

**Research fellowship on “Advanced materials for energy & environmental applications” –
Università Ca' Foscari Venezia**

(Italian law 30 December 2010, n.240, art. 22 and subsequent amendments and additions)

The present document in English is to be considered as a mere summary of the main provisions of the notice of competition which is available in Italian at the following ([link](#)) The text in Italian is the official text of the notice of competition for all legal intents and purposes and, in the event of non-conformity with the present document, it shall prevail.

Description

The Department of Molecular Sciences and Nanosystems at Università Ca' Foscari Venezia invites applications for a fellowship lasting 36 months titled “Advanced materials for energy & environmental applications”, SSD: IMAT-01/A e CHEM-03/A, project PRIN 2022 PNRR titled “All-oxide nanowire plasmonic solar cells (NanoSolar)”, cod. P2022RL4TR, CUP: H53D23009150001, tutor and principal investigator: Prof. Alberto Vomiero e Prof. Elisa Moretti

The fellowship is intended to provide the successful candidate with the opportunity to pursue his/her own research while benefiting from the range of expertise at Università Ca' Foscari Venezia.

Abstract:

The project aims to develop innovative 0-2D nanostructured materials (both in the form of powders and thin films and nanowires), through the engineering of the semiconductor electronic structure, for different photo/electrocatalytic applications, including: - water splitting, - p-n junctions for light photoconversion, - luminescent solar concentrators. From January 2025 to November 2025 the fellow will work on the project “All-oxide nanowire plasmonic solar cells (NanoSolar)”, cod. P2022RL4TR, CUP: H53D23009150001, funded by the PRIN 2022 PNRR Call - Mission 4 “Education and Research” of the National Recovery and Resilience Plan and in particular the C2 component - investment 1.1, Fund for the National Research Program and Projects of Relevant National Interest (PRIN), while in the following period it will work on the themes of the research group of professors Vomiero and Moretti.

Who can apply

Prospective candidates are expected to hold a **PhD degree in Chemistry, Physics, Materials Science**, with scientific-professional curriculum suitable for carrying out the research activities.

Ca' Foscari encourages applications from researchers with positive evaluation in all the criteria in individual proposals such as Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar.

Researchers having successfully completed Marie Skłodowska Curie Actions - Individual Fellowships/ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) or similar funded projects are warmly encouraged to apply.

The following qualifications are considered as evaluation criteria:

- a.** specialization diplomas and certificates of attendance of post-graduate specialization courses, obtained both in Italy and abroad, the carrying out of documented research activities at public and private entities with contracts, scholarships or assignments both in Italy and abroad;
- b.** scientific publications, invited presentations at conferences, organization of international conferences, oral or poster presentations at conferences, patents, other dissemination activities, involvement in research projects and awards;
- c.** skills in: synthesis of nanomaterials by hydrothermal, solvothermal, chemical exfoliation and vapor

deposition techniques for applications in the field of hydrogen production and photoconversion; knowledge of analytical techniques of nanomaterials, including microscopic, optical, spectroscopic, diffraction and synchrotron light techniques.

Duration of contract: 36 months, approximately starting in: **January 2025**.

Salary: The research fellowship amounts to **Euro € 36.683,40** per year gross of the recipient, net of the expenses to be sustained by the Provider.

Deadline for submission of applications: 10th December 2024, at 12.00 a.m.(Rome CET)

How to apply:

Candidates shall submit:

1. The application form;
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both to enclosed as a one single.pdf file ([link](#)); a declaration must be appended in the footnote of the curriculum, pursuant to the Italian DPR 445/2000 and subsequent amendments and additions, that the information provided corresponds to the truth. Moreover, the candidates have to consent to the use of their personal data for the purposes of this selection procedure pursuant to the Italian Legislative Decree 196/2003 and to the EU Regulations 2016/679;
3. The attachments called “obligations and understanding” and “participation and compatibility”;
4. All documents, qualifications and publications relevant for the selection procedure (please, see the notice - [link](#));
5. A copy of a valid identity document (either Identity Card or Passport);
6. (If available) Evaluation Summary Reports of Marie Skłodowska Curie Actions - Individual Fellowships/ ERC Starting Grants/FIRB (Italian Fund for basic research investments)/SIR (Scientific Young Independence Research) individual proposals having passed all the evaluation thresholds;
7. (If available) Details of Marie Skłodowska Curie Actions - Individual Fellowships, ERC Starting Grants, FIRB (Italian Fund for basic research investments)/ SIR Scientific Young Independence Research funded projects;
8. Declaration on availability to held the interview in remote ([Link](#)) to be send via email at the following address: ricerca.dsmn@unive.it

All the schemes of the quoted documentation are available on the website ([link](#)).

Incomplete applications will be rejected.

How to submit your application

Applications should be submitted by the online procedure, available on this link:

<https://apps.unive.it/domandeconcorso-en/accesso/dsmn-36mesi-advancedmaterials>

The candidate, after the uploading, will receive a submission number and an e-mail acknowledging receipt of his/her application.

The candidate, if necessary, could access the procedures for updating any data and materials by the link provided by the e-mail, in any case any updates must be made no later than the deadline December 10st 2024, at 12.00 a.m.

If you don't have an Italian tax identification code, please click on “Calculate Italian tax identification code (codice fiscale)”, (<https://apps.unive.it/utills/cf>).

Please note that the University can be contacted for any support needs by the candidate until 24 hours prior to the deadline.

Please note that in case of a high number of applications and / or weight of the materials loaded by the candidates the system might become slower, therefore it is suggested not to start the process close to the deadline.

NB: the University does not take on responsibility for wrong or late communication of addresses, nor for any communication problem not depending on the University.

Topics of the interview:

- Curriculum vitae of the candidate;
- Previous experience in the field of nanomaterials for energy and the environment;
- Assessment of skills for the development of the project;
- Assessment of knowledge of the foreign language English by carrying out part of the interview in English.

Evaluation

Up to 100 points, specifically:

For qualifications, publications and possible tests, from 0 to 60;

For interview, from 0 to 40.

Selection procedure

The interview will be on 17/12/2024 at 08:00 a.m. (italian time)

by remote at the link:

meet.google.com/ckk-nvpx-bui

The list of candidates admitted to the interview or any postponements will be made known on December 12th 2024 through a notice that will be published on the website of this University ([link](#)) and on the web pages required by current legislation.

Information and contacts

Candidates may find further details about the application process and the research project in the official call published on the following ([link](#))

For further information please contact the Research Office, email: ricerca.dsmn@unive.it, Ph: 0412348633/8514.

The Head of Department of
Molecular Sciences and Nanosystems
Prof. Maurizio Selva

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