



Elettra Sincrotrone Trieste

Postdoctoral Research Associate position at SSSI-Bio beamline Elettra

Deadline: 30 September 2020

Ref: DA/20/33

Company description

Elettra Sincrotrone Trieste is an international multidisciplinary research center operated as a user facility, featuring a 2.0/2.4 GeV, third-generation synchrotron light source (Elettra), a new free-electron laser light source (FERMI) and a variety of support laboratories. The extremely high quality of the machines and beamlines has set new performance records and has been producing results of great scientific and technological interest. See <http://www.elettra.eu> for more information.

Beamline/Activity/Project description

The SSSI beamline at Elettra has been operating since 15 years in the application of infrared synchrotron radiation for Fourier Transform Infrared spectroscopy, microscopy and imaging to a variety of fields, from medical to material science. The beamline is divided into two branches, the Material Science branch, SSSI-Mat, managed by IOM-CNR, and the Chemical and Life Sciences branch, SSSI-Bio, managed by Elettra Sincrotrone Trieste, equally sharing the operation time.

SSSI-Bio is equipped with a Bruker VERTEX 70v interferometer coupled with the Hyperion 3000 Vis/IR microscope. The branchline is optimized for working in the MIR, being equipped also with a 64x64 pixel Focal Plane Array (FPA) detector for fast sample imaging, and it is progressing in FTIR tomography. Recently, a new branch for FTIR nanoscopy equipped with a IR s-SNOM system has been installed, with the aim to further extend the range of applications of the beamline and improve its complementarity with nano-resolved characterization techniques.

Presently, SSSI-Bio hosts mainly proposals from the community of biologists and medical doctors aimed at the understanding of biochemical pathways responsible for disease onset, progression, diagnosis, prognosis and treatment, just as an example, but newer users from cultural heritage, chemistry and biophysics are emerging.

Job description

The successful candidate will collaborate with the beamline staff in the scientific activities and is expected to provide high-quality support to the beamline users, from proposals preparation to beamtime assistance and data analysis. In particular, he/she is expected to foster biophysical studies at SSSI-Bio, both through in-house research and user activities, implementing strategies for infrared-based high-pressure biochemistry and biophysics and nano-resolved infrared studies of biological systems. Moreover, the candidate will support the beamline staff in the transition between Elettra and Elettra 2.0, and in the upgrade/design of the new beamline/branchlines.

The candidate should possess strong personal skills to pursue collaborative research programs in a team-oriented environment and to become part of existing research collaborations.

Qualifications

A PhD in Physics or related disciplines and proven experience in infrared spectroscopy, infrared microscopy and high-pressure mid- and far-infrared spectroscopy with synchrotron radiation is mandatory. Hands-on experience on IR s-SNOM is also expected. Proven experience in biochemical and biophysical disciplines will be considered a plus. Knowledge of beamline simulation tools like SRW or OASYS will be a distinctive asset, as well as programming capabilities in Java, Matlab or Python. Basic knowledge of LabVIEW will be considered positively.

Good time management skills and ability to prioritize are expected, together with the ability to interact with staff and facility users at all levels and to work as part of a multi-disciplinary team.

Good oral and written communication skills in English are essential.

Elettra - Sincrotrone Trieste S.C.p.A.

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The appointment envisioned is a fixed term contract with an initial duration of 12 months, renewable on the parties' agreement.

The salary will be commensurate with the previous experience and qualifications of the candidate.

Applications should include full curriculum vitae, contact information (including electronic mail) of at least two references.

The deadline for the submission of the application is September 30, 2020.

In accordance with the provisions of article 21 of the Italian legislative decree no. 39/2013 and in conjunction with article 53 (subsection 16ter) of Italian legislative decree no. 165/2001, employees or former employees of any Italian Public Entity who have exercised authority over Elettra Sincrotrone Trieste S.C.p.A. or have negotiated with Elettra - Sincrotrone Trieste S.C.p.A. within the last three years will be excluded from the present selection procedure.

We thank all applicants in advance.

For more information, please contact Lisa Vaccari (email: lisa.vaccari@elettra.eu).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?ref=DA%2F20%2F33>

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