



The ESRF is a multinational research institute, situated in Grenoble, France and financed by 21 countries mostly European. It operates a powerful synchrotron X-ray source with some 30 beamlines (instruments) covering a wide range of scientific research in fields such as biology and medicine, chemistry, earth and environmental sciences, materials and surface science, and physics. The ESRF employs about 600 staff and is organized as a French *société civile*.

Within the Experiments Division, the Electronic Structure and Magnetism group is now seeking to recruit a:

Post-Doctoral Fellow (m/f)

for X-ray investigations of dynamically compressed matter

FUNCTION

Within the framework of the H2020 project EUCALL (European Cluster of Advanced Laser Light Sources) you will be part of a team of scientists involved in developing dynamic compression experiments at the ESRF and at the European XFEL, in collaboration with other EUCALL partners. You will participate in the design study of the future dedicated laser shock facility at ESRF and how it will be coupled to the beamlines. The technical requirements (laser power, pulse duration, spot size) will be based on the scientific case. You will be in charge in particular of simulating the interaction between a high power 40-200 J ns laser and the target, that will lead to a ns-lived hot ($T \sim 1$ eV) and highly compressed ($P \sim 10$ Mbar) state of matter. You will develop the optimal target design to allow for x-ray characterization of this dynamically compressed state, using x-ray absorption spectroscopy and x-ray diffraction, and evaluate the expected modifications in the x-ray observables (XAS spectrum, XRD pattern). User-allocated beamtime at ESRF and possibly also at LCLS will validate part of these simulations. We expect you to take over also other tasks to "cross-link" the activity carried out at ESRF amongst other EUCALL partners. You will integrate the ID24/BM23 team and work in close collaboration with the ID27 team at ESRF and participate in the scientific life of the group. For further information about the instruments please consult: <http://www.esrf.fr/UsersAndScience/Experiments/Beamlines>.

QUALIFICATIONS AND EXPERIENCE

You should hold a PhD in physics, chemistry, materials science or closely related science. Experience with optical lasers is mandatory and some previous experience with x-ray techniques would be an asset. The following qualities are essential:

- good time management skills and ability to prioritize
- ability to interact with staff and facility users at all levels
- ability to work as part of a multi-disciplinary team.

The working language of the ESRF is English.

OUR OFFER

The annual gross salary will be 41k€, plus additional allowances according to status. Further information on the post can be obtained from Sakura Pascarelli (tel.: +33 (0)4 76 88 21 47, email: sakura@esrf.fr). For further information on employment terms and conditions, please refer to <http://www.esrf.fr/Jobs/Conditions>. The ESRF is an equal opportunity employer and encourages applications from disabled persons.

Contract of 18 months, renewable for a further 6 to 18 month-period. Only candidates holding a Ph.D. obtained less than 3 years ago are eligible for Post-doctoral positions.

If you are interested in this position, please apply on-line at this address:
<http://www.esrf.fr/Jobs>.

Ref. 2327- Deadline for returning application forms: 26 August 2015