

Short biography

Marcela Alves Segundo, PhD

Professora Auxiliar, Department of Chemistry, Faculty of Pharmacy, University of Porto

Marcela Segundo is an expert in Instrumental Methods of Analysis and Analytical Chemistry, coordinating a research group in Separation Science and High-throughput Screening. Her current research is focused on automation of sample treatment prior to chromatographic analysis, and on development of high-throughput microchemical methods. Her scientific production comprises 14 book chapters, 125 peer-reviewed papers in international journals, with over 2550 citations (*h*-index is 29). She has successfully supervised 10 PhD thesis and is currently supervisor of 5 PhD students, funded by Portuguese grants and Brazilian CAPES. She is also a member of the Direction Board of SANFEED program – Sustainable Animal Nutrition and Feeding, PhD program funded by FCT and companies. In 2016 she received the FIA Award for Science attributed by the Japanese Association for Flow Injection Analysis. Since 2018, she is the Secretary of Division of Analytical Chemistry – EuChemS (European Chemical Society).

Abstract

A glimpse of opportunities and challenges in Analytical Chemistry

Marcela Alves Segundo, Department of Chemistry, Faculty of Pharmacy, University of Porto

What is expected from analytical chemists in 2020? This lecture will address the main challenges faced today, including the need for sustainable methods, the involvement of citizens in science, the -omics needs, and the quest for low level of analytes and for low sample amount. Some selected examples will illustrate how these challenges can be met, namely through chromatographic methods coupled to tandem mass spectrometry. Other examples will address flow based methods that provide kinetically relevant information in studies dealing with bioactive compounds, and also how smart-phones can be incorporated in analytical sciences.