



Elettra Sincrotrone Trieste

# CoSMoS Research Associate at Elettra

Deadline: 13 April 2020

Ref: DB/20/16

## 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 and therefore uses the same photon beam of linearly polarized photons in the energy range 90-1500 eV than SuperESCA with high flux and energy resolution. CoSMoS combines synchrotron-based photoemission and absorption techniques (high-resolution photoemission with spin detection capabilities, x-ray absorption) with STM and MBE deposition, all of the 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, surface science and surface chemistry. He/she will ensure the ordinary maintenance of CoSMoS and its routine operation. Moreover, he/she will collaborate with external users in operating 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, together with experience in ultra-high-vacuum methods for surface analysis, sample surface preparation, film and nanostructures growth. In the case the Ph.D has not yet been awarded, the candidate must prove that he/she has completed the course of studies and the defense has already been scheduled. In any case, the Ph.D. must be awarded by the end of May 2020.

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.

Experience in the construction of scientific equipment relevant to UHV systems or for synchrotron beamlines is expected.

Programming skills in LabView and/or Igor would be considered a plus.

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.

The deadline for the submission of the application is April 13, 2020.

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

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

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Applications should include a full curriculum vitae, the names and contact information (including electronic mail) of possibly three references.

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?ref=DB%2F20%2F16>

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