



Dipartimento di Scienze Molecolari e Nanosistemi

Università Ca' Foscari Venezia

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Call for Applications for 1 Short-term Research Fellowship – Ca' Foscari University of Venice – Department of Molecular Sciences and Nanosystems

HAVING REGARD TO Article 18, paragraph 5, letter f) of Law No. 240 of December 30, 2010, as amended and supplemented;

HAVING REGARD TO Article 21-quinquies of Law No. 241 of August 7, 1990, as amended and supplemented;

TAKING INTO ACCOUNT Article 1-bis, paragraph 2, of Decree-Law No. 45 of April 7, 2025, as amended during conversion by Law No. 79 of June 5, 2025 (in force since June 7, 2025), has repealed the preferential tax regime for post-graduate research fellowships under Article 4, paragraph 3, of Law No. 210 of July 3, 1998, introducing IRPEF and IRAP taxation for said fellowships;

RECALLING the Regulation for the establishment of post-graduate research activity fellowships pursuant to Art. 18 of Law No. 240 of December 30, 2010, issued by Rectoral Decree No. 300/2014 of 14/04/2014, as amended and supplemented;

CONSIDERING that the tax treatment of research fellowships is subject to the legislation in force at the time of disbursement. Even if not expressly cited in this call, the applicable tax regime will be that provided for by the pro tempore legislation in force;

Description

The Department of Molecular Sciences and Nanosystems of Ca' Foscari University of Venice, under Director's Decree Rep. 763 prot. 212170 of 05/09/2026 regarding the activation of a short-term research fellowship, invites applications for a 12-month short-time research fellowship entitled “Modeling and simulation of organic mixed ionic-electronic conductors (OMIECs)” under the SPIN Supporting Principal INvestigators Call 2025 project “Harnessing Complexity in Organic Mixed Conductors for neuromorphic processing and Sensing” (acronym “COMICS”, CUP: H73C25001620005), Scientific Supervisor and Tutor: Prof. Gabriele D’Avino.

The fellow will carry out the following research activity:

Development of interacting-electron models to simulate the electronic structure and charge transport in organic mixed ionic-electronic conductors (OMIECs) for the realization of electrochemical devices for neuromorphic computing. Specifically, the activity will consist of studying many-body dielectric screening phenomena and formulating approximate expressions for the dielectric function under varying material parameters such as doping and disorder. To this end, the fellow will employ a multiscale methodology

including ab initio electronic structure calculations (DFT, GW/BSE), mesoscopic electrostatic models, and Monte Carlo simulations.

The research activity will include:

- Development of numerical methods for the simulation of high charge density disordered molecular solids.
- Simulation and theoretical characterization of the dielectric properties of OMIECs.
- Comparative analysis and rationalization of simulation results against experimental data, with a specific focus on applications in electrochemical devices for neuromorphic computing.

For anything not expressly provided for in this Call, reference is made to the University Regulation and current relevant legislation.

Duration of the fellowship: 12 months, starting tentatively from November 2026.

Amount: The fellowship amount is EURO 20.040,00 per year gross recipient (lordo percipiente) and will be subject to taxation according to current legislation. It will be paid in bi-monthly deferred installments upon certification of regular performance of the activity.

Application deadline: 28/09/2026 at 12:00 PM (Rome CET). If the deadline falls on a Saturday or a public holiday, it is extended to the next working day.

Eligibility Criteria (University Regulation for Research Fellowships, Art. 3)

Citizens of European Union Member States and non-EU citizens possessing the following qualification may apply:

Degree (Laurea) in Chemistry, Physics, Materials Science, or equivalent/related field.

Requirements must be held by the application deadline specified in this selection call. Candidates are admitted conditionally to the selection process. Exclusion from the selection due to lack of prescribed requirements may be ordered at any time, even after the selection procedure has taken place, by reasoned decree notified to the person concerned.

Required Skills

- Knowledge of the research field of organic materials for electronic applications.
- Solid experience in modeling molecular systems, with a specific focus on electron-electron and electron-phonon interactions.
- Experience in scientific software development and numerical computation.
- Proficiency in English.

Preferential Qualifications / Evaluated Titles

- Bachelor's Degree final mark / grade.
- Other relevant academic qualifications, such as a Master's Degree or Ph.D. in Chemistry, Physics, or Materials Science.
- Research experience gained in areas relevant to the research to be conducted.
- Interdisciplinary nature of the academic and research path.
- Publications in fields relevant to the research to be conducted.

Incompatibilities

The research fellowship is incompatible with:

- a) other scholarships/fellowships awarded for any reason, except those granted by national or foreign institutions useful for integrating the research activity of the fellow with stays abroad;
- b) attendance of Ph.D. courses with scholarship or medical specialization courses, in Italy or abroad;
- c) research grants (assegno di ricerca).

The fellowship holder may engage in self-employed work or occasional/continuous collaboration, compatible with the ongoing research activity and subject to prior authorization by the Department, provided that the activity:

- does not entail a conflict of interest with the specific research activity carried out by the fellow;
- does not cause detriment to the University.

Holders of subordinate employment relationships, in addition to Department authorization, must provide authorization from their employer. Specifically for holders of subordinate employment existing prior to the award of the fellowship, the Department will evaluate compatibility with the existing employment; if the evaluation is negative, the fellowship will not be awarded. If positive, the winning candidate must provide employer authorization within 15 days.

If a subordinate employment relationship commences during the fellowship period, the fellow is required to report the changed status at least 30 days prior to the start of employment for compatibility evaluation by the Department. If the evaluation is negative, the fellowship will terminate upon the start of the employment; if positive, the winning candidate must submit employer authorization within 15 days.

The awarding of the fellowship does not constitute an employment contract, nor does it give rise to rights regarding access to university staff roles.

How to Apply

Candidates must submit:

- **1. Application Form:** The application form, in which candidates shall declare under their own responsibility:
 - the academic qualification held;
 - -the possession of a residence permit valid at the deadline of the call for applications, in case he/she is a non-European citizen residing in Italy;
 - -that they understand that the short-term research fellowship is not compatible with the positions referred to in Art. 12 of the present Regulations and current legislation;
 - -to be medically fit to discharge his/her duties for the fellowship; - not to have received measures restricting personal freedom at the time of submitting the application;
 - - not to have a degree of kinship or affinity, up to and including the fourth degree, with any professor
 - belonging to the department or facility issuing the call or with the Rector, the General Manager or a member of the University Board of Directors and that they are aware of the provisions of the Law no 240/2010, Art. 18, para. 1, letter b);
 - - any benefit under L. 104/92.
- **2. CV:** Dated and signed Curriculum Vitae in European format attached (or available online via link <http://www.unive.it/data/28900/>).
- **3. ID Document:** A photocopy of a valid identity document (Identity Card or Passport).
- **4. Additional Documents:** Any other document, qualification, or publication useful for the selection.

Submission Procedure

Applications must be submitted exclusively using the dedicated web procedure available at:
<https://apps.unive.it/domandeconcorso-en/accesso/dsmn-davino-2026>

by 12:00 PM on 28/09/2026.

After completing and submitting the application and relative documentation via the online system, candidates will receive a confirmation email with an application code. This code allows access to the system for any updates to data and materials up to the deadline of 28/09/2026 at 12:00 PM.

Please note that for support or technical clarifications, candidates may contact the Department exclusively up to 24 hours prior to the call deadline. For information regarding the procedure, candidates may contact

the Department of Molecular Sciences and Nanosystems, email: ricerca.dsmn@unive.it, tel. +39 041 234 8633/8514.

Due to high candidate volume or large file uploads, the online system may experience slowdowns. Candidates are strongly advised not to initiate the application procedure close to the deadline.

Incomplete applications, applications missing mandatory signed attachments where required, or applications submitted after the above deadline for any reason will be deemed inadmissible and will not be considered.

Declarations made in the application and attachments are deemed released pursuant to Presidential Decree D.P.R. No. 445/2000 as amended, by candidates entitled to use administrative simplification forms permitted under said decree.

Selection Procedures and Evaluation Criteria

Candidate selection is performed based on qualifications and curriculum vitae by an Examining Board appointed pursuant to Art. 7 of the Research Fellowship Regulations, respecting gender balance where possible.

The Examining Board has a total of 100 points available for evaluating qualifications and CV, will establish a final merit ranking based on awarded scores, and identify the winner. In case of equal scores, the youngest candidate will be selected.

The ranking will be used in order of formulation. In case of renunciation or non-acceptance within the terms communicated by the Department by the winning candidate, the fellowship will be assigned to the candidate in the next position of the final merit ranking, pursuant to University Regulations (Art. 8).

The Examining Board will forward the minutes of the selection process to the Department Director who, having verified legality of the proceedings, will approve them by decree and award the fellowship.

Awarding of short-term Fellowship

Upon receiving the selection records, the Department Director approves the ranking and minutes via decree and publishes them.

The Secretariat of the Department issuing the call will transmit formal communication to the winner indicating the start date of the fellowship.

Within seven days of receiving written communication, the winner must accept the fellowship under penalty of forfeiture. In case of renunciation, the fellowship will be assigned to the next candidate in the ranking.

Public notice of results for all selection phases is guaranteed via the University Online Official Notice Board (Albo online), the Department web page, and the University portal.

Access to selection documents is guaranteed pursuant to Law No. 241/1990 as amended and relative internal implementation regulations.

Processing of Personal Data

Personal data processing will be conducted in compliance with applicable national and EU regulations (Legislative Decree 196/2003 and EU Regulation 2016/679 - GDPR). The privacy policy information can be downloaded at: <https://www.unive.it/pag/36550/>.

Person in charge of the procedure

Pursuant to Art. 5 of Law No. 241 of 07/08/1990 as amended, the Administrative Procedure Manager for this selection is Sonia Barizza, Head of Secretary of the Department of Molecular Sciences and Nanosystems.

Final Provisions

For anything not expressly provided for in this Call, reference is made to the University Regulation and current governing legislation.

Venice,

The Head of Department
Prof. Maurizio Selva

Responsible for administrative procedure
The Secretary of Department : Mrs. Sonia Barizza