



## Postdoc : Tunable narrow linewidth laser in the visible range.

**Duration** 12 months period (renewable for 12 additional months)

### Job status Post doc full time

LOCATION : Talence, LP2N laboratory

DATE : start : August/September 2019

Salary : around 2600€ gross per month

### Description

The LP2N (Institut d'Optique Graduate School, CNRS, Université de Bordeaux) is seeking a post-doctoral research associate for the development of a novel tunable laser source in the visible range (610-640 nm >500mW).

Visible narrow linewidth laser sources find application in several domains like spectroscopy, atomic physics and holography. But in the Orange/red part of the spectrum, there is a lack of easily tunable low noise single frequency lasers. The scope of the post-doc is to develop a novel approach to generate laser radiation in the 610-640nm range by non-linear combination of near infrared lasers in the erbium (1530nm-1570nm) and ytterbium (1000nm-1100nm) range. Indeed, fiber lasers in a Master Oscillator Power Amplifier (MOPA) configuration are ideal candidates to produce high power in an efficient way while preserving the noise features of the low power master seeding laser. However, although fiber lasers are well established at a fixed frequency, there are still challenges to keep these features for broadly tunable systems. The first part of the post doc will be dedicated to the realization of highly tunable high-power amplifiers both in the erbium and ytterbium range. The second phase will focus on the generation of tunable frequency sum generator in the orange/red range.

The Postdoctoral Research Associate will work primarily in fiber optics, optoelectronics and non-linear optics & free-space optics. He or she will be expected to participate in the experimental work in close collaboration with R&D scientists from the nearby company Azur Light System, as well as AlphaNov, the technology center for photonics in Aquitaine. The post doc will be carried out in the framework of a shared lab between academia and industry initially founded by the ANR within the LabCom call dedicated to partnership research ([Starlight+](#)) LP2N is a laboratory hosted in the facilities of the Institut d'Optique d'Aquitaine focusing on several research fields ranging from nano&bio photonics, metamaterials to stable laser developments as well as advanced atom interferometry. Located in Talence (very close to Bordeaux), we enjoy close proximity to several world-class research laboratories, laser companies and cultural opportunities.

### Profile of applicant

The candidate should have a Ph.D in applied physics, optics or a related discipline. A fluent knowledge of English and/or French is a pre-requisite. The successful candidate will be highly motivated, creative, with demonstrated abilities to work in a collaborative environment. An experimental background in optoelectronics, optical fibers and laser frequency stabilisation is preferred.

### Supervisors/Contact

Interested candidates are invited to apply, by email with a CV, references and a cover letter to Adèle Hilico <[adele.hilico@institutoptique.fr](mailto:adele.hilico@institutoptique.fr)>

**Application deadline** : June 2019