

Curriculum Vitae

My name is José Aniceto, I'm 30 years old and I currently live in Aveiro. I have just completed my PhD in Chemical Engineering at University of Aveiro after obtaining my Master's degree from FEUP (U. Porto). During my PhD I worked with SMB technology for the separation of high value compounds. This work comprehended modeling and simulation, material synthesis and set-up of a SMB unit. My research activities have been focused in separation processes, namely adsorption processes and ion exchange. I have also worked on the production of polyols from biomass residues in the context of biorefinery.

EXPERIENCE

PhD Researcher

CICECO, University of Aveiro

2013 – Jan 2018

Working on the separation of triterpenic acids by simulated moving bed chromatography in the scope of my PhD thesis which was completed in January 2018. During this work I've assembled a laboratory SMB unit, developed a SMB simulator program and synthesised new adsorbent materials.

Research Fellow (European Project AFORE)

CICECO, University of Aveiro

2012 – 2013

Working on the design and development of a simulated moving bed chromatography process for the separation and purification of compounds of high commercial value.

Research Fellow (EcoPolyol Project)

CICECO, University of Aveiro

2011 – 2012

Working on the development of a biomass-based polyol production process.

Management of Research Laboratory

Egichem Laboratory, University of Aveiro

2015 – Present

Management of the EgiChem Laboratory coordinated by Prof. Carlos Silva. Responsible for the maintenance, cleaning and safety tasks of the laboratory and coordination of its members.

Collaboration in teaching activities

Department of Chemistry, University of Aveiro

2015 – 2016

Collaboration and assistance on the classes of Engenharia Avançada das Reações Químicas (1st Semester/5th year, MIEQ, UA). Advanced problem solving using numerical methods and Matlab.

FURTHER TRAINING

Seminar | Development of HPLC methods and global solutions for HPLC and UHPLC

Provided by Eng. Rafael Chust (Managing Director of Tecnocroma) at UA

2013

Covering topics from the basic theory of chromatography to the selection of stationary and fluid phases and the usage, maintenance and care of HPLC columns.



José Aniceto

Chemical Engineer

✉ joseaniceto@ua.pt

📍 Aveiro

🌐 sweet.ua.pt/joseaniceto

🌐 linkedin.com/in/janiceto

🌐 orcid.org/0000-0001-5206-0142

EDUCATION

PhD in Chemical Engineering

University of Aveiro

2013 – 2018

MSc in Chemical Engineering

FEUP, University of Porto

2005 – 2010

LANGUAGES

Portuguese Native

English Professional (C1)

French Basic (A1)

OTHER

Year of birth 1987

Driving licence Category B

Seminar | Advanced material characterization techniques

Provided by Paralab and Netzsh

2013

Covering thermal analysis techniques (TG, DSC, DMA and DEA) as well as hyphenated techniques for the analysis of released gases (TG/STA-FTIR, TG/STA-MS and TG/STA-GC/MS).

Workshop | Aspen Tech

Provided by Prof. Doutor Francisco Avelino da Silva to the Egichem group at University of Aveiro

2011

General overview of the Aspen simulator and application to several case studies.

Workshop | Speciation methods for assessing the origin, mobility and toxicity of metals in contaminated matrices

Provided by CESAM, University of Aveiro

2011

Covering recent developments and approaches in speciation methods of solid matrices.

Workshop | Design of Experiments and Response Surface Methodologies

Provided by Eng. António Bettencourt to the Egichem group at University of Aveiro

2010

Covering topics such as analysis of variance (ANOVA), complete and factorial design of experiments and introduction to the Taguchi design.

PUBLICATIONS**Papers in international peer-reviewed journals (10)**

JPS Aniceto, IS Azenha, FMJ Domingues, A Mendes, CM Silva. Design and optimization of a simulated moving bed unit for the separation of betulinic, oleanolic and ursolic acids mixtures: Experimental and modeling studies, *Separation and Purification Technology*, 2018, 192 401-411.

JPS Aniceto, CM Silva. General optimization strategy of simulated moving bed units through design of experiments and response surface methodologies, *Computers & Chemical Engineering*, 2016, 90 161-170.

JPS Aniceto, CM Silva. Simulated Moving Bed strategies and designs: From established systems to the latest developments, *Separation and Purification Reviews*, 2015, 44(1) 41-73.

PF Lito, **JPS Aniceto**, CM Silva. Maxwell-Stefan based modelling of ion exchange systems containing common species (Cd^{2+} , Na^+) and distinct sorbents (ETS-4, ETS-10), *International Journal of Environmental Science and Technology*, 2015, 12(1) 183-192.

PF Lito, **JPS Aniceto**, CM Silva. Modelling ion exchange kinetics in zeolyte-type materials using Maxwell-Stefan approach, *Desalination and Water Treatment*, 2013, 52(28-30) 5333-5342.

JPS Aniceto, DLA Fernandes, CM Silva. Modeling ion exchange equilibrium of ternary systems using neural networks, *Desalination*, 2013, 309 267-274.

PF Lito, **JPS Aniceto**, CM Silva. Removal of Anionic Pollutants from Waters and Wastewaters and Materials Perspective for their Selective Sorption, *Water, Air, & Soil Pollution*, 2012, 223(9) 6133-6155.

JPS Aniceto, CM Silva, I Portugal. Biomass-Based Polyols through Oxypropylation Reaction, *Chemoschem*, 2012, 5(8) 1358-1368.

JPS Aniceto, PF Lito, CM Silva. Modeling Sorbent Phase Nonideality for the Accurate Prediction of Multicomponent Ion Exchange Equilibrium with the Homogeneous Mass Action Law, *Journal of Chemical & Engineering Data*, 2012, 57(6) 1766-1778.

JPS Aniceto, SP Cardoso, TL Faria, PF Lito, CM Silva. Modeling ion exchange equilibrium: Analysis of exchanger phase non-ideality, *Desalination*, 2012, 290 43-53.

Book Chapters (2)

JPS Aniceto, CM Silva. Preparative Chromatography: batch and continuous in: Analytical Separation Science (Volume 5), ed: Alain Berthod, 2015, Wiley-VCH.

JPS Aniceto, CM Silva. Recent simulated moving bed strategies for enhanced separations, Recent Research Developments in Chemical Engineering, 2014, 7, 45-60.

Communications (4)

IS Azenha, **JPS Aniceto**, FMJ Domingues, A Mendes, CM Silva. Design and optimization of a simulated moving bed unit for the separation of betulinic, oleanolic and ursolic acids mixtures: experimental and modeling studies, 10^o Encontro Nacional de Cromatografia, Bragança, Portugal, 4-6 December, 2017.

JPS Aniceto, AF Silva, SP Cardoso, CM Silva. Isolation of high value triterpenic acids by Simulated Moving Bed (SMB): design of lab unit and modelling results, XX Encontro Luso-Galego de Química, 2014.

JPS Aniceto, CM Silva. High value triterpenic acids from Eucalyptus barks: design and construction of a Simulated Moving Bed (SMB) equipment for the isolation of pure compounds, FuBio Seminar 2013, Helsinki, Finland, 2013.

B Soares, **JPS Aniceto**, CSR Freire, I Brandão, CM Silva, I Portugal, CP Neto. Valorization of Coffee grounds by oxypropylation, Chempor 2011, 2011.

TECHNICAL AND COMPUTER SKILLS

Over 5 years experience in **laboratory work**.

Experience with **HPLC** and **spectroscopy** techniques.

Experience in the **modeling** and **optimization** several processes and phenomena.

Application of **Design of Experiments (DOE)** and **Response Surface Methodologies (RSM)** for the efficient design of experiments aimed at process optimization as well as the use of several softwares (Design Expert, Statistica, JMP).

Advanced **Matlab** programming experience: application of numeric methods and optimization algorithms, process modeling and simulation.

Aspen software for engineering design and process simulation.

Extended knowledge of **Microsoft Office** applications (Word, Excel, Power Point, Access, Project, Visio).

Python programming experience for scientific computation, automation, web scrapping.

VBA integrated in MS Office applications, file automations, macro programming.

Web design and development (HTML, CSS, Javascript, PHP).

ADDITIONAL INFORMATION

Volunteer work

Refood, Aveiro Center (re-food.org)

Mar 2016 – Present

Re-food is an independent, citizen driven, 100% volunteer, eco-humanitarian community charity, working to eliminate food waste and hunger on a neighborhood basis. I have been involved in the collection of excess food and its packaging and managing its redistribution.