



Elettra Sincrotrone Trieste

Senior Scientist for Xpress beamline at ELETTRA

Deadline: 3 April 2021

Ref: DA/21/5

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 Xpress beamline is dedicated to high pressure (HP) x-ray diffraction. The beamline is in full operation and it is managed in the framework of a scientific partnership between the Indian Institute of Science, Bangalore, and Elettra-Sincrotrone Trieste. The beamline source, - a superconducting wiggler and a cryocooled single crystal Si(111) monochromator - provides photons at a fixed wavelength, close to 0.5 angstrom. The final beam size at the end station is chosen by a precision pin-hole, typically 80 microns in diameter. The end station is equipped with a Pilatus 6M detector and a custom-made sample stage to host various types of diamond anvil cells (DACs). An online ruby fluorescence set-up is available at the end station for *in situ* pressure monitoring. An automatic pressure controller PACE5000 is available for the driving membrane DAC. The experimental station can be adapted to host high-temperature (HT) and low-temperature (LT) set-ups, thus permitting to perform HP-LT and HP-HT diffraction data collection. A user-friendly beamline control and data acquisition software is available together with a web-based data storage system. More information can be found at: <https://www.elettra.eu/elettra-beamlines/xpress.html>

Job description

The successful candidate will lead Xpress beamline activities. She/he will contribute to the management, operation, optimization, maintenance and upgrades of the beamline and of its experimental station in order to continue meeting the requirements of a scientific community covering different disciplines. She/he will supervise all members of the staff assigned to the beamline, manage the budget, and ensure reporting. She/he is expected to be aware of the technical/scientific evolution in the relevant scientific fields, develop her/his own research program and foster scientific collaborations with user groups. She/he will be involved in the Elettra upgrade program, by contributing to the design of the beamline specifications for enhanced performance, in order to meet the high expectations of the user community.

She/he is expected to provide daily high-quality support to external users through the role of local contact, thus gaining opportunities for collaborative work at the frontiers of the field and contribute to the definition and execution of in-house research activities. She/he is expected to establish outreach programs to promote the capabilities and scientific accomplishments of the beamline.

Qualifications

A PhD in Physics, Chemistry, Materials Science or related disciplines and more than 5 years of experience in high-pressure materials research is expected. Experience in handling different types of diamond anvil cells for diverse HP experiments is expected, as well as knowledge of diffraction data analysis for both powders and single crystals. Good know-how in HP-diffraction complementary techniques, such as Raman, infrared, x-ray absorption, and a publication record consistent with the advertised position are essential, together with proven ability to work with user groups having different scientific backgrounds.

Preference will be given to candidates who have operated high-pressure x-ray diffraction beamlines at synchrotron radiation facilities and have documented experience in the construction, commissioning and upgrade of high-pressure XRD beamlines and end stations.

Good oral and written communication skills in English are essential. A working knowledge of Italian would be desirable, but is not required.

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

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Good time management skills together with the ability to interact with staff and facility users and to lead a multi-disciplinary team is expected.

The appointment is for a permanent position.

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 April 3, 2021.

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?id=1761>

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