

Pedro Rodrigues is a Postdoctoral Researcher at the Institute for Polymers and Composites, University of Minho (UM) in Portugal. He received his PhD degree in Science and Engineering of Polymers and Composites (2020) and a master's degree in Materials Engineering (2015) from the UM. He has a strong background in reactive extrusion, compounding (polymer blends and nanocomposites), and material science. The last 5 years (2019-2024) of his scientific work were mostly focused on the development and transfer of scientific knowledge to the industry, working alongside more than ten industrial projects, and developing scientific work with several research groups and centers. Currently, he is focusing on the development of solutions to foster sustainability in materials science and industry. Alongside his research activities, Pedro started his career as Professor at the Department of Polymers Engineering, lecturing several courses for more than 100 students. Pedro has/is supervised/ing several students and researchers (16 Msc student, 13 tutoring MSc and 2 PhD students), has 20 published papers and 21 conference presentations (still increasing). Pedro has developed research activities in the area of Polymers Science at the Institute for Polymers and Composites (IPC), UM, and at the Center for Innovation in Polymer Engineering. These activities have always been strongly linked to industrial, technological and research centers. Pedro has been actively involved in several industrial and scientific projects from his supervisor Professor Ana Vera Machado (IPC/DEP UMinho), helping and guiding undergraduate and graduate students and researchers in laboratory activities. He has collaborated in theoretical-practical classes from master courses and demonstrations to high school students. The beginning of his professional career (2016) allowed him to get in touch with advanced techniques in the functionalization of synthetic polymers by reactive extrusion. In 2017, he embraced a new project to obtain a PhD degree in Science and Engineering of Polymers and Composites, in partnership with several companies in the Portuguese footwear sector (IMPULSE and FAMEST projects). In this project, high-performance materials were developed for the safety footwear industry, namely for non-slip soles with thermochromic properties, and copolymers for structural application in toe caps and shanks, resulting in two commercialized products. Subsequently, Pedro was involved in several research projects with a strong component in the functionalization and compounding of polymeric systems. These experiences captivated his interest in this area, leading him into a huge challenge with one of the largest international reference companies in the manufacture and sale of raw materials for the plastics industry (BASF, SA). Since then, he has been actively working on the development of innovative and sustainable materials from material waste (MOBFOOD, GreenShoes, and BetterPlastics projects) and marine plastic pollution (MASPLAS project). Pedro has a proactive attitude, giving positive and decisive contributions in projects of fellow grantees, in a synergy of knowledge and multidisciplinary skills. He is responsible for several laboratory equipments, manages 1 laboratory at IPC, and is responsible for the material inventory of his working research group. He is constantly working with other research groups (Physics Department at the University of Minho, CIMO-IPB, INSA, IPL-CDRSP, CENTIMFE), participating in project meetings, developing studies, and publishing. Overall, Pedro Rodrigues's research profile has been building up to develop more sustainable polymeric solutions, enhancing the circular economy, and fighting against global pollution, with a strong collaboration with the industry. Keywords: Polymer; Reactive extrusion; Blending; Compounding; Nanomaterials; Polymer functionalization; Circular economy; materials science; material characterization; biopolymers