



ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE



PhD position on integration of optical tweezers in photonic crystal structures

A PhD student position is available at the Laboratory of Quantum Optoelectronics in the fields of optical tweezers and planar photonic crystals. Planar photonic crystals consist of 100 nanometer sized arrays of holes etched in a planar semiconductor waveguide. Such structures exhibit very peculiar properties for light propagation or confinement that will be exploited for the implementation of new type of integrated optical tweezers.

The subject of the thesis will concern some theoretical but mainly experimental aspects with a special emphasis on one specific point such as processing, optical measurements or photonic crystal structure design. Prior knowledge or a strong interest for at least one of the following topics is a prerequisite: photonic crystal, optical trapping, experimental lab work in optics (Fourier imaging, confocal microscopy, ...), semiconductor processing (clean room), microfluidics.

Starting date: Fall 2011, duration 4 years.

For more information on:

EPFL : www.epfl.ch

The doctoral schools at EPFL: phd.epfl.ch

The EPFL doctoral school in physics: phd.epfl.ch/edpy

The EPFL doctoral school in photonics: phd.epfl.ch/edpo

The Institute of Physics of Condensed Matter: icmp.epfl.ch

The Laboratory of Quantum OptoElectronics: loeq.epfl.ch

For more information or to send application :

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