Elettra Sincrotrone Trieste

Postdoctoral Research Associate position at XRD1 beamline Elettra

Deadline: 30 September 2020
Ref: DA/20/32

Background

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 XRD1 beamline at Elettra allows different kind of measurements based on hard X-rays diffraction. Exploiting the higher part of the available spectrum (4-21.5 keV) we determine the structure of small natural or synthetic molecules, supramolecular and self-assembled systems, metal organic framework systems. Middle photon energies are mainly used to characterize phase transitions in materials as a function of thermodynamic variables (*e.g.,* temperature, humidity), while the lower part of the spectrum is used to map the presence of lighter, biologically important atoms in protein structures and add phase information for their structural solution. Studies of drug polymorphism, fibres, nanoparticles, technological materials and cultural heritage are typically performed in this energy ranges. X-ray fluorescence is a frequently used tool at the beamline.

Comprehensive information on these activities can be found at: http://www.elettra.eu/elettra-beamlines/xrd1.html

Job description

The successful candidate will work in close collaboration with the beamline group on varied systems, including synthetic molecules, supramolecular and self-assembled systems, metal organic framework systems, *via* single crystal diffraction and powder diffraction techniques. He/she will contribute to the operation, maintenance and upgrade of the XRD1 beamline and experimental station, as well as to the definition and performance of in-house research activities. It is expected that he/she collaborates with the users of the beamline in a variety of research projects.

Qualifications

A Ph.D. in structural Chemistry or Physics or related disciplines is required. In the case the PhD has not yet been awarded, the candidate must prove that he/she has completed the course of studies of the Ph.D. and the defense has been already scheduled. In any case, we request that the Ph.D. title is issued before 31/10/2020.

A good publication record in single-crystal X-ray diffraction is required. Good experience in single crystal X-ray diffraction data collection and in the use knowledge of the relative crystallographic programs for data reduction, structure solution and model building is required.

Experience in most of the following fields is highly desirable: structure solution of small natural or synthetic molecules, supramolecular and self-assemblies, metal organic framework systems.

Experience in structural solution of larger molecules and molecular complexes such as proteins would be considered a plus as would be experience in the use of spectroscopic methods and techniques in the near UV/visible/IR.

Time management skills and ability to prioritize are expected, together with the capability to interact with staff and external collaborators, as well as to work as part of a multi-disciplinary team. Excellent oral and written communication skills in English are essential.

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General information

The appointment envisioned is a fixed term contract with an initial duration of 12 months. The salary will be commensurate with the previous experience and qualifications of the candidate.

Candidates who have held previous fixed-term contracts at Elettra Sincrotrone Trieste will not be considered eligible for this position.

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 (subsection16ter) 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 Maurizio Polentarutti (email: maurizio.polentarutti@elettra.eu).

To apply for this position please visit the following link:
https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=1481