

Postdoc Position: ANR Metropolis

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Postdoc position in a financed ANR project Metropolis on the:

“Development of Middle Infrared Fibre Optical Parametric Chirped Pulse Amplifier (F-OPCPA) based on Yb pumped Four Wave Mixing”

Position of **12 months** within the framework of a French national (ANR) collaborative project between Univ. Bordeaux, Univ. Limoges, Univ. Dijon, and Univ. Nice.

Start Date: January 2021.

Developing coherent sources operating in the mid-IR range of wavelengths (2-10 μm) is of paramount importance for a wide range of applications such as telecommunications, biology, and medicine. This spectral range is currently covered by solid state or doped fibre lasers as well as nonlinear crystals.

In the project, our aim is to develop a innovative middle infrared fibre optical parametric chirped pulse amplifier (F-OPCPA) based on Yb pumped degenerated four wave mixing (FWM) in microstructured fibres. A spectrally tailored fibre CPA Yb source will be developed to generate a broadband FWM spectrum around 2 μm , and passive CEP stabilization scheme implemented.

The researcher will thus carry out diversified activities on (i) pulse shaping, (ii) fiber nonlinear optics and characterization, and (iii) optical pulse characterization.

The Ultrafast Optic group at CELIA has been developing ultrafast coherent sources from the UV to the THz range, including MidIR for the last decade. The postdoc will conduct his activities at CELIA but will also collaborate with XLIM (Univ. Limoges), ICB (Univ. Dijon), and INPHYNI (Univ. Nice) who produce and characterize microstructured fibres and waveguides. The postdoc will particularly interact with their PhD students.

We seek to recruit a young postdoc researcher (up to 2 y. after PhD) attached to CELIA laboratory at the University of Bordeaux with basic knowledge on ultrafast optics, as well as good expertise and experimental skills in fibre-based lasers. Any expertise in simulating or coding nonlinear propagation in waveguides will be a plus, though the later will likely be learned largely from the host laboratory and project partners.

Candidates are invited to apply online at <https://emploi.cnrs.fr/> - CV including at least one recommendation and motivation letter are requested.