

## ANNOUNCEMENT FOR THE AWARD OF A RESEARCH FELLOWSHIP

Title: Research Fellowship; 1 vacancy

### Reference: 35/ECUM/CFUM/2025 -STRAWBERRIES

A call for applications is now open for the attribution of one research fellowship within the scope of the R&D project “Solar Thermal Agriculture with bifacial collectors for farming synergies – STRAWBERRIES” with the reference CETP/0002/2022, from the Physics Centre of the Minho and Porto Universities of Minho, financed by national funds through Foundation for Science and Technology (FCT), under the following conditions:

**Scientific Area:** Engineering Physics /Materials Engineering

**Recipient category:** This research grant is intended for R&D activities by masters enrolled in non-academic degree courses integrated into the educational project of the institution.

#### Requirement for granting the fellowship:

- The applicants may apply without prior registration in the course for which the fellowship is open. The requirement to enroll in a degree course or non-academic degree course will be verified on the date of contracting the fellowship;
- Only fellowships whose selected applicants present a valid proof of enrollment in a degree course or non-academic degree course will be contracted, according to the type of the fellowship, issued by a Higher Education Institution, indicating, respectively, the academic year or its duration (star and term).

**Applicants’ eligibility:** Candidates who meet the conditions set out in Article 9 of the Research Grant Regulations, No. 950/2019, of 16-12-2019, of FCT I.P. are eligible.

Nationals or citizens of other European Union member states, third-country nationals, stateless persons, and citizens with political refugee status are eligible to apply for this competition.

#### Candidate eligibility requirements:

- a) Mandatory requirements: Master's degree in Physics, Physics Engineering, or Materials Engineering, or related areas, with knowledge in sputtering deposition of thin films and respective characterization;
- b) Masters enrolled in non-conferring courses: not having benefited from a non-conferring degree research grant for a cumulative period of 2 years followed or interpolated;
- c) contracting requirements, proof of academic qualifications completed at the deadline for applications, including those resulting from academic degree recognition processes.

#### Workplan and objectives to be achieved:



Main objectives:

- Develop selective coatings for bifacial solar thermal collectors, adding thermochromic functionality. Above the transition temperature, solar absorption should decrease and emissivity should increase.
- Increase the transition temperature to values greater than 68 °C, which is the VO<sub>2</sub> transition temperature, by adding a doping element.

The development of the selective solar absorber coating will involve the following steps:

1. Preparation and characterization of the Ge or Sc-doped VO<sub>2</sub> layer and optimization of the deposition conditions, in order to try to increase the semiconductor-metal transition temperature, relative to the case of undoped VO<sub>2</sub> (~68 °C).
2. Design, deposition and experimental verification of the multilayer deposited on aluminum and glass substrates
3. Evaluation of the performance of the multilayer coating, which should have solar absorption greater than 95% and emissivity less than 8%.

**Applicable legislation and regulations:** Research Fellow Statute (EBI), approved by Law n.º. 40/2004 of August 18, in its current wording and FCT Research Fellowship Regulation, approved by Regulation n.º 950/2019, published in the Diário da República, 2nd series, of December 16, 2019, in its current wording, and Scientific Research Fellowship Regulation (RBIC) of the University of Minho, approved by order n.º 4998/2025, published in the Diário da República, 2nd series, n.º 81, of April 28, 2025 Amended and republished through amendment statement no. 634/2025/2, published in the Official Gazette, 2nd series, no. 132, of July 11.

**Host/Contracting institution and scientific supervision:** The workplan will be carried out in the Centre of Physics, School of Sciences, of University of Minho, located in Azurém, Guimarães, under the scientific supervision of the Professor Luís Manuel Fernandes Rebouta.

**Fellowship duration:** The grant will take place for a period of 6 months, with a provisional starting date on the February of 2026. The fellowship grant may, eventually, be renewed up to the maximum limit allowed by the project and/or applicable legislation.

**Amount of the research grant:** The amount of the grant corresponds to 1309,64 €/month, according to the table of values of the Research scholarship of the University of Minho, updated annually, as decided by the Management Board.

Payment is made on the 23rd of each month, through bank transfer to the Bank Identification Number of the fellow identified in the contractualization process.



**Other benefits:** Reimbursement of Voluntary Social Insurance, if the candidate chooses to receive it, corresponding to the 1st level of discounts (for research grants with a total duration 6 months or higher) and personal accident insurance.

**Exclusivity regime:** The grantee will perform the activities under exclusivity, as foreseen in article 5º of the Research Fellow Statutes and applicable regulations.

**Selection panel:**

President of the jury: Luis Manuel Fernandes Rebouta, Associate Professor with Aggregation of the Physics Department, School of Sciences of the University of Minho;

Effective Members:

Martin Andritschky, Full Professor of the Physics Department, School of Sciences of the University of Minho;  
Carlos José de Macedo Tavares, Associate Professor with Aggregation of the Physics Department, School of Sciences of the University of Minho;

Substitute members:

Stanislav Lazarov Ferdov, Assistant Researcher, Centre of Physics, School of Sciences of the University of Minho;  
Armando José Barros Ferreira, Assistant Professor of the Physics Department, School of Sciences of the University of Minho;

The first effective member will substitute the President of the selection panel in case of impediment, being nominate the first substitute member in the place of the first effective member.

**Criteria and procedures for applications assessment and selection:** The applications assessment will focus on the candidate's Merit, following evaluation criteria, valued on a scale of 1 to 5 values:

Applicant Merit - AM (100%):

- a) Academic path (considering the classifications of academic degrees), with a weighting of 50%;
- b) Personal curriculum (considering professional and scientific background), with a weighting of 40%
- c) Motivation letter, with a weighting of 10%.

The final classification of the applicant's merit is achieved through the following formula:

$$MC=(a*0,5)+(b*0,4)+(c*0,1)$$

**Note:** Applicants with degrees obtained abroad must present proof of recognition of qualifications in Portugal and conversion of the final classification obtained in them to the Portuguese classification scale or declaration under the terms indicated in the previous point. Candidates who do not comply with one of these provisions, the selection



panel will assign with minimum in the grade of the graduation and/or master course. Candidates will be evaluated on the remaining parameters.

**Application deadline and submission:** The call for applications is open for a period of 10 working days from the date of publication on the Euraxess portal.

Applications must be submitted by email to [bolsas@ecum.uminho.pt](mailto:bolsas@ecum.uminho.pt), indicating the reference number of the competition in the subject line: **35/ECUM/CFUM/2025 -STRAWBERRIES**. Only applications submitted within the established deadline and accompanied by the following documents will be accepted:

- a) Candidate's updated curriculum vitae;
- b) Certificates of the academic degrees obtained or, if applicable, the candidate's declaration of honor that he/she has completed the degrees required in the notice by the application deadline.

For degrees obtained abroad, the record of recognition of the academic degrees and record of the conversion of the respective final classification to the Portuguese classification scale must be presented, or, alternatively, a declaration of honor from the candidate.

This declaration must attest to facts that occurred prior to the application. In the event of a discrepancy between the information contained in the declaration and the documentation submitted for the purposes of contracting the scholarship, only the information contained in the latter will be considered. If it is found that the documents proving the academic degree and diploma, or their recognition under the terms of Decree-Law n. ° 66/2018, of August 16, do not correspond to the classifications awarded in the assessment of the academic career and may consequently alter the candidate's ranking, the scholarship will not be contracted;

- c) Letter of motivation,
- d) Other mandatory documents to be attached at the time of application.

**Form of publication/notification of results:** The results of the evaluation are published in a single list (in alphabetical order or by final score obtained), posted in a visible and public place in the host unit, as well as by email to all candidates, attaching, for this purpose, the minutes of the jury's deliberations, within a maximum period of 90 working days from the deadline for submission of applications.

Candidates are informed, at a preliminary hearing, in accordance with Articles 121 and 122 of the Administrative Procedure Code, of the likely outcome of the final decision, and may comment within 10 working days of this notification.



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An appeal may be lodged against the final decision within 15 working days, or an appeal may be lodged with the highest executive body of the funding entity within 30 days, both after the respective notification (Article 12(nº6) of the FCT Research Grant Regulations).

Within 10 working days of notification of the grant award, the applicant must declare their acceptance in writing. In case of non-acceptance, the next highest ranked applicant will be notified immediately.

**Constitution of a selection reserve list:** The applicants ranked in the next positions on the ordered list will be included in a selection reserve list, which can be used until 14/6/2026.

**Fellowship contractualization:** The scholarship is awarded through the signing of a contract between the University of Minho and the scholarship recipient, in accordance with point 2.4 of the Rules for the Award and Management of Scholarships

[https://www.fct.pt/wpcontent/uploads/2022/03/Normas\\_de\\_Atribuicao\\_de\\_Bolsas\\_2021.pdf](https://www.fct.pt/wpcontent/uploads/2022/03/Normas_de_Atribuicao_de_Bolsas_2021.pdf) and the draft contract in Annex II of the University of Minho's Scientific Research Scholarship Regulations.

The contract can only be signed after receipt of all the documentation required for the type of scholarship, which must occur within a maximum period of 6 months, including proof of academic degrees or diplomas, as well as enrollment in non-degree study cycles or courses, as applicable.

Once all the documentation has been received, the contracting entity has 60 working days to sign the scholarship contract. Once received by the scholarship holder, the contract must be returned, duly signed, within 15 working days.

**Term and cancellation of fellowship contracts:** Without prejudice to the other grounds laid down in the University of Minho's Scientific Research Scholarship Regulation and in the Research Fellow Statute, the scholarship will cease on completion of the contracted work plan, as well as on expiry of the period for which it was granted or renewed.

The **final report** must be submitted to the scientific advisor, in accordance with the defined objectives and evaluation criteria, no later than 60 working days after the end of the scholarship and must be drawn up in accordance with Annex I of the Regulations of the University of Minho.

**Non-discrimination and equal access policy:** Universidade do Minho actively promotes a policy of non-discrimination and equal access, so that no candidate may be privileged, benefited, harmed or deprived of any right or exempt from any duty due, namely, to ancestry, age, sex, sexual orientation, marital status, family status, economic situation, education, social origin or condition, genetic heritage, reduced working capacity, disability,



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chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological convictions and trade union membership.

Note: Under FCT rules (point 9), it is “expressly mandatory to use the FCT logo and, when applicable, the logos of the European Union and the Operational Program, following the graphic standards available on the websites of the respective Operational Programs.”

### **Declaration of Honor**

#### **Academic qualifications**

I, (full name), candidate for the vacancy for the award of a (type of scholarship), within the scope of the project (name or reference of the project), published on the Euraxess portal, with the reference (ref. notice), declare on my honor that I have completed the academic degree of (academic degree), qualifying for the type of scholarship in the competition, namely the course (designation), by the (University conferring the degree), on the date XX/XX/XXXX, with a final average of XXXXX values on the YY scale.

As it is not possible for me to present proof of qualifications until the end of the competition, I declare that I undertake to present the aforementioned certificate at the conclusion of the scholarship contract, in the event that I am selected for the vacancy in the competition.

As this is true, I hereby date and sign this declaration.

(Place), (date).

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(full name)



NOTE: The declaration may only attest to facts that occurred prior to the application.

In the event of a discrepancy between the information contained in the declaration and the documentation submitted for the purpose of contracting the scholarship, only the information contained in the latter will be taken into account.

### Declaration of Honor

I, (full name), bearer of identification document number (XXXX), candidate for a research grant (type of grant), within the scope of the project (name or reference of the project), published on the Euraxess portal, with the reference (ref. call for proposals), declare on my honor that (I have not received any research grants to date / I have received the following research grants) under the Research Grant Holder Statute.

University	Financing Entity	Project	Type of Grant	Duration	Start	Term

As this is true, I hereby date and sign this declaration.

(Place), (date).



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(full name)



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