

GEMA RUIZ GUTIÉRREZ
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A.1. Current position

Name of University/Institution	UNIVERSITY OF CANTABRIA		
Department	DEPARTMENT OF CHEMISTRY AND PROCESS & RESOURCE ENGINEERING		
Address and Country	AVDA. DE LOS CASTROS 46		
Phone number	943 206708	E-mail	gema.ruiz@unican.es
Current position	ASSOCIATE PROFESSOR	From	13-October-2006
Palabras clave	Modeling, simulation, bioresources		

A.2. Education

PhD	University	Year
Degree of Chemical Sciences	University of Valladolid	1988
PhD in Chemical Engineering	University of Cantabria	1999

A.3. JCR articles, h Index, thesis supervised...

Periods of six years of research: 2. Grant date: 01-January-2016.

Doctoral Thesis Direction: 1

Total citations: 416

Average citations / year in the last 5 years: 20.80

Total publications Q1: 16

Index h: 10

Part B. CV SUMMARY

Line of research:

Modeling and simulation of chemical and environmental processes. Applying mathematical models to processes that allow the development and innovation in products and processes.

Teaching experience:

- 24 years of teaching, University of Cantabria.
- Four periods of six years of teacher
- Participation in Three Communications to Teaching Innovation Congresses.
- Direction of 20 Final Degree/Master Projects.

Research experience:

- Two periods of six years of research of the CNEAI
- 18 Publications of articles in indexed journals.
- 28 Communications to international congresses.
- Participation in 17 Research Projects in Public Calls.
- Participation in 11 Research Contracts with Companies.

Research stays:

- Department of Chemical Engineering. Faculty of Chemical Sciences, Complutense University, MADRID, 1- October -2011, Duration: 12 weeks
- Department of Chemical Engineering. Faculty of Chemical Sciences, Complutense University, MADRID, 1- June -2004, Duration: 20 weeks

Management experience:

- Member of the Executive Committee of the International Congress WASCON 2015.
- Member of the Company Committee of the Labor PDI of the University of Cantabria. From 05/26/2009 to the present.
- Responsible for Curricular External Practices of the Department of Chemistry and Process & Resource Engineering. From May 2014.
- Academic responsible of the degree of Chemical Engineer of the University of Cantabria. From 06/01/2006 to 09/31/2007.
- Coordinator of International Practices in Chemical Engineering. From 05/22/2008 to 03/01/2010

Part C. RELEVANT MERITS

C.1. Publications (including books)

Last 5 years:

- RODRIGUEZ-ROMERO, ARACELI; RUIZ-GUTIERREZ, GEMA; VIGURI, JAVIER R.; TOVAR-SÁNCHEZ A., 2019, Sunscreens as a New Source of Metals and Nutrients to Coastal Waters, EN. VIRONMENTAL SCIENCE & TECHNOLOGY, Vol. 53, N. 17, pg. 10177-10187. DOI:10.1021/acs.est.9b02739
- LLANO, T; ARCE, C; RUIZ, G; CHENNA, N; COZ, A, 2018, Modelling and Optimization of the Last Two Stages of an Environmentally-Compatible TCF Bleaching Sequence, Bioresources, Vol.: 13(3), pg: 6642-6662.
- MARTIN-TORRE, M.C., CIFRIAN, E., RUIZ, GEMA; GALAN, BERTA; VIGURI, JAVIER R, 2017, Estuarine sediment resuspension and acidification: Release behaviour of contaminants under different oxidation levels and acid sources, JOURNAL OF ENVIRONMENTAL MANAGEMENT, Vol. 199, pg.: 211-221, DOI:10.1016/j.jenvman.2017.05.044
- MARTIN-TORRE, M.C., RUIZ, G., GALAN, B., VIGURI, J.R., 2016, CO₂ seawater acidification by CCS-simulated leakage: Kinetic modelling of Zn, Pb, Cd, Ni, Cr, Cu and As release from contaminated estuarine sediment using pH-static leaching tests, INTERNATIONAL JOURNAL OF GREENHOUSE GAS CONTROL, Vol. 54, pg.: 185-199, DOI: 10.1016/j.ijggc.2016.09.004
- RUEDA, C., MARINOVA, M., PARIS, J., RUIZ, G., COZ, A., 2016, Technoeconomic assessment of different biorefinery approaches for a spent sulfite liquor, JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY, Vol. 91, N. 10, pg.: 2646-2653, DOI: 10.1002/jctb.4868
- MARTIN-TORRE, M.C., RUIZ, G., GALAN, B., VIGURI, J.R., 2015, Generalised mathematical model to estimate Zn, Pb, Cd, Ni, Cu, Cr and As release from contaminated estuarine sediment using pH-static leaching tests, CHEMICAL ENGINEERING SCIENCE, Vol. 138, pg.: 780-790, DOI: 10.1016/j.ces.2015.08.053.
- RUEDA, C., CALVO, P.A. , MONCALIÁN, G., RUIZ G., COZ, A., 2015, Biorefinery options to valorize the spent liquor from sulfite pulping, Journal of Chemical Technology and Biotechnology, Vol. 90, N. 12, pg.: 2218-2226, DOI 10.1002/jctb.4536.
- MARTÍN-TORRE, M. CAMINO; PAYÁN FRAILE, M. CRUZ; VERBINNEN, BRAM; COZ, ALBERTO; RUIZ, GEMA; VANDECASTEELE, CARLO; VIGURI, JAVIER R., 2015, Metal Release from Contaminated Estuarine Sediment Under pH Changes in the Marine Environment, Archives of Environmental Contamination and Toxicology, vol. 68, pg.: 577–587. DOI: 10.1007/s00244-015-0133-z.

C.2. Research projects and grants

Last 5 years

- “Impact of sun creams in coastal areas of Andalusia: a requirement for sustainable tourism. (CREMAR)”. European union within the framework of the feder 2014-2020 operational program and the council of economy, knowledge, businesses and university of the board of andalusia. (01/07/2020 - 30/04/2023). Total Project Financing Amount: 56.169,43 euros. Type of participation: Investigator
- “The role of penguins in the biogeochemical cycles of trace metals in the southern ocean (PiMetAN)”. I+D+I projects «research challenges» - of the state I+D+I program aimed at the challenges of society. call 2018. (01/01/2019 - 31/12/2021). Total Project Financing Amount: 24000 euros. Type of participation: Investigator
- “Sustainable production of cellulosic-based products and additives derived from the processing of biomass waste, (SUSTCEL)”. State investigation agency (01/06/2019 - 31/05/2021). Total Project Financing Amount: 56.169,43 euros. Type of participation: Investigator
- “Obtaining, processing and disseminating data on the production and management of waste and adaptation of the existing system of indicators to the new waste plan for Cantabria”, Government of Cantabria; Counseling of Universities and Research, Environment and Social Policy (11/30/2017 - 12/31/2020). Total Project Financing Amount: 54.329,00 euros. Type of participation: Investigator
- “Analysis and protein hydrolysis of fish bones for human consumption (HIDPROTEC)”, SODERCAN, S.A. (11/07/2017 - 06/21/2018). Total Project Financing Amount: 7.411,25 euros. Type of participation: Investigator
- “Incineration residues in the formulation of alkaline activated materials for use in construction and civil works: technical and environmental requirements”, SODERCAN, S.A. (10/19/2017 - 10/18/2018) . Total Project Financing Amount: 20.620,98 euros. Type of participation: Investigator
- “Integrated assessment models of the effects associated with CO2 acidification on the speciation and bioavailability of pollutants in water”, SODERCAN, S.A. (10/19/2017 - 10/18/2018). Total Project Financing Amount: 15.489,94 euros. Type of participation: Investigator
- “New tailor-made biopolymers produced from lignocellulosic sugars waste for highly demanding fire-resistant applications (BRIGIT)”, BRIGIT. European Commission. 7th Framework Program FP7-KBBE-2012-6-311935. (08/01/2009 - 07/31/2016 Total Project Financing Amount: 276.480,00 euros. Type of participation: Investigator
- “Obtaining resources for human habitability in extreme extraterrestrial environments through optical biostimulation”, Parliament of Cantabria (04/16/2015 - 04/15/2017) . Total Project Financing Amount: 57.000,00 euros. Type of participation: Investigator

C.3. Contracts

Last 5 years

- “Feasibility study of the process of extraction and characterization of sulfated polysaccharides from macroalgae (POLIEXTRALGA)”, INVESTALGA AHTI S.L. (01/10/2018 - 31/05/2019). Total price of the project: 13.023,9 euros. Type of participation: Investigator
- “Research and development in the field of resource recovery, environmental information management and decision-making tools (IDiGER)”, Universidad de Cantabria (03/20/2013 - 03/19/2015) Total price of the project: 31.446,10 euros. Type of participation: Investigator