



Elettra Sincrotrone Trieste

# Postdoctoral Research Associate at CoSMoS

Deadline: 29 October 2021

Ref: DB/21/24

## 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 CoSMoS end station is installed on the branch line of the SuperESCA beamline, using the same beam of linearly polarized photons in the 90-1500 eV energy range with high flux and energy resolution. CoSMoS features the rare ability to combine synchrotron-based photoemission and absorption techniques (high-resolution photoemission with spin detection capabilities, x-ray absorption) with STM and an MBE deposition system, all preparation and measurement operations being performed in-situ. The CoSMoS facility is used for the study of the electronic, chemical and physical properties of surfaces and nanostructures, including 2D materials, semiconducting thin films, as well as oxide materials for nanoscale device applications. See <http://www.elettra.eu/lightsources/elettra/elettra-beamlines/superesca/CoSMoS> for more information.

## Job description

The successful candidate will be involved in the study of the electronic, chemical and structural properties of complex and in-situ prepared materials, including 2D systems. He/she will ensure the ordinary maintenance of CoSMoS and its routine operation. Moreover, he/she will give assistance and collaborate with external users in running and further developing the CoSMoS end station in order to satisfy the experimental needs of the scientific community.

## Qualifications

A Ph.D. in Physics, Chemistry or a related discipline is required. The candidate must not have had more than 6-years of total postdoctoral experience, in academic institutions or private companies.

A background and a suitable track record in ultra-high-vacuum methods for surface analysis, sample surface preparation, film and nanostructures growth are required.

Proven experience in the at least two of the following techniques is also required: X-ray photoelectron spectroscopy, photoelectron diffraction, absorption spectroscopy and scanning tunneling microscopy.

The following qualifications will be considered as additional assets:

- Previous participation in experiments at synchrotron radiation facilities
- Experience in the construction of scientific equipment relevant to UHV systems or for synchrotron beamlines
- Programming skills in LabView, Python and/or Igor Pro, with demonstrated ability in data processing.

The successful candidate should possess strong interpersonal skills to conduct collaborative research programs in a team-oriented environment.

Good time management skills and ability to prioritize are expected, together with the ability to interact with the facility staff and international 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.

S.S. 14 Km 163,5 in Area Science Park  
34149 Basovizza, Trieste, Italy  
T. +39 040 37581  
F. +39 040 938 0903

P.IVA e C.F. IT00697920320  
Cap. Soc. € 47.632.663,00 i.v.  
PEC: [sincrotrone.trieste.elettra@legalmail.it](mailto:sincrotrone.trieste.elettra@legalmail.it)  
[www.elettra.eu](http://www.elettra.eu)

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Applications should include a full curriculum vitae, the names and contact information (including electronic mail) of up to three persons who have agreed to provide references.

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

Due to the situation related to the COVID-19 virus, the interviews will be performed through video conferencing.

The deadline for the submission of the application is October 29, 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 Silvano Lizzit (email: [silvano.lizzit@elettra.eu](mailto:silvano.lizzit@elettra.eu)).

To apply for this position please visit the following link:

<https://www.elettra.trieste.it/it/about/careers/working-withus.html?id=2081>

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