

Part A. PERSONAL INFORMATION

CV date	3/01/2025
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First name	Inmaculada		
Family name	ORTIZ URIBE		
e-mail	ortizi@unican.es	URL Web: http://grupos.unican.es/pasep	
Open Research and Contributor ID (ORCID)(*)		0000-0002-3257-4821	

(*) Mandatory

A.1. Current position

Position	Chemical Engineering Professor		
Initial date	28/01/1996		
Institution	University of Cantabria		
Department/Center	Chemical and Biomolecular Engineering/ETSIIT		
Country	Spain	Teleph. number	942201585
Key words	Advanced Separation Processes, Microfluidic, Remediation Technologies, Clean energy, Waste circularity		

A.2. Previous positions (research activity interruptions, art. 45.2.b))

Period	Position/Institution/Country/Interruption cause
1983 - 1992	PhD grant. Research Assistant and Lecturer in Chemical Engineering at the University of the Basque Country, Spain
1992 - 1995	Lecturer of Chemical Engineering at the University of Cantabria, Spain
1995 - 1996	Professor of Chemical Engineering at the University of Huelva, Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
BsC. Chemistry	University of the Basque Country	1980
PhD Chemistry	University of the Basque Country	1985

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

Inmaculada Ortiz Uribe is Professor of Chemical Engineering at the University of Cantabria, Spain, since 1996. She received her Ph.D in Sciences (Chemistry) from the University of the Basque Country (Spain) in 1985 and completed her training at Giessen University, Germany (1980) and Imperial College, University of London (1985-86, 1987). She has been visiting Professor at Universidad Nacional del Sur (Argentina), 2000, Wuhan University, China in 2010, KAUST University (Arabia), 2010, University of Oulu, 2012, Institute of Chemical technology, Bombay, 2012, Universidad del Noroeste en Potchefstroom (Sudáfrica) 2014, Institute of Technology of the University of Tashken (Uzbekistan), 2018, Universidad Autónoma de México (Ciudad de México), 2015 and 2018, and Fulbright Fellow at Carnegie Mellon University, USA, 2017; during the research and academic visits she has given specialized courses in the field of Membrane Technology and electrochemical processes and has strengthen networking and scientific collaborations.

Her research interests focus on the *design, optimization and integration of advanced separation technologies*; this general objective is divided into i) the synthesis and development of highly selective separation materials, where selective membranes play a key role, ii) the integration of separation and reaction steps searching for more efficient processes and, iii) the development of the methodology for process scale-up and scale-down. ORCID: <http://orcid.org/0000-0002-3257-4821>. Apart from the high number of publications and citations received, it is worth mentioning the increasing number of publications placed in the 1% of articles with the highest citations in the respective fields.

Currently she is the head of the Advanced Separation Processes research group (<http://grupos.unican.es/pasep>) where the binomial “knowledge creation and its application & transfer” is the cornerstone of the daily activity. R&D projects have applied advanced separations to a wide number of fields, such as protection of natural resources, optimization of industrial separations, renewable energy sources, food quality and biomedical applications. She has supervised 27 post-doc and 53 doctorate thesis in the doctorate program of chemical, process and energy engineering. In 2006 she co-founded the spin off company APRIA SYSTEMS; the SME that has experienced a continuous and sustained growth (from 1 PhD in 2006 to 12 PhD, 4 engineers and 2 non-specialized workers in 2024) has consolidated its position in the design, engineering and construction of demonstration plants for challenging applications.

The research and academic activities have been shared with her commitment and service to the Society where the following responsibilities deserve special mention 1) scientific officer of 2 national R&D programs in the period **1998-2002** (Environment: Environmental Technologies and Chemical Products and Processes), and 2) Scientific coordination of the field “Chemical Technology” for the Agencia Nacional de Evaluación y Prospectiva, **2005-08**; in addition Dr. Ortiz Uribe has participated as arepresentative of the Spanish ministry of science in the Scientific Committee of a good number of international R&D programs, INTAS 2003-06; COST, ESSEM Domain, 2013-14; Joint Programming Initiative, JPI Water, 2015-18, and has given over 60 invited and plenary talks at scientific congresses and meetings.

She was elected to the National Academy of Sciences in May 2008, and in February 2022, she was appointed as full member of this institution. Prof. Ortiz has received several research awards: XV Burdinola Research Prize for the work “Industrial Applications of Membrane Technologies” in 2010, XV Research and Innovation in applied Chemistry, Prof. M. Moreno in 2014. CIDETEC 2015 for the work “Contribution of electrochemistry to the sustainable development”; C.S.J. M. Parés 2017 for the Research trajectory on Advanced Separation Processes, ICCE2019 etc.

Part C. RELEVANT MERITS (*sorted by typology*)

C.1. Most important publications in books and journals with "peer review" and in conferences (*see instructions*). 2018-2023

Moral, Gonzalo; Ortiz, Alfredo; Gorri, Daniel; Ortiz, Inmaculada. Hydrogen recovery from industrial waste streams using Matrimid®/ZIF mixed matrix membranes. INTERNATIONAL JOURNAL OF HYDROGEN ENERGY. pp. 210- 224. PERGAMON-ELSEVIER SCIENCE LTD, 15/12/2023. ISSN 0360-3199, ISSN 1879-3487

Schroder, Sophie; Ortiz, Inmaculada; San-Roman, Ma. Fresnedo. Electrochemical degradation of key drugs to treat COVID-19: Experimental analysis of the toxic by-products formation (PCDD/Fs). SCIENCE OF THE TOTAL ENVIRONMENT. ELSEVIER, 11/10/2023. ISSN 0048-9697, ISSN 1879-1026

Fernández-González, Javier; Rumayor, Marta; Dominguez-Ramos, Antonio; Irabien, Angel; Ortiz, Inmaculada. The Relevance of Life Cycle Assessment Tools in the Development of Emerging Decarbonization Technologies. JACSAU. 10, pp. 2631 - 2639. AMER CHEMICAL SOC, 28/09/2023. ISSN 2691-3704

Gómez-Coma, Lucia; Diaz-Sainz, Guillermo; Fallanza, Marcos; Ortiz, Alfredo; Ortiz, Inmaculada. Integration of chemical engineering skills in the curriculum of a master course in industrial engineering. EDUCATION FOR CHEMICAL ENGINEERS. pp. 68 - 79. ELSEVIER SCI LTD, 23/08/2023. ISSN 1749-7728, ISSN 1749-7728

García-Merino, Belén; Bringas, Eugenio; Ortiz, Inmaculada. Fast and reliable analysis of pH-responsive nanocarriers for drug delivery using microfluidic tools. INTERNATIONAL JOURNAL OF PHARMACEUTICS. ELSEVIER, 22/07/2023. ISSN 0378-5173, ISSN 1873-3476

Gonzalez-Fernandez, Cristina; Ohlknecht, Christoph; Diem, Matthias; Escalona, Yerko; Bringas, Eugenio; Moncalián, Gabriel; Oostenbrink, Chris; Ortiz, Inmaculada. Insights into the Binding Mode of Lipid A to the Anti-

lipopolysaccharide Factor ALFPm3 from *Penaeus* monodon: An In Silico Study through MD Simulations. JOURNAL OF CHEMICAL INFORMATION AND MODELING. 8, pp. 2495 - 2504. AMER CHEMICAL SOC, 07/04/2023. ISSN 1549-9596, ISSN 1549-960X

Guati, Carlota; Gomez-Coma, Lucia; Fallanza, Marcos; Ortiz, Inmaculada. Progress on the influence of non-enzymatic electrodes characteristics on the response to glucose detection: a review (2016-2022). REVIEWS IN CHEMICAL ENGINEERING. 1, pp. 123 - 148. WALTER DE GRUYTER GMBH, 28/02/2023. ISSN 0167-8299, ISSN 2191-0235

Arguillarena, Andrea; Margallo, Maria; Arruti-Fernández, Axel; Pinedo, Javier; Gómez, Pedro; Ortiz, Inmaculada; Urtiaga, Ane. Circular economy in hot-dip galvanizing with zinc and iron recovery from spent pickling acids. RSC ADVANCES. 10, pp. 6481 - 6489. ROYAL SOC CHEMISTRY, 21/02/2023. ISSN 2046-2069

Pelayo, Deva; Rivero, María J.; Santos, Germán; Gómez, Pedro; Ortiz, Inmaculada. Techno-economic evaluation of UV light technologies in water remediation. SCIENCE OF THE TOTAL ENVIRONMENT. ELSEVIER, 18/01/2023. ISSN 0048-9697, ISSN 1879-1026

Schroder, Sophie; Ortiz, Inmaculada; San-Roman, Ma Fresnedo. Formation of polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs) in the electrochemical oxidation of polluted waters with pharmaceuticals used against COVID-19. JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING. 2, ELSEVIER SCI LTD, 18/01/2023.

Santos, German; Ortiz-Gándara, Isabel; Del Castillo, Andrés; Arruti, Axel; Gómez, Pedro; Ibañez, Raquel; Urtiaga, Ane; Ortiz, Inmaculada. Intensified fish farming. Performance of electrochemical remediation of marine RAS

Maestre, V. M.; Ortiz, A.; Ortiz, I. Transition to a low-carbon building stock. Techno-economic and spatial optimization of renewables-hydrogen strategies in Spain. JOURNAL OF ENERGY STORAGE. ELSEVIER, 21/10/2022. ISSN 2352-152X, ISSN 2352-1538

Sampedro, T.; Tristán, C.; Gómez-Coma, L.; Rioyo, J.; Sainz, M.; Ortiz, I.; Ibañez, R. SWRO concentrates for more efficient wastewater reclamation. DESALINATION. ELSEVIER, 19/10/2022. ISSN 1873-4464, ISSN 1873-4464

García-Merino, Belén; Bringas, Eugenio; Ortiz, Inmaculada. Robust system for the regenerative capture of aqueous pollutants with continuously synthesized and functionalized magnetic nanoparticles. JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING. 5, ELSEVIER SCI LTD, 18/08/2022. ISSN 2213-2929, ISSN 2213-3437

Barquín, Carmen; Rivero, María J.; Ortiz, Inmaculada. Shedding light on the performance of magnetically recoverable $\text{TiO}_2\text{Fe}_3\text{O}_4$ rGO-5 photocatalyst. Degradation of S-metolachlor as case study. CHEMOSPHERE. PERGAMON-ELSEVIER SCIENCE LTD, 18/08/2022. ISSN 0045-6535, ISSN 1879-1298

Gomez-Coma, L.; Abarca, J. A.; Fallanza, M.; Ortiz, A.; Ibanez, R.; Ortiz, I. Optimum recovery of saline gradient power using reversal electrodialysis: Influence of the stack components. JOURNAL OF WATER PROCESS ENGINEERING. ELSEVIER, 01/08/2022. ISSN 2214-7144

Shen, Yu; de Vidales, Maria J. Martin; Gorni, Giulio; Rivero, Maria J.; Ortiz, Inmaculada; Dos santos-Garcia, Antonio J. Enhanced peroxymonosulfate activation in the morphotropic phase boundary of molybdenum doped LaCoO_{3-x} perovskite. CHEMICAL ENGINEERING JOURNAL. ELSEVIER SCIENCE SA, 07/06/2022.

Moral, Gonzalo; Ortiz-Imedio, Rafael; Ortiz, Alfredo; Gorri, Daniel; Ortiz, Inmaculada. Hydrogen Recovery from Coke Oven Gas. Comparative Analysis of Technical Alternatives. INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH. 18, pp. 6106 - 6124. AMER CHEMICAL SOC, 11/05/2022. ISSN 0888-5885

Pérez, Gema; Diaz-Sainz, Guillermo; Gómez-Coma, Lucia; Álvarez-Miguel, Lucia; Garnier, Aymeric; Cabon, Nolwenn; Ortiz, Alfredo; Gloaguen, Frederic; Ortiz, Inmaculada. Rhodium-based cathodes with ultra-low metal loading to increase the sustainability in the hydrogen evolution reaction. JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING. 3, ELSEVIER SCI LTD, 20/04/2022. ISSN 2213-2929, ISSN 2213-3437

Coterillo, R.; Gallart, L. -e.; Fernández-Escalante, E.; Junquera, J.; García-Fernández, P.; Ortiz, I.; Ibáñez, R.; San-Roman, M. -F. Selective extraction of lithium from seawater desalination concentrates: Study of thermodynamic and equilibrium properties using Density Functional Theory (DFT). DESALINATION. ELSEVIER, 29/03/2022. ISSN 0011-9164, ISSN 1873-4464

Fernández-Maza, Christian; Fallanza, Marcos; Gómez-Coma, Lucia; Ortiz, Inmaculada. Performance of continuous-flow micro-reactors with curved geometries. Experimental and numerical analysis. CHEMICAL ENGINEERING JOURNAL. ELSEVIER SCIENCE SA, 08/03/2022. ISSN 1385-8947, ISSN 1873-3212

Fernandez-Rios, Ana; Santos, German; Pinedo, Javier; Santos, Esther; Ruiz-Salmon, Israel; Laso, Jara; Lyne, Amanda; Ortiz, Alfredo; Ortiz, Inmaculada; Irabien, Angel; Aldaco, Rubén; Margallo, María. Environmental sustainability of alternative marine propulsion technologies powered by hydrogen-a life cycle assessment approach. SCIENCE OF THE TOTAL ENVIRONMENT. ELSEVIER, 24/01/2022. ISSN 0048-9697, ISSN 1879-1026

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Tristan, C.; Fallanza, M.; Grossmann, I.; Ortiz, I.; Ibanez, R. Generalized Disjunctive Programming Model for Optimization of Reverse Electrodialysis Process. IFAC PAPERSONLINE. 31, pp. 154 - 159. ELSEVIER, 01/01/2022. ISSN 2405-8963

González-Fernández, Cristina A.; Bringas, Eugenio; Oostenbrink, Chris; Ortiz, Inmaculada. In silico investigation and surmounting of Lipopolysaccharide barrier in Gram-Negative Bacteria: How far has molecular dynamics Come?. COMPUTATIONAL AND STRUCTURAL BIOTECHNOLOGY JOURNAL. pp. 5886 - 5901.

Abascal, E.; Gomez-Coma, L.; Ortiz, I.; Ortiz, A. Global diagnosis of nitrate pollution in groundwater and review of removal technologies. SCIENCE OF THE TOTAL ENVIRONMENT. ELSEVIER, 27/12/2021. ISSN 0048-9697, ISSN 1879-1026

González-Fernández, Cristina; Gómez-Pastora, Jenifer; Bringas, Eugenio; Zborowski, Maciej; Chalmers, Jeffrey J.; Ortiz, Inmaculada. Recovery of Magnetic Catalysts: Advanced Design for Process Intensification. INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH. 46, pp. 16780 - 16790. AMER CHEMICAL SOC, 24/11/2021. ISSN 0888-5885

Ortiz-Imedio, Rafael; Ortiz, Alfredo; Ortiz, Inmaculada. Comprehensive analysis of the combustion of low carbon fuels (hydrogen, methane and coke oven gas) in a spark ignition engine through CFD modeling. ENERGY CONVERSION AND MANAGEMENT. PERGAMON-ELSEVIER SCIENCE LTD, 06/11/2021. ISSN 1879-2227, ISSN 1879-2227

Pérez, Gema; Gómez, Pedro; Ortiz, Inmaculada; Urtiaga, Ane. Techno-economic assessment of a membrane-based wastewater reclamation process. DESALINATION. ELSEVIER, 30/10/2021. ISSN 1873-4464,

Maestre, Víctor M.; Ortiz, Alfredo; Ortiz, Inmaculada. The role of hydrogen-based power systems in the energy transition of the residential sector. JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY. 3, pp. 561-574. WILEY, 21/10/2021. ISSN 0268-2575, ISSN 1097-4660

Maestre, V. M.; Ortiz, A.; Ortiz, I. Challenges and prospects of renewable hydrogen-based strategies for full decarbonization of stationary power applications. RENEWABLE & SUSTAINABLE ENERGY REVIEWS. PERGAMON-ELSEVIER SCIENCE LTD, 13/10/2021. ISSN 1364-0321, ISSN 1879-0690

Arregoitia-Sarabia, Carla; González-Revuelta, Daniel; Fallanza, Marcos; Ortiz, Alfredo; Gorri, Daniel. Polyether-block-amide thin-film composite hollow fiber membranes for the recovery of butanol from ABE process by pervaporation. SEPARATION AND PURIFICATION TECHNOLOGY. ELSEVIER, 24/09/2021. ISSN 1383-5866, ISSN 1873-3794

González-Fernandez, Cristina; Basauri, Arantza; Fallanza, Marcos; Bringas, Eugenio; Oostenbrink, Chris; Ortiz, Inmaculada. Fighting Against Bacterial Lipopolysaccharide-Caused Infections through Molecular Dynamics Simulations: A Review. JOURNAL OF CHEMICAL INFORMATION AND MODELING. 10, pp. 4839 - 4851. AMER. CHEMICAL SOC, 24/09/2021. ISSN 1549-9596, ISSN 1549-960X

Karimi, Mohammad Bagher; Hooshyari, Khadijeh; Salarizadeh, Parisa; Beydaghi, Hossein; Ortiz-Martinez, V. M.; Ortiz, A.; Uribe, I. Ortiz; Mohammadi, Fereidoon. A comprehensive review on the proton conductivity of proton exchange membranes (PEMs) under anhydrous conditions: Proton conductivity upper bound. INTERNATIONAL JOURNAL OF HYDROGEN ENERGY. 69, pp. 34413 - 34437. PERGAMON-ELSEVIER SCIENCE LTD, 22/09/2021. ISSN 0360-3199, ISSN 1879-3487

Romano, Alba; Ortiz, Inmaculada; Urtiaga, Ane M. Comprehensive kinetics of electrochemically assisted ammonia removal in marine aquaculture recirculating systems. JOURNAL OF ELECTROANALYTICAL CHEMISTRY. ELSEVIER SCIENCE SA, 24/08/2021. ISSN 1572-6657, ISSN 1873-2569

Ortiz-Imedio, R.; Ortiz, A.; Urroz, J. C.; Dieguez, P. M.; Gorri, D.; Gandia, L. M.; Ortiz, I. Comparative performance of coke oven gas, hydrogen and methane in a spark ignition engine. INTERNATIONAL JOURNAL OF HYDROGEN ENERGY. 33, pp. 17572 - 17586. PERGAMON-ELSEVIER SCIENCE LTD, 30/04/2021. ISSN 0360-3199, ISSN 1879-3487

Teixeira, Fatima C.; de Sa, Ana, I; Teixeira, Antonio P. S.; Ortiz-Martínez, V. M.; Ortiz, A.; Ortiz, I; Rangel, C. M. New modified Nafion-bisphosphonic acid composite membranes for enhanced proton conductivity and PEMFC performance. INTERNATIONAL JOURNAL OF HYDROGEN ENERGY. 33, pp. 17562 - 17571. PERGAMON-ELSEVIER SCIENCE LTD, 30/04/2021. ISSN 0360-3199, ISSN 1879-3487

Corredor, Juan; Rivero, María J.; Ortiz, Inmaculada. New insights in the performance and reuse of rGO/TiO₂ composites for the photocatalytic hydrogen production. INTERNATIONAL JOURNAL OF HYDROGEN ENERGY. 33, pp. 17500 - 17506. PERGAMON-ELSEVIER SCIENCE LTD, 30/04/2021. ISSN 0360-3199, ISSN 1879-3487

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Ortiz-Imedio, Rafael; Caglayan, Dilara Gulcin; Ortiz, Alfredo; Heinrichs, Heidi; Robinius, Martin; Stolten, Detlef; Ortiz, Inmaculada. Power-to-Ships: Future electricity and hydrogen demands for shipping on the Atlantic coast of Europe in 2050. ENERGY. PERGAMON-ELSEVIER SCIENCE LTD, 23/04/2021. ISSN 0360-5442, ISSN 1873-6785

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Fresno, Fernando; Iglesias, Olalla; Alfonso-González, Elena; Rivero, María J.; Ortiz, Inmaculada; de la Pena O'Shea, Victor A. Assessing the feasibility of reduced graphene oxide as an electronic promoter for photocatalytic hydrogen production over Nb-Ta perovskite photocatalysts. CATALYSIS TODAY. pp. 22 - 27. ELSEVIER, 15/02/2021. ISSN 0920-5861, ISSN 1873-4308

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Basauri, Arantza; Fallanza, Marcos; Giner-Robles, Laura; Fernández-López, Raill; Moncalián, Gabriel; de la Cruz, Fernando; Ortiz, Inmaculada. Integrated strategy for the separation of endotoxins from biofluids. LPS capture on newly synthesized protein. SEPARATION AND PURIFICATION TECHNOLOGY. ELSEVIER, 15/01/2021. ISSN 1383-5866, ISSN 1873-3794

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Ortiz-Martinez, V. M.; Gomez-Coma, L.; Perez, G.; Ortiz, A.; Ortiz, I. The roles of ionic liquids as new electrolytes in redox flow batteries. SEPARATION AND PURIFICATION TECHNOLOGY. ELSEVIER, 01/12/2020. ISSN 1383-5866, ISSN 1873-3794

Amiri Roodan, Venoos; Gomez-Pastora, Jenifer; Karampelas, Ioannis H.; Gonzalez-Fernandez, Cristina; Bringas, Eugenio; Ortiz, Inmaculada; Chalmers, Jeffrey J.; Furlani, Edward P.; Swihart, Mark T. Formation and manipulation of ferrofluid droplets with magnetic fields in a microdevice: a numerical parametric study. SOFT MATTER. 41, pp. 9506 - 9518. ROYAL SOC CHEMISTRY, 07/11/2020. ISSN 1744-683X, ISSN 1744-6848

Manuel Ortiz-Martínez, Víctor; Gómez-Coma, Lucia; Ortiz, Alfredo; Ortiz, Inmaculada. Overview on the use of surfactants for the preparation of porous carbon materials by the sol-gel method: applications in energy systems. REVIEWS IN CHEMICAL ENGINEERING. 7, pp. 771 - 787. WALTER DE GRUYTER GMBH, 01/10/2020. ISSN 0167-8299, ISSN 2191-0235

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Ortiz, Inmaculada; Álvarez-Guerra, Manuel; Zarca, Gabriel. In focus: ANQUE-ICCE-CIBQ 2019. JOURNAL OF CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY. 7, pp. 1842 - 1843. WILEY, 01/07/2020. ISSN 0268-2575, ISSN 1097-4660

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C.2 Supervised Doctorate thesis , 1918-2023

1. **Víctor Manuel Maestre Muñoz**, Sistema de potencia híbrido fotovoltaico-hidrógeno para aplicaciones estacionarias, International mention, 14.07.2023; **R&D Engineer at H2site**
2. **Laura Rancaño Vázquez**, Avances en la degradación fotocatalítica de los contaminantes emergentes halogenado s-Metalacloro y ácido perfluorooctanoico, 30.06.2023, **R&D Engineer at ITG Galicia**
3. **Sophie M. Schröder Barraza**, Dioxinas y furanos (PCDD/Fs) en la electro-oxidación de fármacos utilizados en la pandemia de COVID-19. Análisis experimental y teórico, Mención internacional, 20 enero 2023, **Management Engineer at Apria Systems**
4. **Rafael Ortiz Imedio**, Rendimiento de combustibles bajos en carbono en motores de combustión interna, Mención internacional febrero 2022, **GNSS Engineer at GMV**.
5. **Cristina González Fernández**, Model prediction and experimental assessment of the reaction of Lipid A with different binding agents. Abril 2022, International mention, nov 2022- nov 2023 **post-doc Universidad de Texas, EEUU: asssistant profesor UC**
6. **Juan Corredor Ortega**, New strategies in the generation of photocatalytic hydrogen, Universidad de Cantabria, International mention 30.06.2021. **Project Manager at ARCAMO Group**
7. **Arantxa Basauri Penagos**, Design of microtubular devices for the selective separation of Lipid A from blood mimicking fluids. International mention, 30 April 2021. **R&D Engineer at Exolum**.

8. **Miguel Guate Alonso**, Catalytic Reduction of Nitrates on Polymeric Membranes. Modelling and experimental Validation, Universidad de Cantabria, 16th July 2020, **Técnico Facultativo Superior de Organismo Autónomo del Ministerio de Medio Ambiente**
9. **Alba Romano Moyano**, Regeneración electroquímica del agua utilizada en sistemas intensivos de acuicultura marina, Universidad de Cantabria 29th June 2020; **Senior R&D Scientist at Inovyn, Rosignano, Italy**
10. **Claudia Solá Gutiérrez**, Traceability of PCDD/Fs formation in the advanced oxidation of triclosan in aqueous samples, 20th November 2019; Doctorado Internacional; **R&D engineer at UniSieve AG, Suiza**
11. **Raúl Zarca Lago**, Comprehensive study and process optimization of propylene purification using silver based ionic liquid polymeric membranes, 29th November 2018; Doctorado internacional. **Educación secundaria.**
12. **Paula Ribao Martínez**, Noble metals and/or graphene oxide as TiO₂ co-catalysts for DCA degradation, 28 septiembre de 2018; Doctorado internacional; Departamento de producción en **Armando Alvarez S.A.**
13. **Jenifer Gómez Pastora**, On the design of lab-on-a-chip devices for magnetophoretic separations, 20 julio de 2018; Doctorado internacional; contrato postdoctoral en **Columbus University**; EEUU

C.2. Congress.

Dr. Ortiz Uribe has co-authored more than 500 contributions to scientific conferences and congresses. Next a short list of Plenary lectures delivered at international conferences with special invitation of the scientific committee are listed.

Plenary Lectures, 2018-2023

1. **PL Contribución de la ciencia y tecnología de membranas a los ODS**, at the XXI Congreso chileno de Ingeniería Química, Santiago de Chile, 13 noviembre 2023
2. Discurso de ingreso en la Real Academia de Ciencias Exactas, Físicas y Naturales, **Ciencia y Tecnología de Membranas y los Objetivos de Desarrollo Sostenible 2030**, Madrid 23 de febrero de 2022.
3. **The role of electromembranes in the recovery of energy**, invited **KN**, at Euromembrane 2022, Sorrento, 24/11/2022
4. **PL From Fundamentals to Future Perspectives** at the 11th International Symposium on Catalysis in Multiphase Reactors & 10th International Symposium on Multifunctional Reactors, Milano, Scheduled for June the 1st, 2020, and given on-line on March 22, 2021.
5. **PL, Sostenibilidad energética en Desalación y Reutilización de agua. I Congreso Digital AEdyR** given on line on 26.05.2021
6. **PL Membrane-assisted photocatalytic reactors. Achieving the paradigm of process integration**, at SESTEC 2020, given on-line on March 23, 2021.
7. **PL, Increasing Desalination Sustainability**, at Desalination Week, Denia, 25-27 November 2019.
8. **PL, Separation Challenges in the quest for sustainability**, at the 12th European Congress of Chemical Engineering, Florence, 18 September 2019.
9. **Polymer/ionic liquid composite membranes for complex gas separations**, invited **KN** at ILSEPT 4, Sitges 2019

Conferences open to the general public

10. **Presentación del Premio Nobel de Química 2019**, Fundación Ramón Areces, junio 2020
11. **Agua, Energía y Calidad de Vida**, Programa PPCCyT 2019/20 de la Real Academia de Ciencias Físicas, Exactas y Naturales, Segovia, 17 702/ 2020.
12. **Eliminación de nitrato de aguas para consume humano. Conferencia invitada** en el curso de Verano “Uso sostenible de los recursos hídricos” de la Universidad internacional de Andalucía, Málaga, 11/07/ 2022.

13. **Desalinización por electrodiálisis y potencial de gradientes salinos, Conferencia invitada** en el curso Nuevas fuentes de agua: desalación y regeneración hacia la sostenibilidad del ciclo integral del agua, cursos de verano de la universidad de Almería, Almería, 13 /07/ 2022
14. **Membrane separations in Biomedicine**, en el Workshop “Biotechnology and Biomedicine 2019, UC-UPV” Santander, 3 /10/ 2019
15. **Retos de los Procesos de Separación en la Sociedad del siglo XXI**, conferencia plenaria en las XXXVI Jornadas Nacionales de Ingeniería Química, Zaragoza, 6 /09/ 2019
16. **El valor de los residuos y el paradigma de la Economía Circular**, RAC, Madrid, 25 /04/2019; Club de Prensa de Asturias, 13 /05/ 2019 y Casa de las Ciencias de Logroño, 14 /05/ 2019.
17. **Recuperación de energía a partir de salmueras**, Conferencia invitada en el Congreso nacional del Agua, Orihuela, 21 /02/ 2019.
18. **Membranas poliméricas para la separación/purificación de hidrógeno**, ANQUE, Madrid, 13 /11/ 2018.
19. **Gestión sostenible del agua en la industria**, Málaga, 11 /07/2018, en el curso de la UNIA “El agua en la industria de procesos”
20. **Retos y perspectivas futuras de la Tecnología de Membranas**, Salamanca, 5 /07/ 2018 en las Jornadas nacionales de Ingeniería Química.

C.3. Projects or research lines in which you have participated.

Projects acting as IP

1. **LIFE-INDESAL**, EU under the LIFE call, 01.08.2022-30.07.2026; coordinator : ACCIONA AGUA S.A. **IP at UC : Inmaculada ORTIZ**; budget : 2. 800 k€; budget at UC: 472, 976 k€. Participants: ACCIONA AGUA SA, APRIA SYSTEMS, SL, REVOLVE Ltd, REDSTACK Ltd and UC
2. **Solar to hydrogen energy conversion efficiency using seawater, S2H, PLEC2021-007718** financiado por MICIU/AEI/10.13039/501100011033 y por la Unión Europea Next Generation EU/PRTR) **IP: I. Ortiz** (01.12.2021-30.11.2024, extended to 30.09.2025); Budget: 453.120,59 €. (UC: 209.586€)
3. **Circularidad del hidrógeno: Recuperación de corrientes de gases residuales para su transformación en energía eléctrica**. PID2021-123120 OB-I00; MICIN/AEI/10.13039/501100011033/FEDER UE; **IP1: Inmaculada ORTIZ**, IP2: Alfredo Ortiz, 01.09.2022-31.08.2025; Budget: 240.810,81€
4. **Piloto demostrador de un sistema híbrido solar fotovoltaica-hidrógeno para el abastecimiento energético en el ámbito residencial** TED2021-129951B-C21 financiado por MICIU/ AEI /10.13039/501100011033 y por la Unión Europea Next Generation EU/PRTR; proyecto coordinado con el C22 cuyo objetivo es el desarrollo del gemelo digital, Ministerio de Ciencia e Innovación, 01.12.2022-30.11.2024, extended 31.08.2025; **IP1 first subproject: Inmaculada ORTIZ**; Budget first subproject: 218.500€
5. **LIFE-3E**, Environment, energy and economy. *LIFE19 ENV/ES/000143*. EU under the LIFE call coordinator: MARE SA; partners: MARE SA, APRIA SYSTEMS SL, University of Darmstadt (Germany) and UC; **IP at UC: Inmaculada ORTIZ**; (01.10.2020-30.06.2025, extended); Budget: 1.730.984 euros; budget at UC: 498.623 €
6. **PLATAFORMA MICROFLUÍDICA PARA LA SELECCIÓN EFICIENTE DE TECNOLOGÍAS DE REMEDIACIÓN AMBIENTAL** (PDC2022-133122-I00_ MICIU/AEI/10.13039/501100011033 y UE Next Generation EU/PRTR); 149.5500 €
7. **LUV2Innovate: Innovative photochemical processes assisted by LED UV-C for the treatment of wastewaters**. Ministerio de Ciencia e Innovación under the call Retos- Colaboración *RTC2019-006820-5*. Coordinator: APRIA SYSTEMS S.L., **IP at UC: Inmaculada ORTIZ**; (01.04.2020-31.12.2022); Budget UC: 183.108 €.
8. **High performance microfluidic separations: Challenges and Opportunities**, *MINECO RTI2018-093310-B-I00*; **IP: I. ORTIZ** (01.01.2019-31.12.2021); Budget: 338.800 €.

9. **Harnessing saline gradient energy through the reverse electrodialysis technology. Phase I. Techno-economic feasibility of the application in the Cantabria Autonomy.** GRADISAL. SODERCAN. **IP: I. Ortiz.** (30.12.2016-29.12.2018), Budget: 194.247,31 €.
10. **Advanced separation applications. Modeling and experimental validation.** CTQ2015-66078-R MINECO- FEDER; **IP: I. Ortiz;** (01.01.2016-31.12.2018); Budget 385.990 €;
11. Red de excelencia: **Sistemas Iónicos para la Sostenibilidad Energética** RED2018-102679-T; IP UC: Inmaculada ORTIZ URIBE
12. **Nuevos procesos de separación con control cinético basados en la utilización de materiales funcionalizados.** MINECO. IP: Inmaculada ORTIZ URIBE. 01.01.2013 – 31.12.2015. Cuantía Total: 328.770 €.

Participation in R&D projects

13. **PLAST4H2: PLASTIC CIRCULARITY THROUGH AN EFFICIENT DETECTION, COLLECTION, AND VALORIZATION INTO HYDROGEN AND VALUE-ADDED PRODUCTS (FEDER);** INTERREG ATLANTIC AREA-EAPA_0018/2022 PLAST4H2; coordinador A. Ortiz, grupo PAS-UC, 01/11/2023-31/10/2026; budget-UC: 238.110 €
14. **PLAN COMPLEMENTARIO EN EL ÁREA DE ENERGÍA E HIDRÓGENO RENOVABLE** (Financiado por la Comunidad Autónoma de Cantabria y por la Unión Europea Next GenerationEU/PRTR). IP: A. Ortiz, grupo PAS-UC; 04/11/2022-30/09/2025; 460.804€ + 248.125€
16. **SUDOE ENERGY PUSH.** SOE3/P3/E0865; 01/09/2019-31/12/2022. Coordinador :CTL Participantes: UC, grupo PAS; Fundación Centro Tecnológico en Logística Integral Cantabria .CTL España; ADENE - Agência para a Energia ADENE Portugal ; A g e n c i a d e V i v i e n d a y Rehabilitación de Andalucía (antes EPSA). AVRA España ; G e s t i o n d e v i v i e n d a s e infraestructuras en Cantabria S.L. GESVICAN España ; Universidade do Porto CONSTRUCT Portugal PT; Universidad de Cantabria UC España; Tipee TIPEE France; Agence Locale de l'Energie et du Climat Alec France; Asociación Empresarial Centro Tecnológico de la Energía y del Medio Ambiente de la Región de Murcia CETENMA España; CARBONE 64 SARL C64 France 1.387.457,64 euros , UC: 277.534€
17. **Sostenibilidad energética en la región SUDOE: Red PEMFC-SUDOE,** PEMFC-SUDOE-SOE1/PI/E0293; 01/07/2016-30/06/2019. Coordinador: A. Ortiz, UC. Participantes: CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (France), Universidade do Porto (Portugal), Laboratório Nacional de Energia e Geologia, IP (Portugal), Institut National Polytechnique de Toulouse (France), ARIEMA Energia y Medioambiente S.L. (España), APRIA Systems S.L. (España), Institut de la Filtration et des Techniques Séparatives (France), Nanoinnova Technologies (España. 2016-2019. Coordinador: Universidad de Cantabria; la participación de la UC se centra en el desarrollo de nuevos materiales para construir PEMFC de mayor eficiencia. 1.812.666,65 € ; UC: 247.082 €
18. **Network for Renewable Generation and Supply of Hydrogen to promote High Energy Efficiency.** HYLANTIC; ATLANTIC AREA EAPA_204/2016; 01/10/2017- 30/06/202 Coordinador: A. Ortiz, UC; participantes: Universidade do Porto (PT), Ulster University (UK), Dublin City University (IR), CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE – Délégation Bretagne Pays de la Loire (France), Laboratório Nacional de Energia e Geologia, IP (PT), ULEMCO Ltd (UK), APRIA Systems S.L. (Spain), Auriga Energy Limited (UK), A. Silva Matos Metalomecânica SA (Portugal), PURE ENERGY CENTER (UK). Coordinator: UC. Budget:2.500.000 euro; UC: Financiación: 399.166 €
19. LIFE-2-ACID, 01/07/2017-31/12/2021; ip: am Urtiaga, 159.663 €

C.4. Participation in technology/knowledge transfer activities and exploitation of results.

1. Since the promotion and creation of the technology oriented spin-off Company APRIA SYSTEMS in 2006 there is a steady collaboration line; the company offers continuous support to the transfer of knowledge created in the academic R&D group Advanced Separation Processes; APRIA SYSTEMS has hired Dr. I. Ortiz Gándara (2016), Dr. S. Domínguez (2017), Dr. A. Hernández (2021), Dr. S. Schröder (2023) trained in the R&D UC group, it jointly collaborates in EU financed projects (HYLANTIC, LIFE 3E, LIFE INDESAL etc) and acts as a bridge between the group and different stakeholders through the establishment of research contracts.

In order to give answer to specific and temporary demands from different companies R&D contracts have been signed with specific agreements for the protection of the intellectual property; among the most recent contracts the following are highlighted,

2. **REMSELAM.** Técnicas Reunidas 12.11.2020-30.06.2022 (IR: I. Ortiz) Cuantía Total: 77597,3€

3. **Evaluación Técnica de la recuperación de la energía de gradiente salino contenida en la mezcla salmuera-agua de mar mediante electrodiálisis reversa.** ACCIONA-AGUA; 01.05.2018-31.01.2019 (IR: I. Ortiz); 50.000 €.

4. **Desarrollo de recubrimientos funcionalizados con nanopartículas de grafeno para laminados prelacados con elevada resistencia a la corrosión.** Santander Coated Solutions. 06.02.2017 – 12.12.2017. (IR: I. Ortiz). 60.500 €.

5. **Apoyo técnico al estudio de viabilidad técnico-económica de producción de cauchos hidrogenados con propiedades ópticas,** Dynasol Elastómeros S.A., 01/06/2015-31.12/2016; 30.000€

6. **Diseño y caracterización de nano-materiales magnéticos como agentes de separación,** Santander Coated Solutions, S.A., 01/06/2015-31/05/2016. 30.000€

7. **NITRALIM, 16/03/2015-31/12/2015, ABENGOA SA, 50000 €**

Participación en contratos I+D 2015-2023

8. **Caracterización de membranas selectivas para la separación de gases -2023.** IP: E.D. Gorri

9. **Impulso a la recuperación y valorización de recursos minerales estratégicos para la transición ecológica-MINETHIC,** 01/01/2023-30/06/2025, IP: Fresnedo San Román

10. **Evaluación de las propiedades de las cenizas de combustión de biomasa en procesos de deshidratación de lodos de depuradora,** 08/03/2022-31.12.2022, IP: A.M. Urtiaga

11. **Informe de evaluación de productos fertilizantes para su consideración como graneles sólidos minerales,** 11/2019, IP: AM Urtiaga

12. **Desarrollo y seguimiento de aplicaciones de electrodiálisis,** 13/09/2021, IP: Raquel Ibáñez

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