

Post-Doctoral Research Fellowships

Applications are open for one Post-Doctoral Research Fellowship(s), within the framework of project from Centro de Química Estrutural, UIDB/00100/2020 financed by national funds through FCT/MCTES (PIDDAC), under the following conditions:

Scientific Area: Chemistry and Chemical Engineering

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-ID.*

Workplan: The work will address the design, synthesis and characterization of coordination compounds with ecological and abundant metals, namely from the first transition series (e.g., iron, copper, cobalt, zinc) and alkaline, including polynuclear complexes of metallocenes, and their application as homogeneous and/or supported catalysts, in the activation of small molecules, including alkanes, alcohols, ketones, namely in C-H bond activation reactions, in oxidation reactions, Baeyer-Villiger, Knoevenagel condensation, among others, exploring different media (e.g., aqueous, glycerol, scCO₂) as well as unconventional reaction conditions (MW, scCO₂) aiming to establishing sustainable processes for the synthesis of added-value compounds. Reaction mechanisms of selected systems will also be studied, by experimental and theoretical methods. Thus, proven experience in synthesis and characterization of complexes of the mentioned types and their application in catalysis of the mentioned types is required, as well as analytical techniques of IV, multinuclear NMR, GC, and in the electrochemical technique of cyclic voltammetry.

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 of Instituto Superior Técnico, under the scientific supervision of Professor Maxim Leonidovich Kuznetsov

Duration: The research fellowship(s) will have the duration of 6 months. It's expected to begin in July 2024, and may be renewed up to the maximum of 36 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/2024/02/Tabela-de-Valores-SMM_atualizacao-2024.pdf), the amount of the monthly maintenance allowance is € 1 801,00, being the payment method an option of the Fellow by Wire Transfer/Check.

Selection methods: The selection methods will be the following: Curriculum evaluation, individual interview by Zoom with the respective weight of 60% + 40%. Proven research experience in the topic of the work plan is an essential requirement.

Composition of the selection Jury: Maxim Leonidovich Kuznetsov (Auxiliary Professor, IST; president), M. Fátima C. Guedes da Silva (Associate Professor, IST. Anirbarn Karmakar, Elizabete Alegria (Adjunct Professor, ISEL),)



Fundação
para a Ciência
e a Tecnologia

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 June 20 until July 3, 2024.

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: fatima.guedes@tecnico.ulisboa.pt



Fundação
para a Ciência
e a Tecnologia