

Post-doctoral position in Hybrid femtosecond laser microfabrication

REQUIRED SKILLS

- ✓ A PhD in Physics, EE or a related discipline.
- ✓ Good oral and writing skills in English.
- ✓ Experience in femtosecond laser micromachining and Multiphoton polymerization (MPP) will be highly advantageous.

DURATION

1 YEAR + 1 RENEWABLE YEAR

SALARY RATE

1650 € /month (net after taxes)

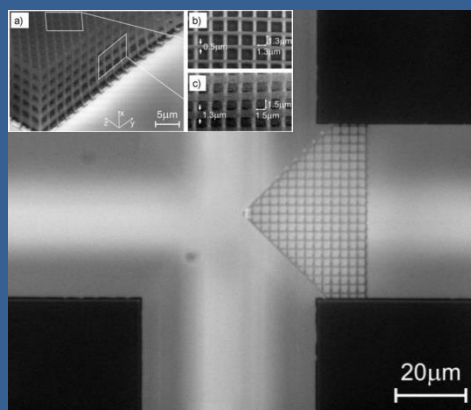
LOCATION

Istituto di Fotonica e Nanotecnologie
Piazza Leonardo da Vinci, 32
Milan, Italy

The main activities related to this post-doctoral position will be:

- ✓ Fabrication of microfluidic chips by fs laser irradiation followed by chemical etching (FLICE).
- ✓ MPP fabrication of Label free sensors and cell manipulation micro-components inside microfluidic chips.

The position envisages the participation to meetings in Japan and Hungary, and in Scientific conferences at different countries.



The Femtosecond laser micromachining (FAST) group at the Istituto di Fotonica e Nanotecnologie (IFN-CNR) is offering a 1+1 year postdoctoral position in experimental Multiphoton polymerization, under the project "Femtosecond laser advance manufacturing for Ship-In-a-Bottle Lab-on-chips Environment" (FEASIBLE). This project is funded under an European Union initiative for Connecting and Coordinating European Research and Technology Development with Japan.

The **Istituto di Fotonica e Nanotecnologie (IFN)** is part of the National Research Council (Consiglio Nazionale delle Ricerche - CNR), the largest public research institution in Italy. IFN, with a permanent staff of 65 people, is involved in more than 50 research projects funded by EU, Italian government, Regional funding, private foundations and private industries.

The **femtosecond laser micromachining group** has been one of the pioneers in the field of femtosecond laser waveguide writing. It also has a solid expertise in the fabrication of optofluidic devices both in glasses and in plastic for biophotonic and cell analysis applications. It has state of the art experimental setups for femtosecond laser microfabrication and physical/optical characterization of samples: three fs-laser micromachining stations; optical and table-top scanning electron microscopes; optical and fluidic characterization setups.

<http://www.mi.ifn.cnr.it/research/fs-micromachining>

The project **FEASIBLE** aims at advancing the field of photonic manufacturing by introducing a novel hybrid process based on fs lasers. This hybrid approach will solve the difficulties of realizing LOC combining 3D glass microfluidic networks with 3D polymer micro-components. This technology will enable the direct fabrication of polymeric components in the microfluidic networks for the on-chip integration of functionalities such as sensing and manipulation of bio and chemical materials. The devices developed in the project will find applications in many different fields of biotechnology, such as medical diagnostics, environmental monitoring, agriculture and food quality, protection against hazardous agents.

CALL DEADLINE: 31 October 2014

FOR CONTACT: Applicants should submit their CV, including list of publications, and two reference letters to rebeca.martinez@polimi.it

For further INFORMATION:

roberto.osellame@polimi.it

rebeca.martinez@polimi.it