

CURRICULUM VITAE ABREVIADO (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

First name	MARÍA		
Family name	GONZÁLEZ ALRIOLS		
Gender (*)	Female	Birth date (dd/mm/yyyy)	23/09/1978
Social Security, Passport, ID number	47023716D		
e-mail	maria.gonzalez@ehu.eus	URL Web www.ehu.eus/es/web/biorp/maria-gonzalez	
Open Researcher and Contributor ID (ORCID) (*)	orcid.org/0000-0002-1607-6603		

(*) Mandatory

A.1. Current position

Position	Associate professor		
Initial date	30/04/2021		
Institution	University of the Basque Country (UPV/EHU)		
Department/Center	Chemical and Environmental Engineering Department	Gipuzkoa Engineering School. San Sebastian, Spain.	
Country	Spain	Teleph. number	+34-653301023
Key words	Biorefinery processes, Lignocellulosic biomass, Process simulation		

A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
2021-2018 18 months	Assistant professor/ UPV/EHU/Spain/Promotion Associate prof.
2018-2008 10 years	Substitute Teaching Tutor/ UPV/EHU/Spain/Promot. Assist. prof.
2020-2019 5 months	Child-care leave
2019-2018 5 months	Maternity and breastfeed leave
2015-2014 5 months	Maternity and breastfeed leave
2008-2006 35 months	Pre-doctoral researcher/ UPV/EHU/ Promot. Substit. Teach. Tutor
2006-2004 20 months	Pre-doctoral scholar/ UPV/EHU/ Promotion predoc. researcher

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Environmental Engineering	UPV/EHU / Spain	2010
Master Degree in wood, paper and biomaterials	UPV/EHU / Spain	2007
Bachelor Degree in Chemical Engineering	Complutense Univ./ Spain	2003

(Include all the necessary rows)

Part B. CV SUMMARY (max. 5000 characters, including spaces)

I got my Bachelor degree in Chemical Engineering (Complutense University, Madrid) in 2003, and joined the Polymer Science and Technology Institute (Superior Council of Scientific Investigations, Madrid) in 2004 (5 months research scholar). Immediately after, I initiated a pre-doc scholar grant in the Applied Chemistry Dep. of the University of the Basque Country, UPV/EHU, in San Sebastian, Spain. Hereafter, I moved to the Chemical and Environmental Eng. Dep., UPV/EHU, in which I have been since then steadily. Currently, I have a permanent position as associate professor and I teach different subjects in engineering bachelor degrees and master programs of the UPV/EHU. My research field of knowledge belongs to the Environmental Engineering category, in particular, biorefinery technologies for the conversion of lignocellulosic biomass. I defended my PhD (UPV/EHU special thesis award) entitled "Biorefinery Processes" in 2010. My scientific trajectory has been focused on the study of the processes for the separation, fractionation, purification and conversion techniques to transform



the lignocellulosic biomass components into value-added products, materials and energy. My research has included aspects such as the energetic and exergetic efficiencies, the environmental performance or the economics. I have dedicated special interest to the design and simulation of the biorefinery processes, in terms of the steps definition, intensification processes or reaction stages. I use specialized software for the simulation, energetic optimization and effluents minimization. The main goals of my scientific trajectory include the development of alternatives for the valorization of biomass in order to reduce the dependency on fossil fuels, to generate positive environmental, social and economic impacts. With my publications, I have aimed to contribute to the generation of knowledge in the green chemistry and technologies, towards a more sustainable industrial development. The results of the investigations related to the research projects in which I have participated have been published in prestigious journals of the chemical and environmental engineering categories mainly. I am a member of the consolidated research group "Biorefinery Processes", directed by Dr. Jalel Labidi (www.ehu.eus/es/web/biorp/home). The main indicators of the group's research quality are: defended thesis: 25; publications in scientific journals: 230; book chapters: 20; research projects: 58 (National, UE and internationals), patents: 1. Within the group, I actively collaborate in the request and development of research projects with responsibility and dedication. Collaborations with teams from foreign universities are frequent, which significantly enriches our research. We work closely to the industrial sector of our surroundings trying to give solutions to actual problems of our society. I collaborate in several activities for the diffusion of the scientific knowledge in the society, such as radio programs or blogs. I enjoy working with doctoral students, and collaborating in their scientific formation. I have supervised two doctoral thesis with excellent results in terms of the subsequent professional career of the doctorates. I am currently supervising another two. The main indicators of my research activity are:

- **h Index:** 21 **Citations:** 1442 by 1246 documents.
- **JCR articles:** 30 articles published in journals classified by JRC ranking, 25 Q1 and 5 Q2, in the following categories: Chemical Eng., Environmental Eng., Agricultural Eng., Energy & Fuels, Thermodynamics, Agronomy and Crop Sciences.
- **SJR referenced articles:** 20 articles published in journals classified by Scimago Journal & Country Rank, 1 Q1, 14 Q2, 4 Q3, and 1 Q4, in the Chemical Eng. category, in the following journals: Chemical Engineering Transactions (16), Computer-Aided Chemical Engineering (3) o Education for Chemical Engineers (1).
- **Book chapters:** 7 published book chapters. One has been published in 2021 (Nova Science Publishers), two in 2019 (Presses Universitaires de Bordeaux and Academic Press, Elsevier); two in 2018 (Apple Academic Press, Taylor & Francys Group and NOVA Science Pub.); one in 2016 (NOVA Science Pub.) and one in 2014 (NOVA Science Pub.).
- **Book editor:** Co-editor of: "What to know about lignin", Nova Science Pub., New York
- **Conferences:** 20 oral presentations and 35 poster and written communications in conferences in the field of Chemical and Environmental Eng. or Education in Engineering.
- **Research projects:** Project head of 1 competitive research project (funded by the Basque Government, Spain); Member of the research team of 49 I+D+I competitive projects.
- **Supervised thesis:** 2 directed and 2 ongoing, PhD program of Renew. Mat. Eng., UPV/EHU.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

Publication year: 2022

10. Authors: R. Volpe, **M. Gonzalez Alriols**, N.Martelo Schmalbach, A.Fichera; Scientific article title: Optimal design and operation of distributed electrical generation for Italian positive energy districts with biomass district heating, Journal: Energy Conversion and Management; Volume: 267; Number: 115937.

9. Authors: Nezly Martelo; Mirari Antxustegi; Eriz Corro; Marya Baloch; Rosaria Volpe; Antonio Gagliano; Alberto Fichera; **María Gonzalez Alriols**; Scientific article title: Use of residual lignocellulosic biomass for energetic uses and environmental remediation through pyrolysis; Journal: Energy Storage and Saving; Volume: 1; Pages: 129-135



Publication year: 2021

8. Authors: Fabio Hernández-Ramos, **María González Alriols**, Tamara Calvo-Correas, Jalel Labidi, and Xabier Erdocia; Scientific article title: Renewable Biopolyols from Residual Aqueous Phase Resulting after Lignin Precipitation, Journal: ACS Sustainable Chem. Eng.; Volume: 9; Pages: 3608–3615.

7. Authors: Javier Fernández-Rodríguez, Xabier Erdocia, **María González Alriols**, Jalel Labidi; Scientific article title: Techno-economic analysis of different integrated biorefinery scenarios using lignocellulosic waste streams as source for phenolic alcohols production; Journal: Journal of Cleaner Production; Volume: 285; Number: 124829.

6. Authors: Sepideh Haroni, Hassan Zaki Dizaji, Houshang Bahrami, **María González Alriols**. Scientific article title: Sustainable production of cellulose nanofiber from sugarcane trash: A quality and life cycle assessment; Journal: Industrial Crops & Products; Volume: 173; Number: 114084.

5. Authors: Balaji Venkatesagowda, Robert F. H. Dekker and **María González Alriols**; Book title: What to know about lignin; Book chapter: Biofunctionalization and Biotransformation of Lignin: A Novel Approach to Lignin Aryl-O-Demethylation and Fenton Chemistry; Chapter number: 2; Pages: 37-104; Editorial: Nova Science Publishers, New York; Editor: **María González Alriols**, Jalel Labidi and M. Özgür Seydibeyoğlu Editors; ISBN: 978-1-53619-222-3

Publication year: 2020

4. Authors: Fabio Hernández Ramos, Javier Fernández-Rodríguez, **María González Alriols**, Jalel Labidi, Xabier Erdocia; Scientific article title: Study of a renewable capping agent addition in lignin base catalysed depolymerization process; Journal: Fuel; Volume: 280; Number: 118524.

3. Authors: Javier Fernández-Rodríguez, Xabier Erdocia, Fabio Hernández-Ramos, Oihana Gordobil, **María González Alriols**, Jalel Labidi; Scientific article title: Direct lignin depolymerization process from sulfur-free black liquors; Journal: Fuel Processing Technology; Volume: 197; Number: 106201

Publication year: 2018

2. Authors: Aicha Mabrouk, Xabier Erdocia, **María González Alriols**, Jalel Labidi; Scientific article title: Economic analysis of a biorefinery process for catechol production from lignin; Journal: Journal of Cleaner Production; Volume: 198; Pages: 133-142.

Publication year: 2017

1. Authors: Javier Fernández-Rodríguez, Oihana Gordobil, Eduardo Robles, **María González-Alriols**, Jalel Labidi; Scientific article title: Lignin valorization from side-streams produced during agricultural waste pulping and total chlorine free bleaching; Journal: Journal of Cleaner Production; Volume: 142; Pages: 2609-2617.

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, póster).

Year: 2022

4. Authors: N. Martelo Schmalbach, A. Gagliano, A. Fichera, R. Volpe, M.M. Antxustegi Bengoetxea, **M. Gonzalez Alriols**; Title: Modelling and simulation of a residual lignocellulosic biomass pyrolysis pilot plant; Conference: 32nd European Symposium on Computer Aided Process Engineering; Date: June 12th-15th, 2022; Place: Toulouse, France; Contribution type: poster.

3. Authors: Antxustegi M., Egües I., Davila I., Seoane R., **González Alriols M.**; Title: Sustainability and life cycle engineering in the field of renewable energies; Conference: 16th annual International Technology, Education and Development Conference; Date: March 7th-9th, 2022; Place: Valencia, Spain; Contribution type: oral presentation.

2. Authors: Fernández-Rodríguez J., Erdocia X., **González Alriols M.** Labidi J.; Title: Economic assessment of high-pure lignin extraction processes as chemical precursor by computer-aided simulation; Conference: Int. Conference on Materials & Energy; Date: 30/04/2018 – 04/05/2018; Place: San Sebastian, Spain; Contribution type: oral presentation.



1. Authors: A. Mabrouck, X. Erdocia, **M. González Alriols**, J. Labidi; **Title:** Exergetic Optimization of Lignin Valorization Process for the Production of Bio-Based Chemicals; **Conference:** 11th SDEWES, Conference on sustainable development of energy, water and environment systems; **Date:** 5-9/09/2016; **Place:** Lisbon, Portugal; **Contribution type:** oral presentation.

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.

Year: 2022

10. Project title: Consolidated Research Group "Biorefinery Processes. Basque Government; **Participation type:** Research team member; **Project head:** Dr. Jalel Labidi. **Institution:** UPV/EHU; **Number of researchers:** 13; **Initial and final dates:** 05/07/2022-31/12/2025; **Total funding:** 260.000 €

9. Project title: Lignocellulosic biochar II; **Participation type:** Research team member; **Project head:** Dr. Mirari Antxustegi; **Institution:** UPV/EHU; **Funding organism:** Gipuzkoa Provincial Council; **Number of researchers:** 5; **Initial and final dates:** 01/06/2022 – 31/12/2023; **Total funding:** 60.000 €

Year: 2021

8. Project title: Obtaining bioactive compounds derived from wine waste; **Participation type:** Project head; **Institution:** UPV/EHU; **Funding organism:** Basque Government; **Number of researchers:** 7; **Initial and final dates:** 01/10/2021 – 31/12/2022; **Total funding:** 12.276,34 €

7. Project title: Consolidated Research Group "Biorefinery Processes. Basque Government; **Participation type:** Research team member; **Project head:** Dr. Jalel Labidi. **Institution:** UPV/EHU; **Number of researchers:** 13; **Initial and final dates:** 05/07/2022-31/12/2025; **Total funding:** 260.000 €

Year: 2020

6. Project title: Biobased Materials for Construction; **Participation type:** Research team member; **Project head:** Dr. Jalel Labidi; **Institution:** UPV/EHU; **Funding organism:** UPV/EHU; **Number of researchers:** 10; **Initial and final dates:** 01/01/2021 – 31/12/2023; **Total funding:** 27.360 €

Year: 2018

5. Project title: Ionic liquids as an innovative solution for a sustainable economy in the Basque Country; **Participation type:** Research team member; **Project head:** Jalel Labidi; **Institution:** UPV/EHU; **Funding organism:** Basque Government; **Number of researchers:** 5; **Initial and final dates:** 01/01/2018 – 31/12/2019; **Total funding:** 48.753,02 €

Year: 2017

4. Project title: Materials and chemical precursors from renewable sources; **Participation type:** Research team member; **Project head:** Jalel Labidi; **Institution:** UPV/EHU; **Funding organism:** UPV/EHU; **Number of researchers:** 5; **Initial and final dates:** 23/01/2017 - 22/01/2021; **Total funding:** 216.789,88 €

3. Project title: Network of Excellence in Sustainable Biorefineries; **Participation type:** Research team member; **Project head:** Jalel Labidi; **Institution:** UPV/EHU; **Funding organism:** Spanish Ministry of Economy, Industry and Competitiveness; **Number of researchers:** 8; **Initial and final dates:** 01/07/2017 - 30/06/2019; **Total funding:** 20.000 €

2. Project title: Development of an integrated multi-product biorefinery; **Participation type:** Research team member; **Project head:** Jalel Labidi; **Institution:** UPV/EHU; **Funding organism:** Spanish Ministry of Economy, Industry and Competitiveness; **Number of researchers:** 5; **Initial and final dates:** 01/01/2017 - 31/12/2019; **Total funding:** 243.210 €

Year: 2016

1. Project title: Consolidated Research Group "Biorefinery Processes; **Participation type:** Research team member; **Project head:** Dr. Jalel Labidi. **Institution:** UPV/EHU; **Funding organism:** Basque Government; **Number of researchers:** 12; **Initial and final dates:** 01/11/2016-31/12/2021; **Total funding:** 536.000 €