Elettra Sincrotrone Trieste

Postdoctoral Research Associate for the Inelastic Ultraviolet Scattering (IUVS) Laboratory

Deadline: 6 April 2026
Ref: DA/26/12

Background

Elettra Sincrotrone Trieste is an international multidisciplinary research center offering international users access to synchrotron and free-electron laser radiation for the characterization and processing of matter. The extremely high quality of the light sources and beamlines has set new performance records and has been producing results of great scientific and technological interest. In order to allow the laboratory to remain competitive in the next 20 years, an entirely new synchrotron radiation source - Elettra 2.0 - belonging to the new generation of storage rings (DLSR or Diffraction Limited Storage Ring) is being installed and will join the already operating free-electron laser (FEL) source FERMI in the second half of 2026. The new source will exhibit a major increase in the brilliance and coherence fraction of the photon beams. The Elettra 2.0 optics is based on our enhanced symmetric six bend achromat structure (S6BA-E) with a 12-fold symmetry and an emittance of 200 pm-rad at 2.4 GeV. The new structure creates also straight sections in the arcs permitting the installation of additional insertion devices, thus increasing the number of beamlines. Existing beamlines are being upgraded and new beamlines constructed to take full advantage of the characteristics of Elettra 2.0. See http://www.elettra.eufor more information.

Beamline/Activity/Project description

The Inelastic Ultraviolet Scattering (IUVS) Laboratory is a user facility dedicated to UV Resonance Raman (UVRR) spectroscopy, providing tunable laser sources covering the 150-400 nm range. Its mission is to develop and offer advanced UVRR setups to international users, employing both fixed-wavelength UV laser sources (213, 224, 248, and 266 nm) and fully tunable picosecond and nanosecond laser systems operating across the FUV-DUV-near UV range (150-315 nm and 350-475 nm).

In-house research activities focus on applying UVRR spectroscopy to a wide range of scientific fields, including the chemical physics of water and liquids, characterization of polymers and gels, investigation of biological molecules such as proteins, peptides, and DNA, as well as studies of carbon-based materials, nanostructures, supramolecular chemistry, and forensic science.

Job description

The position is intended for a postdoctoral researcher who will be responsible for conducting experimental activities at the Inelastic Ultraviolet Scattering (IUVS) Laboratory. The successful candidate will play a dual role: providing expert support to external users of the facility and developing an independent line of research aligned with the laboratory's scientific mission.

The postdoctoral researcher will be expected to design and conduct innovative UV Resonance Raman (UVRR) spectroscopy experiments and to provide high-quality scientific and technical support to users. An important objective of the position is to strengthen and expand the IUVS user community through the development of original research in bio-related sciences, including the investigation of proteins, biomolecules and bacteria.

Qualifications

A Ph.D. in Physics, Chemistry, Engineering, or a related discipline is required, along with in-depth expertise in Raman and Resonance Raman spectroscopy and/or spectroscopic techniques employing laser or synchrotron radiation. A clear scientific vision and proven ability to develop and carry out independent research programs are also essential. Preference will be given to candidates with demonstrated experience in Raman spectroscopy applied to biological systems, as well as strong technical skills and hands-on experience with optical set-ups.

Good time management skills and ability to prioritize are expected, together with strong interpersonal and communication skills and the ability to interact with staff and facility users at all levels, as well as to collaborate effectively in a

multidisciplinary team-oriented environment.

Good oral and written communication skills in English are essential.

General information

The appointment envisioned is a fixed-term employment contract with an initial duration of 12 months. A trial period of 3 (three) months is foreseen. The salary will be commensurate with previous experience and qualifications.

Applications must include completed, dated, and signed curriculum vitae, a motivation letter, and the contact details of at least one person who has agreed to provide references.

The ranking of suitable candidates resulting from this selection process may be used within the following 24 months.

Selection interviews may also be conducted via videoconference.

Employees or former employees of Elettra Sincrotrone Trieste S.C.p.A., as well as current or former personnel provided by temporary work agencies will be excluded from the present selection procedure. 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 also be excluded from the present selection procedure, 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.

The deadline for the submission of the application is April 6, 2026.

We thank all applicants in advance.
For more information, please contact Claudio Masciovecchio (email: claudio.masciovecchio@elettra.eu) or 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=4289