

(BL1/2022-IST-ID)

Post-Doctoral Research Fellowships

Applications are open for one Post-Doctoral Research Fellowship, within the framework of project **pUc-LED - Phosphor-Up-converted white LEDs assisted by 1-D photonic crystals/CQE**, of reference PTDC/CTM-CTM/0757/2021, financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Chemistry-Physics, Materials and NanoSciences, and related areas

Admission Requirements:

- a) *to hold a PhD degree obtained in the 3 years previously to the submission of the fellowship application;*
- b) *to have carried out the research work that led to the PhD degree in a different entity from the host institution of the fellowship;*
- c) *Not to exceed, with this fellowship contract, including the possible renovations, an accumulated period of 3 years in this type of fellowship, continuously or with interruptions;*
- d) *Not to have previously held a post-doctoral fellowship from IST.*

Workplan: This fellowship regards: (a) research activities with the goal of developing LED prototype demonstrators for white light generation, through (anti-Stokes) Up-conversion (Uc) photoluminescence, excited by an external 980 nm laser diode, and assisted by photonic crystals deposited by the sol-gel technique; (b) dissemination activities of the obtained results. The fellow will employ, among others, sol-gel processing and photoluminescence spectroscopy techniques, as well as CIE chromaticity diagrams.

Legislation and Regulations: Statute of Scientific Research Fellow, approved by Law nr. 40/2004, of August 18, as worded by Decree-Law nr. 123/2019, of August 28; FCT Regulation for Research Studentships and Fellowships, available on <https://www.fct.pt/apoios/bolsas/docs/RegulamentoBolsasFCT2019.pdf> and <https://dre.pt/application/file/a/127230968>.

Workplace: The work will be developed at Centro de Química Estrutural (CQE) of Instituto Superior Técnico (IST), under the scientific supervision of Professor Rui Almeida.

Duration: The research fellowship will have the duration of 18 months. It's expected to begin in March 2022, eventually renewable up to the maximum of 18 months.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (<http://www.fct.pt/apoios/bolsas/valores>), the amount of the monthly maintenance allowance is € 1646, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: background and academic degree, relevant experience for the project (sol-gel processing and relevant characterization techniques on the topic of the project) and motivation letter, with the respective weight of 40%, 40% and 20%. An individual interview will be held in case of a tie.

Composition of the selection Jury: Professor Rui Manuel Amaral de Almeida, Professor Luís Filipe Santos, Professora Ana Clara Marques.

Announcement/ notification of the results: The final evaluation results will be communicated to all applicants by email.

Deadlines and procedures of complaint and appeal. A complaint may be lodged from the final decision within 15 working days, or an appeal to the Executive Board of IST-ID within 30 working days, both counted from the respective notification

Application deadline and formalization: The call is open from 17 until 28 January 2022.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<https://ist-id.pt/concursos/bolsas/>); ii) *Curriculum Vitae*; iii) academic degree certificate; iv) motivation letter; v) declaration on honour that the applicant does not exceed with this contract an accumulated period of three years in this type of fellowship, continuously or with interruptions, within the technological and scientific system, and that the research work that led to the PhD degree was carried out in a different entity from the host institution of the fellowship.

Applications must be submitted to the email: rui.almeida@tecnico.ulisboa.pt