MINISTERIO DE CIENCIA E INNOVACIÓN

CURRICULUM VITAE (maximum 4 pages)

AGENCIA ESTATAL DE INVESTIGACIÓN

Part A. PERSONAL INFORMATION

CV date	26/12/2022

First and Family name	Mª Ángeles Sanromán Braga		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0002-8148-2130	
	SCOPUS Author ID (*)	56586197300	
	WoS Researcher ID (*)	A-2847-2008	

(*) Optional
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad de Vigo		
Department	Ingeniería Química		
Address and Country	Campus Lagoas Marcosende, 36310 Vigo		
Phone number	986812383	E-mail	sanroman@uvigo.es
Current position	Catedrático de Universidad	From	02/04/2019
Key words	Advanced water treatment technologies; Environmental biotechnology; Electrochemical and photo-assisted processes; Organic Micropollutants removal; Green Chemistry; Adsorption; Biomass thermal conversion; Catalyst		

A.2. Education

PhD, Licensed, Graduate	University	Year
Licensed Chemical-Chemical Enginnering	Santiago de Compostela	1987
PhD Chemistry	Santiago de Compostela	1991

A.3. General indicators of quality of scientific production *(Scopus December 2022)*

Six-year research periods:
Supervised PhD thesis: 27 (+4 in progress)
Total publications: 361
Sum of the Times Cited: 12191
H index: 57

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

Mª Ángeles Sanromán is Professor of Chemical Engineering at the University of Vigo. She is graduate in Chemical Engineering from the University of Santiago de Compostela, Spain (1987). Completed her PhD degree (1991), focusing on the development of bioreactor and cell immobilisation techniques. In 1991, she got a position as assistant professor joined the staff at the University of Vigo in the Chemical Engineering Department. She is the Head of the Research group Bioengineering & Sustainable Processes (BIOSUV Group) at the University of Vigo. Currently, develops the following research lines: i) Environmental Technology applied to soil and water remediation; ii) Advanced Oxidation Processes; iii) Reuse, Recycling & Valorisation of wastes; iv) Green Chemistry. Her teaching and research assessments have been positively recognised with 6 five-year teaching periods and 5 six-year research periods. She authored> 350 scientific articles, including 10 reviews, and collaborated in several books. Its h index is 57 (Scopus), and the total number of citations is higher 10000. Author of more than 500 communications to National and International Conferences, receiving several awards in recognition of her work. She has participated in more than 50 national and international research and innovation projects and technology transfer contracts with public administration and companies, mainly as principal investigator.

It is remarkable her work as director of the Research Results Transfer Office at the University of Vigo (1994-1998) and member of the National Agency for Evaluation and Prospective (ANEP) in the subject of Chemical Technology (2007-2011). She has been collaborating as panel member in the Coordination and Evaluation Subdivision belonging to the Spanish Agency of Investigation (AEI) in the scientific area of Technology Transfer (2015-2018) and Materials Energy and Environmental (2019- 2022). In addition, she acts as reviewer in regular evaluation tasks of research projects in competitive calls for several national and international calls. She is members of several academic societies and editorial boards of journals, highlighting her position as Associate Editor of the journal Bioresource Technology. In addition, she is member of several organising and scientific committees of international congresses. It is also significant her labour as guidance, supervisor or leadership of young researchers. She is a mentor to > 30 researchers, including MD, PhD and postdocs, and several of them have established successful scientific careers.

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

C.1. Publications *10* Selected Publications type Q1 from 353 papers in 2022:

1. Escudero-Curiel, S., Pazos, M., & Sanromán, A. (2023). Facile one-step synthesis of a versatile nitrogen-doped hydrochar from olive oil production waste, “alperujo”, for removing pharmaceuticals from wastewater. Environmental Pollution, 330 doi:10.1016/j.envpol.2023.121751
2. Balci, E., Rosales, E., Pazos, M., Sofuoglu, A., & Sanroman, M. A. (2022). Continuous treatment of diethyl hexyl and dibutyl phthalates by fixed-bed reactor: Comparison of two esterase bionanocomposites. Bioresource Technology, 363, 127990. doi:10.1016/j.biortech.2022.127990
3. Escudero-Curiel, S., Pazos, M., & Sanromán, A. (2022). Sustainable regeneration of a honeycomb carbon aerogel used as a high-capacity adsorbent for fluoxetine removal. Journal of Molecular Liquids, 357 doi:10.1016/j.molliq.2022.119079
4. Meijide, J., Lama, G., Pazos, M., Sanromán, M. A., & Dunlop, P. S. M. (2022). Ultraviolet-based heterogeneous advanced oxidation processes as technologies to remove pharmaceuticals from wastewater: An overview. Journal of Environmental Chemical Engineering, 10(3) doi:10.1016/j.jece.2022.107630
5. Mkaddem, H., Rosales, E., Pazos, M., Ben Amor, H., Sanromán, M. A., & Meijide, J. (2022). Anti-inflammatory drug diclofenac removal by a synthesized MgAl layered double hydroxide. Journal of Molecular Liquids, 359 doi:10.1016/j.molliq.2022.119207
6. Ouiriemmi, I., Escudero-Curiel, S., Pazos, M., & Angeles Sanromán, M. (2022). On-site regeneration by ultrasound activated persulfate of iron-rich antipyrine-loaded biochar. Journal of Environmental Chemical Engineering, 10(5) doi:10.1016/j.jece.2022.108400
7. Poza-Nogueiras, V., Gomis-Berenguer, A., Pazos, M., Sanroman, A., & Ania, C. O. (2022). Exploring the use of carbon materials as cathodes in electrochemical advanced oxidation processes for the degradation of antibiotics. Journal of Environmental Chemical Engineering, 10(3) doi:10.1016/j.jece.2022.107506
8. Poza-Nogueiras, V., Moratalla, Á., Pazos, M., Sanromán, Á., Sáez, C., & Rodrigo, M. A. (2022). Exploring the pressurized heterogeneous electro-fenton process and modelling the system. Chemical Engineering Journal, 431 doi:10.1016/j.cej.2021.133280
9. Puga, A., Meijide, J., Pazos, M., Rosales, E., & Sanromán, M. A. (2022). Electric field as a useful tool to improve the poor adsorption affinity of pollutants on carbonaceous aerogel pellets. Journal of Molecular Liquids, 366 doi:10.1016/j.molliq.2022.120269
10. Puga, A., Moreira, M. M., Pazos, M., Figueiredo, S. A., Sanromán, M. Á., Delerue-Matos, C., & Rosales, E. (2022). Continuous adsorption studies of pharmaceuticals in multicomponent mixtures by agroforestry biochar. Journal of Environmental Chemical Engineering, 10(1) doi:10.1016/j.jece.2021.106977 Acevedo-García, V., Rosales, E., Puga, A., Pazos, M., & Sanromán, M. A. (2020). Synthesis and use of efficient adsorbents under the principles of circular economy: Waste valorisation and electroadvanced oxidation process regeneration. Separation and Purification Technology, 242 doi:10.1016/j.seppur.2020.116796

C.2. Research projects

1.- Title: “Innovación en la restauración ambiental de zonas costeras mediante el desarrollo de un Sistema Piloto Integrado para la caracterización, dragado, tratamiento y valorización de lodos y sedimentos con contaminantes orgánicos e inorgánicos (INNODRAVAL)”. Ministerio de Ciencia e Innovación (Subprograma INNPACTO)
Partners: Geotecnia y Cimientos S.A., Flota Proyectos Singulares S.A., Fundación CETMAR - Centro Tecnológico del Mar, Fundación Instituto de Hidráulica Ambiental de Cantabria y Universidad de Vigo.
From: 01/01/2010 until: 31/12/2013 Grant money: 4.734.696 €
IP: Pedro Avellanosa Santos (Geotecnia y Cimientos S.A.)

2.- Title: “Implementación de nuevas estrategias de oxidación avanzada para el tratamiento de efluentes del sector vitivinícola (OXIVIT)”. Xunta de Galicia
From: 26/06/2012 until: 30/11/2015 Grant money: 98.320€
IP: Marta Pazos Currás Reference: EM 2012/083

3.- Title: “Remediación Electroquímica y Biológica de Contaminantes Emergentes: Líquidos Iónicos”. Ministerio de Ciencia e Innovación
From: 01-07-2015 until: 31-12-2018. Grant money: 216.000,00 €
IP: **Mª Ángeles Sanromán** Reference: CTM2014-52471-R

4.- Title: “Red Temática de Excelencia: Aplicaciones medioambientales y energéticas de la tecnología electroquímica”.
CTQ2015-71650-REDT: Ministerio Economía y Competividad; IP: Enric Brillas; 2015-2017
CTQ2017-90659-REDT: Ministerio de Ciencia, Innovaciones y Universidades; IP: Manuel Andrés Rodrigo Rodrigo; 2018-2020

5.- Title: "Programa de Consolidación e Estructuración de unidades de investigación competitivas- Modalidad Grupos de Refencia Competitiva”. Xunta de Galicia.
From: 01/01/2017 until: 31/12/2020. Grant money: 280.000€
IP: **Mª Angeles Sanromán** Reference: CTM2017-87326-R

6.- Title: “Sustainable And Safe Water Management In Agriculture: Increasing The Efficiency Of Water Reuse For Crop Growth While Protecting Ecosystems, Services And Citizens’ Welfare” (REWATER). ERA-NET Cofund WaterWorks2015
From: 01/04/2017 until: 31/03/2020. Grant money: 555.960 €.
Project Coordinator: Cristina Delerue Matos, Spanish IP: **Mª Ángeles Sanromán**.

7.- Title: "Hibridación de tecnologías de oxidación avanzada y adsorción selectiva para la recuperación y/o eliminación de microcontaminantes”. Ministerio Economía, Industria y Competividad. From: 01/01/2018 until: 31/12/2020. Grant money: 207.031€
IP: **Mª Angeles Sanromán** Reference: CTM2017-87326-R

8.- Title: "Reduccion del impacto ambiental y sanitario de efluentes hospitalarios mediante oxidacion avanzada: innovacion en el ecodiseño de catalizadores y electrodos multifuncionales (ResiHOSP-AOP)”. Ministerio de Ciencia e Innovación. From: 01/09/2021 until: 30/08/2024. Grant money: 242.000€
IP: Marta Pazos y **Mª Angeles Sanromán** Reference: PID2020-113667GB-I00

9.- Title: "Un enfoque práctico y próximo a la realidad de mercado en la detección y el tratamiento de compuestos farmacéuticos (HIBRITEC+)”. Ministerio de Ciencia e Innovación. From: 01/12/2021 until: 30/11/2023. Grant money: 138.000€
IP: **Mª Angeles Sanromán** y Marta Pazos Reference: PDC2021-121394-I00

C.3. Contracts, technological or transfer merits

- Estudio de la actividad biocida de aceros tras diversos tratamientos (Fase 1). Company: AIMEN-CENTRO APLICACIONES LASER. subcontratación dentro del Proyecto MATChING: Materials and technologies for performance improvement of cooling systems in power plants, GA: 686031 H2020 del topic: NMP 15 – 2015 Material. 2016. IP: **Mª Angeles Sanromán**. Grant money: 1.950 €.
- Estudio del cultivo en fed-batch de la microalga *Crypthecodinium cohnii*. Company: CARBIOTECH, S.L. 2017. IP: **Mª Angeles Sanromán**. Grant money: 2.000 €.
- Diseño de un proceso sostenible para el cultivo de una especie de microalgas autóctona y enriquecimiento en el compuesto de interés – CRYPTHA. Company: CARBALLO BIOMETANIZACIÓN, S.L. 2018-2019. IP: **Mª Angeles Sanromán**. Grant money: 24.000€.

C.4. Patents

- Moldes, D., **Sanromán, A.** y Fernández, M. "Procedimiento para dotar de hidrofobicidad materiales de madera". Ref: P201300587; Priority country: Spain; 2015. Universidad de Vigo
- Deive, F.J., Alvarez, M.S., Moscoso, F., Rodríguez, A., **Sanromán, A.** "Procedimiento para la eliminación de compuestos orgánicos presentes en aguas residuales". Ref: P201301068; Priority country: Spain; 2015. Universidad de Vigo
- Fernández-Costas, C., **Sanromán M.A.**, Moldes D. "Procedimiento enzimático para conferir a la madera y productos derivados resistencia frente a agentes de origen biótico". Ref: P201600325; Priority country: Spain; 2017. Universidad de Vigo
- Moldes D., Domínguez, A., Othman, A.M., **Sanromán M.A.** "Procedimiento para la unión estable de retardantes de llama a productos madereros mediante catálisis enzimática". Ref: P201600924; Priority country: Spain; 2018. Universidad de Vigo
- Deive, F.J. Gutiérrez-Arnillas, E., Rodríguez, A., **Sanromán, M.A.** "Procedimiento para el incremento de producción de lipasa en cultivos de Halomonas mediante inducción química y biológica". Ref: P201700078; Priority country: Spain; 2018. Universidad de Vigo

C.5. Supervised PhD theses: All Sobresaliente *Cum Laude. As example:*

- Dra. Fátima Moscoso Díaz. "Aplicación de técnicas de remediación biológica a la degradación de contaminantes agroindustriales". Thesis Doctor Europeus. 2012. Doctoral extraordinary Award.
- Dra. Olaia Iglesias Castrillejo. "Advanced treatments for marine sediments and polluted wastewaters decontamination". International PhD Mention. 2013. Doctoral extraordinary Award.
- Dra. María Salomé Álvarez Álvarez. "Remediation of polluted effluents through physical and biological methods". International PhD Mention. 2015. Doctoral extraordinary Award.
- Marta Cobas Roade "Sistema integral para la eliminación de contaminantes emergentes en medios acuosos ". International PhD Mention I. 2016. Doctoral extraordinary Award.
- Dra. Elvira Bocos Álvarez "Remediation of contaminated environments by combination of environmentally friendly processes". International PhD Mention. 2016. Doctoral extraordinary Award.
- Dra. Jessica Meijide Fernández "Electro-fenton and adsorption as approach towards a comprehensive remediation of effluents with different types of pollutants". International PhD Mention. 2018. Doctoral extraordinary Award.
- Dr. Ciprian Nicolae Sandu. "Treatment of soils contaminated with oil products, by using modern electrokinetic techniques". Universitatea „Vasile Alecsandri" din Bacău (Rumania). 2018.
- Dr. Marius Popescu. "Green remediation of soil by electrochemical methods". Universitatea „Vasile Alecsandri" din Bacău (Rumania). 2018.
- Dra. María del Carmen Fernández Costas. "New perspectives for wood preservation: Laccase-assisted treatments with Kraft lignin and wood extractives" International PhD Mention. 2019. Doctoral extraordinary Award.
- Dra. Veronica Poza Nogueiras. "Towards a future actual implementation of the heterogeneous electro-Fenton treatment for water remediation" International PhD Mention. 2021. Doctoral extraordinary Award.
- Dra. Maria Arellano Prado. "Techniques integration for degrading emerging pollutants and on the horizon" International PhD Mention. 2022.

C.6. Other merits

- Member of Chemical Tecnology of ANEP (National Agency for Evaluation and Prospective): 2007-2013.
- Member of AEI (Spanish Agency of Investigation) in the scientific area of
    - Technology Transfer of Technology Transfer (2015-2018)
    - Materials Energy and Environmental (2019- 2022).
- Expert Evaluator of the PF7, WaterJPI and other international agences.
- Associate Editor of Bioresource Technology.
- Evaluator of ANECA (National Agency for Quality Assessment and Accreditation of Spain).
- Member of the Engineering and Architecture Commite of Andalusian Agency for Knowledge (DEVA-AAC) from 2016.
- Scientific career prize awarded by the International Forum on Industrial Bioprocesses IFIBiop 2015
- Member of the organizing and scientifc committee of several conferences such as ELO.Water International Workshop on Advanced Electrochemical Oxidation for Water Reuse (Virtual 2020); BIOTEC2019 (Vigo 2019); 10th International Conference on Environmental Engineering and Management (ICEEM10) (Iasi 2019); International Conference on Sustainable Waste Treatment and Management (SWTM-2019) (Malaysia, 2019); 2nd International Biorestech Conference (Sitges 2018); 7th International Forum on Industrial Bioprocessing (IFIBiop 2017) (Wuxi, China 2017);….