CURRICULUM VITAE (CVA)

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

CV date	26/05/2022

Part A. PERSONAL INFORMATION

First name	Antonio		
Family name	Guerrero		
Social Security, Passport, ID number		URL Web: https://investigacion.us.es/sisius/sis_showpub.php?idpers=39	
e-mail			
Open Research and Contributor ID (ORCID)(*)		0000-0001-6050-8699	

(*) Mandatory

A.1. Current position

Position	Professor of Chemical engineering (Catedrático de Universidad)		
Initial date	21/05/2010		
Institution	Universidad de Sevilla		
Department/Center	Ingeniería Química / Escuela Politécnica Superior		
Country	Spain	Teleph. number	
Key words			

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

Period	Position/Institution/Country/Interruption cause
20/05/2010 - 22/11/1991	Profesor Titular de Universidad/Universidad de Sevilla/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Chemical Sciences	Universidad de Sevilla/Spain	1988
Licensed in Chemistry	Universidad de Sevilla/Spain	1981

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

Prof. Guerrero leads the Technology and Design of Multicomponent Products group (TEP229), is Coordinator of the PhD Program in Installations and Systems for Industry (EIDUS), President of the Spanish Rheology Group (GER), Spanish Royal Society of Chemistry and Delegate of GER in the European Society of Rheology and in the International Rheology Committee.

He has led more than 25 R+D+i projects, is the author of 7 patents and 201 articles in indexed journals. in various areas (Chemical Engineering, Polymer Technology, Food Technology, Materials Engineering, etc.). Director of 10 doctoral theses in these same areas. Currently directs three other doctoral theses on the valorization of agricultural and food industry wastes for the development of superabsorbent materials and nanoparticles for different applications.

His research activity in the last decade (with more than 120 JCR articles, 60% Q1 and 30% D1), has been focused on the development of bio-products with tailored microstructure and functionality for a wide variety of applications (bioplastics, superabsorbent materials, matrices for controlled release, membranes for air filtration, films for food packaging, scaffolds for tissue engineering, etc.). These bio-products have been based on proteins and polysaccharides extracted from biomass waste, using various polymer processing techniques (compression molding, injection molding, extrusion, electro-spinning, 3D printing, casting, etc.). This activity

has received public funding of about 2.5 M€ and more than 0.5 M€ through contracts with different companies.

According to Google Scholar, Prof. Guerrero has an h-index of 43 and has received a total of 5100 citations (about 3400 from 2017). In Scopus his h-index is 37. All this has contributed to obtaining 5 six-yearly research bonuses ("sexenios") and one six-yearly transfer bonus.

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

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

1. M. Jiménez-Rosado, A. Gomez-Zavaglia, A. Guerrero, A. Romero. Green synthesis of ZnO nanoparticles using polyphenol extracts from pepper waste (Capsicum annuum). Journal of Cleaner Production 350, 131541 (2022)
   Impact index (ISI, 2021): 11,072 Decyl: D1-24/279
2. M Félix, C Carrera-Sánchez, A Romero, C Bengoechea, A Guerrero. Rheological approaches as a tool for the development and stability behaviour of protein-stabilized emulsions. Food Hydrocolloids, 104, 105719 (2020).
   Impact Index 2020 (ISI-WOS): 9,147 Decyl: D1-5/144
3. JM Aguilar, C Bengoechea, E Pérez, A Guerrero. Effect of different polyols as plasticizers in soy-based bioplastics. Industrial Crops and Products, 153, 112522 (2020).
   Impact Index 2020 (ISI-WOS): 5,645 Decyl: D1 - 5/91
4. M Félix, A Romero, C Carrera, A Guerrero. Modelling the non-linear interfacial shear rheology behaviour of chickpea protein-adsorbed complex oil/water layers. Applied Surface Science 469, 792-803 (2019).
   Impact Index 2019 (ISI-WOS): 6.182 Decyl: D1- 1/21
5. E Álvarez-Castillo, C Bengoechea, N Rodríguez, A Guerrero. Development of green superabsorbent materials from a by-product of the meat industry. Journal of Cleaner Production 223, 651-661 (2019).
   Impact Index 2019 (ISI-WOS): 7.246 Decyl: D1-19/265
6. M Jiménez-Rosado, LS Zarate-Ramírez, A Romero, C Bengoechea, P Partal, A Guerrero. Bioplastics based on wheat gluten processed by extrusion. Journal of Cleaner Production 239, 117994 (2019).
   Impact Index 2019 (ISI-WOS): 7.246 Decyl: D1-19/265
7. M Félix, J Yang, A Guerrero, LMC Sagis. Effect of cinnamaldehyde on interfacial rheological properties of proteins adsorbed at O/W interfaces. Food Hydrocolloids 97, 105235 (2019).
   Impact Index 2019 (ISI-WOS): 7,053 Decyl: D1-5/139
8. E Álvarez-Castillo, A Del Toro, JM Aguilar, A Guerrero, C Bengoechea. Optimization of a thermal process for the production of superabsorbent materials based on a soy protein isolate. Industrial Crops and Products 125, 573-581 (2018)
   Impact Index 2018 (ISI-WOS): 4,191 Decyl: D1-3/89
9. M Félix, I Martínez, A Romero, P Partal, A Guerrero. Effect of pH and nanoclay content on the morphology and physicochemical properties of soy protein/montmorillonite nanocomposite obtained by extrusion. Composites Part B-Eng., 140: 197-203 (2018).
   Impact Index 2018 (ISI-WOS): 6,864 Decyl: D1-1/25
10. V Pérez-Puyana, M Félix, A Romero, A Guerrero. Development of eco-friendly biodegradable superabsorbent materials obtained by injection moulding. Journal of Cleaner Production 198, 312-319 (2018).
    Impact Index 2018 (ISI-WOS): 6,395 Decyl: D1-18/251

C.2. Congress.

1. Guerrero A., Álvarez-Castillo E., Jiménez-Rosado M., Romero A., Bengoechea C. Absorbent and superabsorbent materials from agro-polymers. Rheology, processing, and applications. Keynote Lecture. GEP-SLAP2022. San Sebastian (Spain) YEAR: 2022.

2. Álvarez-Castillo E., Oliveira S., Bengoechea C., Sousa I., Raymundo A., Guerrero A. Influence of rheology in 3D printing of protein-based doughs. Keynote Lecture. Annual European Rheology Conference (AERC 2022). Sevilla (Spain) YEAR: 2022

3. Cabrita M., Álvarez-Castillo E., Castelo-Branco D., Tasso A., Figueira D., Simões S., Guerrero A., Raymundo A. Clean Label emulsions based on vegetable proteins. Oral Communication. Annual European Rheology Conference (AERC 2022). Sevilla (Spain) YEAR: 2022

4. Zarandona I., Bengoechea C., Álvarez-Castillo E., Guerrero P., de la Caba K., Guerrero A. Rheological properties of chitosan-pectin hydrogels for 3D printing. Oral communication. Annual European Rheology Conference in Cyberspace (AERC 2021). Sevilla (Spain) YEAR: 2021

5. Álvarez-Castillo E., Bengoechea C., Aguilar J.M. Guerrero A. Incorporation of salts to soy protein-based bioplastics: rheological and morphological characterization. Oral Communication. 18th International Congress on Rheology Conference (ICR 2020). Río de Janeiro (Brazil) YEAR: 2020

6. Félix M., Carrera C., Romero A., Bengoechea C., Guerrero A. How rheology can help in the development and stability behaviour of protein-stabilized emulsions. Plenary Lecture. 20th Gums & Stabilisers for the Food Industry Conference. San Sebastian (Spain) YEAR: 2019

7. Felix M., Carrera C., A. Romero, Perez-Puyana V., Guerrero A. Interfacial rheology as a tool for designing interfaces in emulsion-based delivery systems. Oral communication. 7th Iberian Meeting on Rheology (IBEREO 2019). Porto (Portugal) YEAR: 2019

8. Perez-Puyana V., Jiménez-Rosado M., Félix M., Romero A., Guerrero A. Development of porous matrices as scaffolds for Tissue Engineering: rheological and microstructural characterization. Oral communication, 7th Iberian Meeting on Rheology (IBEREO 2019). Porto (Portugal) YEAR: 2019

9. Felix M., Carrera C., Romero A., Guerrero A. Rheological characterization of legume protein-stabilized oil/water interfaces and emulsions. Oral communication. Annual European Rheology Conference (AERC 2018). Portoroz (Slovenia) YEAR: 2019

10. Aguilar J.M., Bengoechea C., Cordobés F., Guerrero A. How do pH and acid anion affect thermal gelation of egg yolk? Oral communication. Annual European Rheology Conference (AERC 2018). Sorrento (Italy) YEAR: 2018

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

1. Encapsulación de ingredientes alimentarios bioactivos en emulsiones múltiples para el control de su bioaccesibilidad (BioNanoWOW). Junta de Andalucía /FEDER (PY20_01046) (Universidad de Sevilla). 2021-2022. 120.490 €. (IP).
2. Analizador dinamo-mecánico (DMA) para la caracterización de materiales sólidos con control de temperatura y humedad. Ministerio de Ciencia, Innovación y Universidades, Agencia Estatal de Investigación y FEDER (EQC2019-005400-P). (Universidad de Sevilla). 2019-2021. 156.040,10 €. (IP).
3. Desarrollo de Materiales Superabsorbentes Innovadores, Sostenibles y de Valor Añadido a partir de Biorresiduos. Ministerio de Ciencia, Innovación y Universidades (RTI2018-

097100-B-C21). (Universidad de Sevilla y UPV/EHU). 2019-2021. 188.760 €. (IP y Coordinador).

4. Desarrollo de Materiales Superabsorbentes Biodegradables Procesados a partir de Subproductos Agroindustriales. Ministerio de Economía y Competitividad (CTQ2015-71164-P). (Universidad de Sevilla). 2016-2019. 106.722 €. (IP).
5. Active and intelligent fibre-based packaging - innovation and market introduction (ActInPak). Comunidad Europea. 2016-2019. 128.938 €. (IP of the Group).
6. Reómetro para caracterización reológica interfacial de cizalla y reología extensional. MINECO-FEDER, Infraestructura 2013 (UNSE13-1E-2061). (Universidad de Sevilla). 2013-2015. 158.985€. (IP).
7. Development of bioactive gels based on protein by-products from crayfish-processing industry. NILS Science & Sustainability (ES07). Norwegian Universidad of Science and Technology (Noruega), Universidad de Sevilla 2014 – 2015. 12.960€ (IP of the group)
8. Formulación y procesado de matrices bioactivas para liberacion de biocidas. MICINN (MAT2011-29275-C02-02). Universidad de Sevilla and Universidad de Huelva. 2012-2014. 50.000€ (IP).
9. Valorización de subproductos y residuos de la Industria del cangrejo rojo en base a su contenido proteico. Junta de Andalucía. Excelencia (10-TEP- 6134). Universidad de Sevilla. 2011-2016. 223.547€ (IP)

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

1. Jiménez-Rosado M., Pérez-Puyana V., Romero A., Guerrero A. Matrices proteicas de soja para la liberación controlada de agua y micronutrientes para cultivos y su método de preparación. Universidad de Sevilla. Spain.
   Application Nº: P202031146. Date: 13/11/2020
2. J.E. Martín-Alfonso, A. Guerrero. Membranas poliméricas generadoras de dióxido de carbono y procedimiento de obtención. Univ. de Huelva, Universidad de Sevilla. Spain.
   Application Nº: P201700112. Date: 30/04/2019 Patent Nº: ES2677072B1
3. C. Bengoechea, F. Cordobés, L. Fernández-Espada, A. Guerrero. Material plástico biodegradable con elevada capacidad absorbente, método de obtención y uso. Universidad de Sevilla. Spain
   Application Nº: P201400781 Date: 10/10/2016 Patent Nº: ES2565547-B1
4. A. Guerrero, A. Romero, A. Lucio-Villegas. Material Bioplástico, método de preparación y uso. Universidad de Sevilla. Spain
   Application Nº: P201301063 Date: 02/12/2015 Patent Nº: ES2535211-B1
5. Desarrollo de nuevos materiales filtrantes basados en maniobras biodegradables (BIOFILTER). Andaluza de Filtros, S.L. (ANDEFIL). Code: 3128/0345. Universidad de Sevilla. 2017- 2019 (24 months). 27.830€. (IP).
6. Estudio de propiedades reológicas y fisicoquímicas de muestras (suspensiones y disoluciones) procedentes de la empresa Cobre Las Cruces SA. CLC S.A. Code: 68/83 Universidad de Sevilla. 2013-2104 (12 months). 6.030€ (IP).