

1 Research Grant Announcement (M/F)

Call open for applications for a research grant within the framework of Project “SWMOF - A smart process for water harvesting from air and water distribution based on eco-friendly MOFs”, with the reference: Water4All/0003/2022 financed by Foundation for Science and Technology, I.P through national funds, under the Water4All partnership, under the following conditions:

Scientific Area: Chemical Engineering

Admission requirements: Candidates who cumulatively meet the following two requirements may apply for this grant:

Requirement 1:

- Be a student enrolled in a doctoral program in the area of Chemical Engineering, a requirement to be duly proven at the time of signing the contract.

or

- Holder of an academic degree enrolled in a non-academic degree course integrated in the educational project of a higher education institution, developed in association or cooperation with one or more R&D units, a requirement to be duly proven at the time of signing the contract.

Note: In the case of masters who are enrolled in non-academic degree courses, the scholarship can only be awarded to those who do not exceed, with this scholarship contract, including possible renewals, an accumulated period of two years in that typology of the scholarship, followed or interpolated.

and

Requirement 2:

- Hold a master's degree in Chemical Engineering or related field.

If the degree has been awarded by a foreign higher education institution, it must comply with the provisions of the Decree-Law no. 66/2018, of august 16th, and any formalities established there must be fulfilled until the time of signing the contract.

Activity Outline: Development of a mathematical model to represent the dynamic behaviour of water adsorption in the hybrid material, and to be verified against experimental data. Designing of the real-scale unit. The mathematical model, includes the combination material, momentum, and energy balance equations, and will be implemented in the simulation software (gPROMS) and solved numerically.

Legislation and regulations: Law Nº. 40/2004, of 18th August, in its current wording (Statutes of Scientific Research Fellow) and Regulation of Research Grants of Fundação para a Ciência e a Tecnologia, in force (<https://www.fct.pt/financiamento/programas-de-financiamento/bolsas/>) and Regulation of Research Grants of University of Porto, in force.



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Work place: The work will be developed at the Department of Chemical Engineering of the Faculty of Engineering of the University of Porto (FEUP), under the scientific supervision of Professor Alexandre Ferreira e Professor Ana Mafalda Ribeiro.

Grant duration: Initial duration of **12 months**, with the predicted starting date in **September 2024**, on an exclusive basis eventually renewable but never exceeding the project duration.

If it is not possible to ensure the duration of 12 months estimated in the previous paragraph, this duration will be adjusted according to the end date of the project, and provided that the minimum duration of 3 consecutive months is guaranteed, in accordance with paragraph 3 of article 6 of the Research Grant Regulations of the Foundation for Science and Technology, I.P.

The eventual renewal of the scholarship will be carried out as determined in article 6 of the Research Grants Regulation of the Foundation for Science and Technology, I.P.

Stipend: The grant stipend amounts varies between 1.259,64 € according to the table of values of the grants awarded directly by FCT, I.P. in the Country (<https://www.fct.pt/financiamento/programas-de-financiamento/bolsas/>), and 1.659,64 euros, depending on the profile and previous experience of the candidate in the project area. If the amount to be paid exceeds 1.259,64 euros, the remaining amount will be provided by FEUP funds, not coming from the funding.

The payment will be made by bank transfer.

Selection procedure:

The curriculum of the candidates (60%) will be evaluated based on the merit of the candidate and the following factors will be weighted:

- a) Academic training (Master in Chemical Engineering 10 points; Others Masters – 2 points)
- b) Publications in the area of cyclic adsorption processes 5 points, Publications in other areas – 2 points
- c) Research Experience in the cyclic adsorption processes area – 5 points; in related areas – 3 points; Other areas – 1 point

The curriculum of each candidate will be evaluated in a 1-20 points scale. Candidates with less than 15 points in the curricular evaluation will not be invited for the interview.

In the interview (40%) topics related with the work plan, experience and the candidate's CV will be discussed with the invited candidates.

If none of the candidates achieves a minimum final score of 16 points, the scholarship will not be awarded.

Selection Jury:

President: Professor Alexandre Filipe Porfírio Ferreira



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Effective member: Professor Ana Mafalda Almeida Peixoto Ribeiro

Effective member: Professor Cláudia Sofia Castro Gomes da Silva

Supplementary member: Doctor Ricardo Jorge Nogueira dos Santos

Supplementary member: Doctor Vítor Jorge Pais Vilar

Advertisement of final decision: The results of the evaluation will be released to the candidates by email to the email address indicated in the application process.

Deadline for applications and form of presentation of the applications:

The call is open from **19/08/2024 to 30/08/2024** (until 23h59m, GMT time).

Applications must be formalized by email to aferreir@fe.up.pt and to recursoshumanos@fe.up.pt, clearly stating the reference **FEUP-SWMOF_Mod** and including the following pdf documents: Motivation letter, Copy of certificates evidencing academic degree (referring the classification of each separated or integrated degree), detailed Curriculum Vitae; Declaration on honor that the candidate fulfills the requirement contained in article 6 of the Regulation for Research Grants of the Foundation for Science and Technology, I.P. (model below, for student enrolled in a non-academic degree course integrated in the educational project of a higher education institution, developed in association or cooperation with one or more R&D units) and other documents considered relevant by the applicant. In order to assure that all documents can be read, the preferred saving format is the Portable Document Format (.pdf).

Declaration on honour

I, (identification of the scholarship holder), holder of the Citizen Card / Visa / Residence Permit no. valid until _____, declare under honour, to be in the conditions of no. 5 of article 6º of the Research Grants from FCT, IP - Regulation No. 950/2019, of 16 December.

Oporto, __/__/__

Signature

(scholarship holder)



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