is found that later technique gives better results.

Widely tunable Tm

Amann; TU München, Garching, Germany, Dr.

SNU LASER LABORATORY

Optical fiber is a waveguide made of very thin tubes of glass whose diameter is of the order of a few micrometers. The aforementioned results are meeting the requirements of the ITU-T G.

Erbium

The combined OCS and OIL heterodyne method are not only able to eliminate the phase noise caused by the instability of laser frequencies, but also can further suppress the center wavelength, thus improving the heterodyne performance. This is convenient and cost-effective compared to

using multiple lasers with different emission wavelengths.

Multiwavelength erbium

We achieved a 4X bandwidth enhancement of the input pulse with high fidelity between the supercontinuum spectra and the target Gaussian shape. Fluorescence spectra from the fiber laser inset linear scale , showing the effect of the two fiber Bragg gratings. We demonstrated a widely tunable Tm-doped mode-locked all-fiber laser, with the widest tunable range of 136 nm, from 1842 to 1978 nm.

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