Part A. PERSONAL INFORMATION

CV date	10/07/2023

First and Family name	Victoria Eugenia Santos Mazorra		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID)	0000-0003-0600-8153	
	SCOPUS Author ID	7006173000	
	WoS Researcher ID	C-4003-2014	

A.1. Current position

Name of University/Institution	Universidad Complutense de Madrid		
Department	Chemical and Materials Engineering Department		
Address and Country	Facultad de Ciencias Químicas. Ciudad Universitaria s/n, Spain		
Phone number	+34913944179	E-mail	vesantos@ucm.es
Current position	Full Professor	From	December 2018
Key words	Biochemical Applied Kinetics, Reactor Design, Bio/process development and optimization, Biorefineries, Circular Bioeconomy		

A.2. Education

PhD, Licensed, Graduate	University	Year
PhD Chemical Sciences/Chem.Eng.	Universidad Complutense de Madrid	1993
Licensed Chemistry-Ind. Chemistry	Universidad Complutense de Madrid	1987

A.3. General indicators of quality of scientific production

6-year researching periods recognized: . Supervised Ph.D. Thesis from 2010: 8. H Index (WOS/Scopus): 26/29. 98 total scientific publications (89 in JCR; 43 % in Q1); total citations (WOS/Scopus) 2872/3268; total average citations per item: 33.79. More than 150 oral and poster communications to scientific congresses and symposia.

Part B. CV SUMMARY

Ph.D.Thesis on Xanthan Production, defended in June 1993, which won the extraordinary doctoral award. This Thesis was the first one on Industrial Biotechnology made in the Department of Chemical Engineering of the UCM. The research career was focused on the field of Industrial Biotechnology, with the aim of developing sustainable production bioprocesses from the perspective of chemical engineering, that is, identifying phenomena, and carrying out their experimental study and modelling. Within these works, the kinetic modeling of microbial bioprocesses has been addressed in a prominent way, as well as the study of the oxygen transfer and uptake rates, a decisive phenomenon in the correct functioning of aerobic bioprocesses. Likewise, the phenomenon of cell damage due to the hydrodynamics necessary to achieve the correct transfer of oxygen in this type of system is being studied.

In the latest projects undertaken, it was essential the incorporation of the recovery of wastes (glycerol from biodiesel production, waste from agro-food industries) entering the concept of circular bioeconomy. Within these projects, it is worth mentioning the management of three in ERA-Nets (ERA-IB -2 projects- and SUSFOOD2) forming part of international consortiums and managing the global consortium in the last of them (SUSFOOD2, which is still underway)

It is worth mentioning that since 2008 she is co-director of the consolidated UCM research group called "Physical-chemistry of Industrial and Environmental Processes-FQPIMA 910134", a team of professors from the area of Chemical Engineering in which multidisciplinary research is undertaken (doctoral students come not only from the area of Chemical Engineering, but also from Biology and Biochemistry). From 2020 she is director of the group.

My medium-term scientific-technical objectives would be to contribute to the development of these two great ideas: Biorefinery and circular bioeconomy; all with the overall objective of

minimizing the environmental impact of industrial processes necessary for development, but without neglecting the study and modeling of all novel phenomena that can be identified in the different processes considered; in particular, to address the scaling up of microbial bioprocesses from the perspective of the influence of the phenomena involved in and their modelling.

Part C. RELEVANT MERITS

C.1. Publications.

Total number of papers published between 2017 and 2023: 41.

The most important are:

1. Martinez, I., Mohamed, M.E.S., Santos, V.E., García, J.L., García-Ochoa F., Díaz, E. Metabolic and Process Engineering for biodesulfurization in gram-negative bacteria. Journal of Biotechnology 262:47-55 **(2017). 46 Citations**
2. I. de la Torre, M. Ravelo, S. Segarra, M. Tortajada, V.E. Santos; M. Ladero. Study on the effects of several operational variables on the enzymatic batch saccharification of orange solid waste. Bioresource Technology 245:906-915 **(2017)**. **26 Citations.**
3. V. Martin-Dominguez, Estevez, J., Ojembarrena F.B., V.E. Santos, M. Ladero. Fumaric Acid Production: A Biorefinery Perspective. *Fermentation.*4(2):33 **(2018). 46 citations**.
4. I de la Torre, M. Ladero, V.E. Santos. Production of D-lactic acid by *Lactobacillis delbruckii spp. delbruckii* prom orange peel waste: techno economical assessment of nitrogen sources. Applied Micriology and Biotechnology 102(24):10511-10521 **(2018). 38 citations**.
5. J.J. Senit, D. Velasco, A. Gomez Manrique, M. Sanchez-Barba, J. M. Toledo, V.E. Santos, F. García-Ochoa, P. Yustos and M. Ladero. Orange peel waste upstream integrated processing to terpenes, phenolics, pectin and monosaccharides: Optimization approaches. Industrial Crops and Products 134:370-381 **(2019). 31 citations.**
6. I de la Torre, Martin-Dominguez, V. Acedos, M.G., Esteban J., Santos, V.E., Ladero, M.Utilization/upgtrading of orange peel from a biological biorefinery perspective. Applied Microbiology and Biotechnology.103(15):5975-5991 **(2019). 40 citations.**
7. I de la Torre, M. Ladero, V.E. Santos. D-lactic acid production from orange peel waste enzymatic hydrolysates with *L. delbrueckii* cells in growing and resting state. Industrial Crops and Products 146:112176 **(2020)**. **15 citations.**
8. M.G. Acedos, I. de la Torre, V.E. Santos, F. Garcia-Ochoa, J.L. Garcia and B. Galan. Modulating redox metabolism to improve isobutanol production in *Schimwellia blattae*. Biotechnology for Biofuels 14:8 **(2021). 10 citations**
9. F. García-Ochoa, P. Vergara, M. Wojtusik, S.Gutierrez, V.E. Santos, M. Ladero, J.C. Villar. Multi-feedstock lignocellulosic biorefineries based on biological processes: An overview. Industrial Crops and Products 172: 114062 **(2021). 11 citations**

C.2. Research projects. Research projects in the last 10 years (2013-2023): 12. Most relevant projects (2017-2023):

1. Main Researcher: Juan Manuel Bolívar (Victoria E. Santos' role: researcher)
Project Reference code: BMRex – 101099528.
Project title Biocatalytic membranes for micro/nano plastic degradation within waste water effluents.
Funding Agency: HORIZON-EIC-2022-PATHFINDEROPEN-01. EIC Pathfinder 2022 Call.
Duration: 2023-2026
Obtained funds: 528513.25 €. **Project status:** ongoing

2. Main Researcher: Juan Manuel Bolívar (Victoria E. Santos' role: researcher)
Project Reference code: DECADES - 101072731GAP-101072731.
Project title DEsign of CAtalytic processes with Deep-Eutectic-Solvents.
Funding Agency: HORIZON-MSCA-2021-DN-01.

Duration: 2023-2026
Obtained funds: 503942.40 €. **Project status:** ongoing

3. **Main Researcher:** Miguel Ladero (Victoria E. Santos' role: researcher)
Project Reference code: PCI2022-132971.
Project title Neoteric Biomaterials for hiPSCs Monitorized Differentiation to RGCs: Creation, Microfabrication & Microfluidics (BioMAT4EYE).
Funding Agency: : MCIU Proyectos de I+D+I «Programación Conjunta Internacional» 2022. ERA-Net M-Era.Net3 Cofund 2021. **Duration**: 01/07/2022-30/06/2025
Obtained funds: 140.000 €. **Project status:** ongoing

4. **Main Researcher:** Miguel Ladero and Victoria E. Santos
Project Reference code: PID2020-114365RB-C21.
Project title Transformación de biomateriales residuales del sector alimentario en ingredientes para embalajes sostenibles (VALOPACK).
Funding Agency: Agencia Estatal de Investigación **Duration**: 01/09/2021-31/08/2024
Obtained funds: 140.000 €. **Project status:** ongoing

5. **Main Researcher:** Victoria E. Santos Mazorra (UCM). General coordinator of the international consortium (8 partners from Spain, France, Norway and Germany)
Project Reference code: PCI2018-093114. **Project title** Sustainable Processing of agro-food residues to elicitors and Chemicals (SPAREC)
Funding Agency: : MCIU Proyectos de I+D+I «Programación Conjunta Internacional» 2018. ERA-Net SUSFOOD2. **Duration**: 01/04/2018-31/12/2021
Obtained funds: 94.000 € (UCM budget). **Project status:** finished

6. **Main Researcher:** Félix García-Ochoa Soria / Miguel Ladero Galán (Victoria E. Santos' role: researcher)
Project Reference code: CTQ2017-84963-C2-1-R. **Project title**: Hacia una biorrefinería integrada utilizando biomasa lignocelulósica (BIOREFINE)
Funding Agency: MINECO (Retos de la Sociedad). **Duration**: 01/01/2018-30/09/2021
Obtained funds: 249.000 €. **Project status:** finished

7. **Main Researcher:** Victoria E. Santos Mazorra
Project Reference code: PCIN-2013-021-C02-01. **Project title:** Production of Organic Acids for Polyesters synthesis (POAP)
Funding Agency: MINECO. Programa de Internacionalización de la I+D. ERA-IB. (6 partners from Spain, Germany and Turkey). **Duration:** 01/12/2013-28/02/2018
Obtained funds: 120.000 €. **Project status:** finished

C.3. Contracts, technological or transfer merits

1. **Main researcher:** Victoria E. Santos and Miguel Ladero
Project Reference code: AINIA (248-2020). **Project title:** Análisis de azúcares en muestras de residuos y de ácidos y alcoholes en muestras de fermentación
Funding Company: AINIA **Duration:** 21/07/2020 – 21/07/2023
Obtained funds: charge per analyzed sample. **Contract status**: approved.

C.4. Patents

Participants: Biópolis, S.L. and UCM**.**
Authors: MAR; SS; AM; MT; DR; **Santos, V.E**.; MLG; G-O, F.; VRM
Title: Method for producing 2,3-butanediol using improved strains of *Raoultella planticola*
Spanish Patent Application: P201231119. **Date:** 17/07/2012
PCT number: W02014 / 013330 **Date:** 23/01/2014
European Patent: EP2876155B1. **Date:** 06/09/2017.
American Patent: US9783832 B2. **Date:** 10/10/2017.

C.5. Activity as Ph.D. Thesis and Master/Bachelor final projects supervisor (last 5 years). 10 Master and 13 Bachelor final projects. Four Ph.D. Thesis (all of them in the Chemical Engineering doctorate program of the UCM) and two in progress.

1. Title: Producción de ácido succínico con *Actinobacillus sucinogene*' Date: May 2023. Publications related to her Ph.D. Thesis: 7. Ph.D. Student: Itziar Arias Escanciano.
2. Title: Producción de ácido fumárico. Date: January 2023. Publications related to her Ph.D. Thesis: 4. Ph.D. Student: Victor Martín Dominguez.
3. Title: Producción biotecnológica de ácido D-Láctico a partir de residuos de naranja Date: October 2019. Publications related to her Ph.D. Thesis: 5. Ph.D. Student: Isabel de la Torre Pascual.
4. Title: Producción de isobutanol a partir de glucosa en cultivos de Shimwellia blattae (p424IbPSO): Desarrollo, Fenomenología y Modelización. Date: September 2019; Publications related to his Ph.D. Thesis: 6. Ph.D. Student: Miguel García Acedos.

C.6. Activities in Scientific Committees of Congresses & Symposia, Journal reviewer and Projects reviewer

Member of Scientific Committees: 2017-10th World Congress in Chemical Engineering.
Reviewer of more than 20 Journals in Q1 and Q2 in the areas: Chemical Engineering, Applied Biotechnology, Environmental Engineering and Energy & Fuels.
Participation in the panel of experts for the evaluation of projects of the Spanish National Research Plan (CTQ) in 2016 (PPQ).
Collaboration with AEI in evaluation of Infrastructures (2021) and hiring of technicians (2021)
Collaboration in the evaluation of projects with the agencies of Argentina (2017) and Germany (2020).

C.7. Institutional responsibilities

Vice-dean on Economic Affairs and Facilities of the Chemical Sciences Faculty of the Complutense University of Madrid from January 2009 up to June 2022.

C.8. Memberships of scientific societies

- Ilustre Colegio Oficial de Químicos de Madrid, from 1990. Nº: 4.532
- Asociación Nacional de Químicos Españoles (ANQUE), from 1990. Nº: 16.733.
- Sociedad Española de Microbiología (SEM), Industrial Microbiology Section, from 1997.
- Sociedad Española de Biotecnología (SEBIOT), Industrial Biotechnology Section, from 2004.