

Post-doctoral position
“Solid state ultrafast laser systems in the mid-infrared”

Starting date: From 01.01.2021

Duration: 12 to 24 months

Research team: CORIA, Optics & Lasers Department – University of Rouen, Normandy - FRANCE

The CORIA laboratory is inviting applications for a postdoctoral position under ANR (Agence Nationale de la Recherche) project in the field of mid-infrared ultrafast lasers. The project gathers experts in fluorides and oxides crystals growth (CIMAP and IRCP) and laser physicists (LCF and CORIA) aiming to develop novel active inorganic materials and to demonstrate their implementation in high-power ultrafast lasers and amplifiers operating in the Near-Mid-Infrared (Near-MIR) spectral region between 2 and 3 μm .

Project description:

This post-doctoral position concerns the laser development part and aims to explore different materials and crystal architectures for building robust mode-locked oscillators and high power amplifiers. Our approach is based on the exploitation of optimized rare earth doped fluoride and oxide host materials to build high performance ultrafast sources. The first aim consist to explore the potential of these crystals for ultrashort pulse generation at high-repetition rates exploiting different mode-locking mechanisms and different pumping schemes. The second aim consists to explore different strategies to demonstrate their potential for energy scaling.

Job profile:

The applicant should hold a PhD in the fields of optics or applied physics, with theoretical and experimental skills in laser physics. Experience in ultrafast lasers and/or ultrafast optics will be appreciated. The research involves design and building ultrafast lasers as well as data collection and analysis within a collaborative project. The candidate should have an affinity for working in multidisciplinary teams. He/She will indeed have an active role in this collaboration by interacting with the different partner laboratories and he/she will have the opportunity to perform some experimental laser development also at the LCF (IOGS Palaiseau).

Contacts:

Please submit your application (including a cover letter and a detailed CV) by e-mail.

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