



**Public notice Ref.<sup>a</sup> CDL-CTTRI-22-SGRH/2021** — Doctor Paulo Jorge dos Santos Gonçalves Ferreira, Full Professor and Rector of the University of Aveiro, hereby announces that for a period of 15 business days, starting on the first business day immediately after the publication of the present notice, an international public notice is opened for recruitment in the form of a Uncertain Term Work Contract, under the Portuguese Labor Code, 2 (two) positions for a Early-level PhD researcher for the exercise of activities of scientific research in the scientific areas of Physics and Physics Engineering, to exercise the functions of sustainable micro and nanofabrication, green and clean energy systems, nanomaterials engineering and functional interfaces, and biomedical devices and systems, in close collaboration with i3N researchers associated with the Caparica hub, within the framework of the project UIDP/50025/2020 - Unidade de I&D Instituto de Nanoestruturas, Nanomodelação e Nanofabricação (i3N), N 5002, supported by the Foundation for Science and Technology, in its State Budget component (OE).

The applicant shall reveal an appropriate profile for the activities to be carried out, demonstrating experience at least in one of the following points:

- a) synthesis and characterization of nanomaterials and carbon nanostructures by CVD and laser processing, and respective functionalization.
- b) Development of functional interfaces and their physical and electrochemical characterization.
- c) With dielectrics, semiconductors, multiferroics and respective nanostructures and, measurement techniques of electrical and magnetic properties.
- d) Growth thin films by physical vapour deposition, preparation and physical characterization of thin films based on nanostructured materials and devices for optoelectronic and energy applications.
- e) optical spectroscopy techniques (e.g. Infrared spectroscopy, UV-VIS-NIR spectroscopy, Raman scattering, photoluminescence spectroscopy).
- f) Structural (SEM/EDS, HRXRD, XPS) characterization of solids and nanostructures.
- g) Chemical synthesis functionalization and characterization of nanomaterials.
- h) Metal hybrid metal/oxide nanoparticle synthesis by chemical and/or physical methods;
- i) Development and characterization of devices (sensors and actuators) based on nanomaterials.
- j) Development of micropatterned radiation detectors and medical imaging systems.

The present public notice was opened on 01 of March, 2021 by order of the Rector of the University of Aveiro, following the proposal of the Scientific Council.

The contest is governed by the provisions of Decree-Law 57/2016, August 29, that approves the rules for post-doctoral work contracts, designed to stimulate employment in science and technology in all areas of

knowledge (RJEC) within the legal provisions of the Labor Code, Law no.7/2009, February 12, in its current wording and other applicable legislation and regulations.

The monthly payment corresponds to 2134,73€.

#### 1 — Admission requirements:

Any national, foreign and stateless candidate(s) who hold a doctorate degree in Physics or Physics Engineering (or scientific related area) and a scientific and professional *curriculum* whose profile is suited for the activity to be performed, can submit their applications. Candidate(s) of the contest holding qualifications obtained abroad must prove the recognition, equivalence or registration of the doctor degree, in accordance with the applicable legislation. This formality must be fulfilled up to the date of signing the contract.

#### 2 — Formalisation of the applications:

The applications are addressed to the Rector of the University of Aveiro as follows:

##### 2.1 — The application should include, among others, the following elements:

- a) Call identification;
- b) Applicant's identification: full name, birth date, nationality, mailing address and email;
- c) Identification of the institution where the applicant is presently working and his/her position there, when applicable;
- d) Identification of degrees held by the applicant;
- e) Statement by the applicant declaring that the elements or facts contained in the application are correct and accurate.

##### 2.2 — The application should include the following documents:

- a) Copy of detailed and structured *curriculum vitae* according to items in point 5;
- b) Other relevant documents for the evaluation of qualification in related scientific area;
- c) Any other documents that the applicant considers relevant, namely for the assessment of the information referred to in no. 2 of article 5 of the RJEC.

##### 2.3 — The *curriculum vitae* should contain:

- a) Full identification;
- b) Contacts: address, telephone number and email;
- c) Copy of the certificate with the respective mark or grade or other document that is legally recognised for the same purpose;



d) All pertinent information for assessing the application considering the selection and ranking criteria of the present call, organized according to the sub-items of the assessment set forth in Section 5 below.

2.4 — Submission of the application:

2.4.1 — The application may be submitted in Portuguese or in English, by email, to the Human Resources Department of the University of Aveiro (concursosDL57-2016@ua.pt) until the deadline stipulated in this Notice.

2.4.2 — The applicants are required to present a “message sent” confirmation as proof of the application submission.

2.4.3 — Instructions for the submission of applications, in digital format, are available in the Competition and Job Offers of the Human Resources area at <https://www.ua.pt/en/sgrh/pessoal-investigador-novos-concursos-e-ofertas>.

2.5 — Failure to comply with the deadline for submission of the application, as well as the incorrect formalization of the application, result in the exclusion of the application. The exclusion decision is communicated to candidates by e-mail for the purpose of their hearing.

3 — Call Jury:

3.1 — In accordance with article 13 of the RJEC the call jury has the following composition:

President: Professor Doutor João Filipe Calapez de Albuquerque Veloso, Vice-Reitor da Universidade de Aveiro

Jury members: Professor Doutor Rodrigo Ferrão Paiva Martins, Professor Catedrático da Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa; Professor Doutor João de Lemos Pinto, Professor Catedrático da Universidade de Aveiro;

Substitute members: Professor Doutor João Paulo Miranda Ribeiro Borges, Professor Associado com Agregação da Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa; Professor Doutor Ricardo Assis Guimarães Dias, Professor Auxiliar da Universidade de Aveiro.

4 — Jury operation rules

4.1 — The deliberations are held by roll call voting requiring the absolute majority of votes of the members of the jury present at the meeting, not permitting abstentions.

4.2 — The jury deliberates approval on absolute merit, based on the merit of the overall curriculum of candidates with regards to the scientific area of the Competition and also taking into account, cumulatively, compliance with at least one of the following requisites:

4.2.1 — The applicant is the author or co-author of at least 10 articles, in the scientific area that the Competition is open, indexed in the Science Citation Index Expanded of the Web of Science from Clarivate

Analytics where document type = article or document type = review, or in the SCI Verse Scopus with the same characteristics;

or  
4.2.2 — Have obtained a total of at least 100 citations to the scientific works produced in the area for which the contest is open,

or  
4.2.3 — Have obtained an average of 10 citations per article to the scientific works produced in the area for which the contest is open,

4.3 — The exclusion decision in absolute merit is communicated to candidates by e-mail for the purpose of their hearing.

4.4 — After the phase of approval in absolute merit, the jury will begin the process of appraisal of applications, taking into account the criteria set out in this notice.

5 — Evaluation and selection:

5.1 — The selection methods are curricular evaluation and a public presentation / public demonstration session / interview.

5.2 — The evaluation of the scientific and curricular course focuses on the relevance, quality and timeliness:

- a) Of scientific and technological production in the last five years, deemed most relevant by the candidate;
- b) Of applied research activities, or based on practical work, developed in the last five years, deemed most impactful by the candidate;
- c) Of knowledge extension and dissemination activities developed in the last five years, namely under the scope of the promotion of culture and scientific practices, deemed most relevant by the candidate;
- d) Of the activities of management of science, technology and innovation programmes, or the experience in observing and monitoring the scientific and technological, or higher education system, in Portugal or abroad.

5.3— The five-year period mentioned above can be extended by the panel, if requested by the candidate, whenever the suspension of scientific activities is reasoned by socially protected grounds like parental leave, long-term serious illness, and other legal situations of unavailability to work.

6 — Curricular Evaluation. This component of the evaluation is expressed on a numerical scale from 0 to 20 taking into account the following criteria:

6.1 — Curricular evaluation criteria are:



6.1.1 - Criteria for the evaluation of the scientific performance of the last five years considered more relevant by the candidate (16 points);

- Scientific Production. Quality and quantity of scientific production in the area that the Competition is open (books, articles in scientific journals, papers presented in conferences) expressed by the number and type of publications, and the recognition given by the scientific community (the quality of the location where it has been published and the references made by other authors);

- Coordination and participation in scientific projects. The quality and quantity of scientific projects in which the applicant has participated within the subject area of the Competition, whether financed through public funds of national or international agencies or by enterprises. The assessment of the quality must take into account the funding obtained, the degree of difficulty of the funding competition, the expert assessment of the projects and the resulting prototypes, particularly if they led to the development of products or services.

- Intervention in scientific community. Assessing the capacity to intervene in scientific community, particularly by organizing events, being (co-)editor of magazines, participation in the assessment of projects and articles, being invited to give speeches, being a member of academic juris, as well as being recognized through awards or other distinctions and respective impact. It will also evaluate the orientation of students in doctoral and post-doctoral work.

6.1.2 - Criteria for evaluating extension and knowledge dissemination activities developed over the past five years, in particular in the context of promoting culture and scientific practices, considered to be of greatest impact by the candidate (3 points);

Patents, registration and ownership of rights, elaboration of technical regulation and legislation. Patent authorship and co-authorship, records of ownership of intellectual property rights regarding software, mathematical methods and rules of mental activity. Participation in standardization committees and in the drafting of legislative projects and technical regulation. The evaluation of this criterion should also take into account the resulting economic valuation of patents and intellectual property rights.

Participation in consulting activities, tests and measurements involving the private and/or the public sector. Participation as a former in vocational training courses or technological expertise directed at companies or the public sector. The evaluation of this criterion should also take into account the economic valorization of research results achieved, measured by the contracts of technology transfer and development that have resulted and contribution to the creation of spin-off companies.

Participation in initiatives to disseminate scientific and technological knowledge under the auspices of the scientific community (for example organization of congresses and conferences) and to various audiences. Publications to disseminate science and technology. Presentation of lectures and seminars for the general public.



6.1.3 - Criteria for the evaluation of the activities of program management for science, technology and innovation, or experience in observing and monitoring the scientific and technological system or in higher education, in Portugal or abroad (1 point);

The candidate's participation in activities of scientific, technological and management innovation, or on the observation and monitoring of science and technology or system of higher education, in Portugal or abroad.

6.2 — The score obtained in the curricular evaluation method is expressed in numeric scale of 0 to 20, considering the valuation up to two decimal places.

6.3 — The jury deliberates by vote justified according to the criteria of evaluation, no abstentions are allowed.

6.4 — The classification of each candidate is obtained by averaging the scores of each of the elements of the jury.

6.5 — Once the Curricular Assessment is completed, the 4 best ranked candidates are approved for the application phase of the following evaluation method, as shown in point 5.1.

6.6 — Candidates who obtained a rating of less than 15 points are excluded from the public notice.

#### 7 — Public Presentation

This session, which can be applied to all or part of the candidates, is intended solely for clarification of aspects related to the results of the investigation.

7.1 — In this session the candidates make a public presentation of a topic of their choice with a duration of up to 15 minutes, which will be followed by a discussion that will have a maximum duration of 15 minutes.

7.2 — Public Presentation evaluation is expressed on a numerical scale of 0 to 20, taking into account the candidate's scientific knowledge and ability to communicate, as well as the answers to the questions put by the jury and their development perspectives in the unit for which they are applying.

7.3 — The jury deliberates by roll call voting, not permitting abstentions.

7.4 — The classification of each candidate is also obtained by the average of the scores of the members of the jury.

#### 8 — Ordering of candidates

8.1 — The final score of each candidate is obtained through an weighted average, by assigning a weighting factor of 90% to the curricular review note and a weighting factor of 10% to the public presentation score.

In case of a tie, the decision of the tie-breaker shall be the responsibility of the chairman of the jury.

#### 9 — Participation of the parties and decision:

9.1 — The final ordering project is communicated to candidates by e-mail for the purpose of their hearing.



9.2 — At the hearing of the interested parties, the jury appreciates the allegations offered and approves the final ordering list of candidates.

#### 10 — Publication of Competition Notice

In addition to being published in Series 2 of Diário da República the present notice is also published in:

- a) The Public Employment Pool (BEP);
- b) The website of the Foundation for Science and Technology, I.P., in Portuguese and English;
- c) The website of the University of Aveiro, in Portuguese and English;
- d) In a national newspaper.

11 — This tender is exclusively destined to fill this specific vacancy and can be terminated at any time until approval of final candidate list, expiring with the respective occupation of said vacancy.

12 — In compliance with paragraph h) of Article 9 of the Constitution of the Portuguese Republic, the Government, as the employing entity, actively promotes a policy of equal opportunities between men and women in access to employment and professional advancement, scrupulously taking measures to avoid any form of discrimination.

01 of March, 2021 — The Rector, *Professor Doutor Paulo Jorge dos Santos Gonçalves Ferreira*.

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