

(BL44/2025)

Research Studentships (PhD students)

Applications are open for 1 Research Studentship(s) (PhD students), within the framework of project 30% PEP 1018P.05859.1.09.07, IPFN BASICO 2025-2029 e 70% no Eurofusion – PEP 1018P.05872.1.01.01, financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Plasma Physics, Lasers and Nuclear Fusion

Admission Requirements: *To be enrolled at a PhD.*

Workplan: “Oxidation behaviour of boron coatings for nuclear fusion applications”. Boronization techniques will be used to cover the tungsten (W) first wall in ITER in order to decrease the contents of the main plasma impurity during reactor operation, oxygen. The aim of the workplan is to study the oxidation behaviour of boron (B) coatings, a beneficial process occurring after boronization. Thin B coatings will be deposited on W substrates and annealed under controlled times, temperatures and atmospheres. Ion beam analysis, electron microscopy, X-ray diffraction and thermal desorption analytical techniques will be used to characterize the oxidation process.

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 IPFN, Campus Tecnológico e Nuclear, Instituto Superior Técnico, Estrada Nacional 10 (km 139,7), 2695-066 Bobadela LRS, under the scientific supervision of Dr. Norberto José Sobral Catarino and Dr. Rodrigo Clemente Velez Mateus.

Duration: The research fellowship(s) will have the duration of 12 months. It's expected to begin in April 2025, and may be eventually renewed up to the maximum of 48 months, including the duration of the initial contract.

Monthly maintenance allowance: According to the values for Research Fellowships awarded by FCT in Portugal (https://www.fct.pt/wp-content/uploads/2025/02/Tabela_valores_SMM_2025.pdf), the amount of the monthly maintenance allowance is € 1309,64, being the payment method of the Fellow by wire transfer.

Selection methods: The selection methods will be the following: *Curriculum evaluation and individual interview* with the respective weight of 60% and 40%.

Composition of the selection Jury: Dr. Carlos Silva (ist23913), Dra. Marta Dias (ist46980), Dr. Rodrigo Mateus (ist24807)

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 March 18 until March 31, 2025.

It is mandatory to formalize applications with the submission of the following documents: i) B1 Form – Fellowship application (<http://drh.tecnico.ulisboa.pt/bolseiros/formularios/>); ii) *Curriculum Vitae*; iii) academic degree certificate, where applicable; iv) proof of enrollment at an academic degree course (PhD); v) motivation letter.

Applications must be submitted to the email: bolsas@drh.tecnico.ulisboa.pt



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