

Research fellowship - Valorization by photocatalysis of carbon dioxide and bio oil from pyrolysis (in the framework of the activities of Spoke 1 of the PNRR iNEST Project, Interconnected North-East Innovation Ecosystem). **PNRR Project no.: ECS_00000043 Title of the project: iNEST - Interconnected Nord-Est Innovation Ecosystem Area: Digital, Industry, Aerospace Actuating Subject: University of Padua CUP: H43C22000540006. Call issued by Ca' Foscari University of Venice (Italian law 30 December 2010, n.240, art. 22)**

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 CESA Center at Università Ca' Foscari Venezia, in charge of the administrative management of the above mentioned project, invites applications for a fellowship in:

Title: Valorization by photocatalysis of carbon dioxide and bio oil from pyrolysis

SSD and/or sector : CHEM-04/A

GSD: 03/CHEM-04

Scientific coordinators and tutors: prof. ssa Michela Signoretto

Duration: 12 months

Abstract: The project will focus on the development of photocatalytic processes for the transformation of CO₂ into key products such as methanol, methane, formic acid and hydrogen. The research proposes to valorize waste biomass via pyrolysis and use the bio oil obtained for the synthesis of heterogeneous catalysts. Research will be able to concretely contribute to the transition towards a carbon negative economy by transforming CO₂ from waste to resource.

The research may be carried out in English.

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.

Who can apply

Prospective candidates are expected to hold a Master's degree in Industrial Chemistry or in Sustainable Chemistry and Technologies, or an equivalent degree obtained abroad, and a curriculum suitable for carrying out 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 are considered preferential qualifications:

- PhD in environmental or geological sciences (or similar);
- specialization diplomas and certificates of attendance of postgraduate courses, both in Italy and abroad;
- the conduct of documented research activities in public and private subjects with contracts, scholarships or assignments both in Italy and abroad related to the proposed research topics;
- scientific titles such as publications and original works relating to the topics of the proposed research;
- participation in conferences, workshops and seminars on the topics covered by the project;
- Skills in the field of synthesis and characterization of materials.

Duration of contract: twelve months (approximately starting: september 2024)

Stipend: The research fellowship amounts to 19,367.00 Euros per year, including taxes and social charges.

Deadline for submission of applications: july 17th, 2024, 12.00 noon CET.

How to apply:

Candidates must submit:

1. The application form;
2. A motivation letter (max 1 page) along with their CV in European format, duly dated and signed, both documents are to be enclosed as a one single.pdf file. ([link](#))
3. A copy of a valid identity document (either Identity Card or Passport);
4. (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;
5. (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;
6. Indication of the candidate's intention to avail himself/herself of the option to be interviewed by video, which must be emailed to: inest_pnrr@unive.it;
7. All documents, qualifications and publications relevant for the selection procedure (please, see the notice at this [link](#));

All the templates of the above mentioned documentation are available on the website ([link](#)).

How to submit your application

Applications must be submitted online, exclusively through the procedure that can be entered at the following link: <https://apps.unive.it/domandeconcorso-en/accesso/inest17072024fotocatalitica>

After submitting the application, the candidate will receive a submission number and an email acknowledging receipt of his/her application.

The candidate can, if necessary, access the procedures and update uploaded data and materials via the link provided by the e-mail. Updates are only accepted before the deadline of **July 17th, 2024, 12.00 noon CET**. Please note that the candidate can contact the University for any support needs until 24 hours prior to the deadline.

In case of a high number of applications and / or weight of the materials uploaded by the candidates the system might become slower, therefore it is suggested not to start the application 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.

Evaluation

Up to 100 points, specifically:

For qualifications and publications: from 0 up to 60 points (42 points is the minimum score for admission to the interview)

For the interview: from 0 up to 40 points (28 point is the minimum score for passing the interview)

Selection procedure

Interviews will take place in presence on July 30th, 2024, at 09.30 am CET.

The list of candidates admitted to the interview together with notice of any postponements, the place or changes in the time of the interview, will be announced on **July 24th, 2024** by means of a notice that will be published at the following ([link](#)).

The interview may ascertain knowledge of the following topics:

- synthesis and characterization of materials;
- Italian language (for foreign candidates).

Information and contacts

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

For further information please contact CESA, email: inest_pnrr@unive.it