

Post-doc in advanced ultrafast laser beam engineering and processing

(Duration: 24 months, starting as soon as October 2023)

Laboratoire Hubert Curien, CNRS UMR 5516; Université Jean Monnet (UJM), St-Etienne, France

Background: . In various optical applications, optical substrates require delicate dice to separate the individual units from the raw sheet. The project Glacier seeks to investigate the possibilities of femtosecond (fs) laser processing to enable a new methodology for optical substrates dicing.

Objectives: An advanced technological process based on fs-laser patterning enables new generation of thin glass dicing with improved quality and reduced rejection. The challenge lies in the conception and validation of a laser surface patterning platform for the realization of high quality thin groove dicing, in single or sometimes multiple-layered material surface. Once the feasibility demonstrated, the aim is to upscale the capacity of the structuring process and to move towards an ultrafast laser patterning platform for curved trajectory dicing and curved surfaces processing.

Candidate profile: The successful candidate must be a team player, results-driven, and self-initiator. He/she should hold a doctorate degree in physics / optics, with a good track record in laser material interactions, especially ultrafast laser processing ultrafast optics, and laser-induced ultrafast phenomena. A list of key merits is summarized:

- Experience in laser spatial beam shaping and optics design is highly appreciated
- Skills in material science to ensure a good level of exchange with partnership specialists from other scientific fields and industry
- Chemistry, laser-assisted etching
- Optical substrate polishing
- Programming skills in synchronizing scanners, laser electronics and translation stages are also regarded as a pro

Practical information:

Location: The lab is located in Saint Etienne, France

Remuneration: Net monthly salary 2100~2500€, depending on experience and skills. Public transport compensation and dedicated health care packages will also be available.

Application: Customary documents such as motivation letter, CV and recommendation letters/contacts should be made to the contact person indicated below. (Note: The Hubert Curien Laboratory is a restricted access area. The fellowship is conditioned by a security clearance, to be applied for during the application (two months process time). To apply for a security clearance, we need the following documents: exhaustive CV, passport copy)

Contacts:

Dr. Sedao (xxx.sedao@univ-st-etienne.fr),

Dr. Razvan Stoian (razvan.stoian@univ-st-etienne.fr)