

Public notice Ref.^a CDL-CTTRI-146-ARH/2019 — 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 Labour Code, a position for a Doctorate equivalent to Assistant Researcher for the exercise of activities of scientific research in the scientific area of Physics Engineering, to exercise the functions of modulation and characterization of prototypes based on light emitting materials for luminescent solar concentrators in the project CENTRO-01-0145-FEDER-000005: SusPhotoSolutions: Sustainable Photovoltaic Solutions, supported by the Operational Program of Centro (Centro 2020), in its FEDER/FNR component.

In order to contribute to the objectives of this project, it is expected that the researcher to be hired has demonstrated experience in:

- I) Study of the optical properties of processed materials in the form of thin films, using spectroscopic ellipsometry.
- II) Modeling and optical characterization of radiation guidance mechanisms in optical fibers.
- III) Creation of algorithms in MatLab for acquisition and analysis of optical properties.
- IV) Electrical characterization of photovoltaic devices.

The researcher to be hired will work in the context of task (3.3) called "General characterization of optically active layers", in particular to carry out the spectroscopic ellipsometry tests to define the dispersion curve for the deposited layer to evaluate the most efficient hybrids in terms of their trapping efficiency. The most efficient hybrid materials will be used to fabricate cylindrical LSCs (low cost geometry and high concentration factor) and task (3.4) entitled "Modeling of host-dye interaction and light propagation within LSCs" with respect to modeling of the light propagation within the LSCs, through a Monte Carlo simulator to predict the optical efficiency of the LSC as a function of the fiber type (compact or hollow fibers), its geometry and the optical properties of the active layer. In addition to these tasks, the researcher to be hired will participate in the orientation of undergraduate and graduate students and in the extension and dissemination of knowledge activities, particularly in the context of the societal scientific dissemination.

The present public notice was opened on June 24th 2019 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 on 7/2009, February 12, in its current wording and other applicable legislation and regulations.

The monthly payment corresponds to 3191,82€, according to the 2º Decree Regulatory n. 11-A/2019 of December 29th.

1 — Admission requirements:

Any national, foreign and stateless candidate(s) who hold a doctorate degree in Physics Engineering or Electronic Engineering and a scientific and professional *curriculum* whose profile is suited for the activity to be performed, can submit their applications.

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 category and 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) 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 area of Competition and Job Offers of Human Resources area at <https://www.ua.pt/sgrhf/PageText.aspx?id=15052>.

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 Luís António Ferreira Martins Dias Carlos, Full Professor of University of Aveiro.

Jury members: Professor Doutor Maria Rute de Amorim e Sá Ferreira André, Associate Professor of University of Aveiro and Professor Doutor Paulo Sérgio de Brito André, Associate Professor with Agregation of Univeristy of 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 author or co-author of at least 12 articles, in the scientific area that the Competition is open, indexed in the ISI Science Citation Index Expanded of the Web of Science 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 (excluding self-citations) to the scientific works produced in the area for which the contest is open, indexed in the ISI Science Citation Index Expanded of the

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

or

4.2.3 — Have obtained an average of 10 citations per article (excluding self-citations) 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.

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

- a) Of scientific, technological, cultural or artistic 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 (17 points);

Scientific Production. Quality and quantity of scientific production in the area of the Competition is opened (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);

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 (1 point);

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.

6.1.3: Criteria for evaluating applied or practice-based research 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 (1 point);

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.

6.1.4 - 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 better-classified candidates (in a maximum of two candidates) who obtain an average score equal or higher than 15 values, are approved for the next evaluation method as indicated 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 to your choice with duration up to 30 minutes, which will follow a discussion that will have a maximum duration of 60 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 you are running.

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/ note.

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 the 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.

24th June 2019— The Rector, *Professor Doutor Paulo Jorge dos Santos Gonçalves Ferreira*.