

## Curriculum Vitae

My name is José Aniceto, I'm 29 years old and I currently live in Aveiro. I have a Master's degree in Chemical Engineering from FEUP and I am currently finishing my PhD at University of Aveiro, working with SMB technology for the separation of high value compounds. My research activities have been focused in separation processes, namely ion exchange and adsorption processes. I have also worked on the production of polyols from biomass residues in the context of biorefinery.

## EXPERIENCE

### PhD Fellow

CICECO, University of Aveiro

2013 – Present

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

### 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 triterpenic acids 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 (1<sup>st</sup> Semester/5<sup>th</sup> 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

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## EDUCATION

### PhD in Chemical Engineering

University of Aveiro  
Finishing in 2017

### MSc in Chemical Engineering

FEUP, University of Porto  
2005 – 2010

## LANGUAGES

Portuguese Native

English Professional

French Basic

## 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

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

## 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 (9)

**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 ( $\text{Cd}^{2+}$ ,  $\text{Na}^{+}$ ) 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, Chemsuschem, 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 (3)

**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, EU Project AFORE final meeting, 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 DOE 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).

**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 distribution.