

**Part A. PERSONAL INFORMATION**

<b>CV date</b>	22/02/2023
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First and Family name	Pedro Partal	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	<a href="https://orcid.org/0000-0003-0141-0733">https://orcid.org/0000-0003-0141-0733</a>
	SCOPUS Author ID (*)	55396691100
	WoS Researcher ID (*)	K-6868-2014

**A.1. Current position**

Name of University/Institution	Universidad de Huelva		
Department	Chemical Engineering-Pro <sup>2</sup> TecS		
Current position	Full Professor	From	29/10/2009
Key words	Rheology, Product Engineering, emulsion, bitumen modification, foods, polymers, bioplastics		

**A.2. Education**

PhD, Licensed, Graduate	University	Year
Bachelor in Chemistry (industrial specialization)	Seville	1991
PhD in Chemistry	Seville	1995

**A.3. General indicators of quality of scientific production (see instructions)**

Total number of citations: 3897 (WoS)	
Average number of citations in the last 5 years: 331 (WoS)	
Total number of publications: 126 (WoS)	
Total number of publications in the first quartile (Q1): 86 (JCR)	
h-index: 38 (WoS)	
Thesis supervised in the last 10 years: 7	
Number of six-year research periods: 4	Transfer of knowledge: 1
Date of the last six-year research period: 06/06/2018	Transfer of knowledge: 15/04/2020

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

Professor of Chemical Engineering since 2009, at the Chemical Engineering Department of the University of Huelva. He was born in Sevilla in 1968. He received his bachelor's degree in Industrial Chemistry from University of Sevilla (Spain) in 1991 and completed his PhD in 1995. He became Director for Research Affairs at University of Huelva from 2000 to 2003 and Director of the R&D Centre on Food Technology of the University of Huelva, CIDERTA, in 2004. More recently, he has been Director of Chemical Engineering Department of the University of Huelva (2015-2019). His teaching and research activities are related to PhD studies on "Complex Fluid Engineering", CFD and Heat Transfer at the University of Huelva. As researcher of the Pro<sup>2</sup>TecS Centre of the University of Huelva, his work focuses on Chemical Product Design and Engineering, with specific interest in the microstructure, rheology, formulation and processing of structured chemical products (emulsions, structured food, gels, biopolymers, bioplastics, bitumen, lubricants, surfactants, etc.). He has been Principal Investigator in at least 50 research projects sponsored by public Entities and by the industry, leading different industrial projects that represent over €2 million total budget, developed with both national and international companies. Likewise, he has been principal investigator in five projects belonging to the Spanish R&D National Plan (MAT2001-0066-C02-02, MAT2004-06299-C02-02, MAT2007-61460, MAT2010-21404-C02-01 and MAT2011-29275-C02-01); in an EU project of the FP7-PEOPLE-2013-ITN and in three industrial projects funded by Mineco-INNPACTO (IPT-2012-0316-370000) and Junta de Andalucía (AOPJA GGI3000/IDIH) and IDEA 802C1800001).

He is coauthor of more than 120 papers in published in relevant journals, coauthor of a review on Food and Emulsion Rheology, coauthor of several chapters in specialized books (WP-Woodhead Publishing y EOLSS), coeditor of a book on rheology entitled "Progress in Rheology: Theory and Applications", and author of numerous communications in International



Conferences. He has been external examiner of the National Evaluation and Foresight Agency (Ministry of Science and Innovation, Spain) in Food Technology (2000-2009), The Academy of Sciences for the Developing World-TWAS (Italia) NSF-National Science Foundation (USA), University of Nottingham, etc.

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

### **C.1. Publications** (*see instructions*)

Delgado-Sanchez C.; Cuadri, A.A.; Navarro, F.J.; [Partal P.](#) Formulation and processing of novel non-aqueous polyethylene glycol-in-silicone oil (o/o) phase change emulsions. SOLAR ENERGY MATERIALS AND SOLAR CELLS. 221, 110898, 1-10 (2021).

Senise, S; Carrera, V; Cuadri, AA; Navarro, F J; [Partal, P.](#) Hybrid Rubberised Bitumen from Reactive and Non-Reactive Ethylene Copolymers. POLYMERS, 11, 1974, 1-24 (2019)

Yuliestyan, A; Gabet, T; Marsac, P; Garcia-Morales M.; [Partal, P.](#) Sustainable asphalt mixes manufactured with reclaimed asphalt and modified-lignin-stabilized bitumen emulsions. CONSTRUCTION AND BUILDING MATERIALS, 173, 662-671 (2018)

Felix, M.; Martinez, I.; Romero, A.; [Partal P.](#); Guerrero A. Effect of pH and nanoclay content on the morphology and physicochemical properties of soy protein/montmorillonite nanocomposite obtained by extrusion. COMPOSITES PART B-ENGINEERING, 140, 197-203 (2018)

Senise, S; Carrera, V; Navarro, FJ; [Partal, P.](#) Thermomechanical and microstructural evaluation of hybrid rubberised bitumen containing a thermoplastic polymer. CONSTRUCTION AND BUILDING MATERIALS, 157, 873-884 (2017)

Yuliestyan, A.; Garcia-Morales, M.; Moreno, E.; Carrera V.; [Partal P.](#) Assessment of modified lignin cationic emulsifier for bitumen emulsions used in road paving MATERIALS & DESIGN, 131, 242-251, (2017)

Perez, J. P.; Martinez-Boza, F. J.; [Partal, P.](#) Stability assessment of non-aqueous polymer dispersions through viscous flow and linear viscoelastic rheological tests. POLYMER TESTING, 50, 164-171 (2016).

Yuliestyan, A; Cuadri, AA; Garcia-Morales M.; [Partal, P.](#) Influence of polymer melting point and Melt Flow Index on the performance of ethylene-vinyl-acetate modified bitumen for reduced-temperature application. MATERIALS & DESIGN, 96, 180-188 (2016)

Diañez, I; Martinez, I; [Partal, P.](#) Synergistic effect of combined nanoparticles to elaborate exfoliated egg-white protein-based nanobiocomposites. COMPOSITES PART B-ENGINEERING, 88, 36-43 (2016)

Carrera, V; Cuadri, AA; Garcia-Morales, M ; [Partal, P.](#) The development of polyurethane modified bitumen emulsions for cold mix applications. MATERIALS AND STRUCTURES. 48, 3407-3414 (2015).

### **C.2. Research projects**

**Project Reference:** PID2020-116905RB-I00

**Title:** O<sup>2</sup>emulHEAT-Development of phase change Oil-in-Oil emulsions with enhanced rheological, heat storage and heat transfer properties

**Participants:** Universidad de Huelva

**Principal Investigator:** Fco. Javier Navarro Domínguez y [Pedro Partal López](#)

**Affiliation:** UNIVERSIDAD DE HUELVA

**Funding Body:** Ministerio de Ciencia e Innovación

**Duration: from:** 01/09/2021 to: 30/08/2024

**Budget UHU:** € 174.119 **Project state:** approved



**Project Reference:** 802C1800001  
**Title:** Joint Innovation Unit (UIC-GREENASPHALT)  
**Participants:** Universidad de Huelva y Eiffage Infraestructuras  
**Principal Investigator:** [Pedro Partal López](#)  
**Afiliation:** UNIVERSIDAD DE HUELVA  
**Funding Body:** Agencia de Innovación y Desarrollo de Andalucía IDEA (Junta de Andalucía)  
**Duration: from:** 01/07/2020 to: 30/06/2023  
**Budget UHU:** € 522,906.77      **Project state:** approved

**Project Reference:** RETOS-2017- CTQ2017-89792-R  
**Title:** Study of thermorheologically advanced dispersions designed for heat transport applications  
**Principal Investigator:** F. Javier Navarro Domínguez y Francisco J. Martínez Boza  
**Funding Body:** Ministerio de Economía, Industria y Competitividad.  
**Duration: from:** 01/01/2018 to: 31/12/2020  
**Budget (euros):** €137,940.00      **Project state:** approved

**Project Reference:** RETOS-2014 CTQ2014-56980-R  
**Title:** Rheological design of sustainable fluids enhanced with nanoparticles for improved oil and gas drilling and recovery  
**Principal Investigator:** Francisco J. Martínez Boza  
**Funding Body:** Ministerio de Economía y Competitividad.  
**Duration: from:** 01/01/2015 to: 31/12/2017  
**Budget (euros):** €199,650.00      **Project state:** approved

**Project Reference:** FP7-PEOPLE-2013-ITN Project number 607524  
**Title:** SUP&R ITN— Sustainable Pavements & Railways Initial Training Network  
**Principal Investigator:** [Pedro Partal López](#)  
**Funding Body:** EU Marie Curie Actions-Initial Training Networks (ITN)  
**Duration: from:** 1/10/2013 - to 30/09/2017  
**Budget UHU (euros):** €229,981.62      **Project state:** approved

**Project Reference:** IPT-2012-0316-370000  
**Title:** Rodaduras urbanas sostenibles  
**Principal Investigator:** [Pedro Partal López](#)      **Afiliation:** UNIVERSIDAD DE HUELVA  
**Funding Body:** Ministerio de Economía y Competitividad  
**Duration: from:** 1/01/2013 – to: 31/12/2014  
**Budget UHU (euros):** €81,314.40      **Project state:** approved

**Project Reference:** MAT2011-29275-C02-01  
**Title:** Formulation and processing of active packaging materials based on bioplastics and antimicrobial volatile agents  
**Principal Investigator:** [Pedro Partal López](#)      **Afiliation:** UNIVERSIDAD DE HUELVA  
**Funding Body:** Ministerio de Ciencia e Innovación  
**Duration: from:** 1/01/2012 - to: 31/12/2014  
**Budget (euros):** €49,999.62      **Project state:** approved

### C.3. Contracts, technological or transfer merits

**Title:** Formulation and characterization SBS-modified bitumens  
**Principal Investigator:** [Pedro Partal López](#)      **Afiliation:** UNIVERSIDAD DE HUELVA  
**Funding Body:** Dynasol Elastomeros SAU  
**Duration: from:** 01/09/2019 to: 31/08/2021      **Budget (Euros):** €127,050.00

**Title:** Research and development of new sustainable pavements with improved mechanical and acoustic performance  
**Principal Investigator:** [Pedro Partal López](#)      **Afiliation:** UNIVERSIDAD DE HUELVA  
**Funding Body:** SACYR CHILE  
**Duration: from:** 20/04/2017 to: 30/06/2018      **Budget (Pesos Chilenos):** 30,400,000 clp (€41.000)



**Title:** Development of advanced Heat Transfer Fluids (HTF) applicable in parabolic trough technology

**Principal Investigator:** Pedro Partal López **Afiliación:** UNIVERSIDAD DE HUELVA

**Funding Body:** Abengoa Solar New Technologies S.A.

**Duration: from:** 1/06/2012 to: 31/03/2015

**Budget (euros):** €566,099.79

**Title:** Integrated demonstration of industrial CO<sub>2</sub> reduction processes through carbonation and product recovery. ReCO<sub>2</sub>Val Project

**Principal Investigator:** Pedro Partal López **Afiliación:** UNIVERSIDAD DE HUELVA

**Funding Body:** Eiffage Infraestructuras, S.A.U.

**Duration: from:** 01/01/2014 to: 30/11/2014

**Budget (euros):** €54,450.00

**Title:** Reuse of agricultural plastic waste in the manufacture of bituminous mixture for use in roads using dry process technology (PLASTIC-ROAD)

**Principal Investigator:** Pedro Partal López **Afiliación:** UNIVERSIDAD DE HUELVA

**Funding Body:** Agencia de Obra Pública de la Junta de Andalucía

**Duration: from:** 22/06/2012 to: 31/03/2014

**Budget (euros):** €406,600.00

**Title:** Development of advanced asphalt-based roofing membranes through reactive modification

**Principal Investigator:** Pedro Partal López **Afiliación:** UNIVERSIDAD DE HUELVA

**Funding Body:** The Garland Company, Inc. (USA)

**Duration: from:** 01/03/2012 to: 28/02/2013 **Financiación recibida (en dólares USA):** \$65,600.00

**Title:** Foaming technology of bitumen at low temperature

**Principal Investigator:** Pedro Partal López **Afiliación:** UNIVERSIDAD DE HUELVA

**Funding Body:** Repsol S.A.

**Duration: from:** 01/03/2011 to: 28/02/2013

**Budget (euros):** €141,600.00

#### C.4. Patents

**Inventors:** .Martín-Alfonso, M.J; Martínez Boza F. J.; Partal P.; Navarro F. J.

**Title:** Equipment for measuring rheological properties in fluids

**Application Number:** P201830949 **Reference:** PII-2018-0006

**Date:** 02 October 2018 **Applicant:** Universidad de Huelva **Priority Country:** Spain

**Inventors:** A. Páez, E. Moreno, E. Romero; F.J. Martínez-Boza; P. Partal; F.J. Navarro, C. Gallegos, Bardesi, A

**Title:** Process for continuous preparation of submicronic bitumen emulsions

**Application Number:** EP2213704

**Date:** 28/01/2010

**Applicant:** Repsol YPF S.A.

**Priority Country:** Spain

**Inventors:** D. Gómez-Martínez; M. García-Morales, P. Partal; C. Gallegos

**Title:** Applicable material for obtaining biodegradable films for bags by extrusion and blow moulding, and method of preparation

**Application Number:** ES2352291

**Date:** 17/02/2011

**Applicant:** Plásticos Alhambra, S.L.

**Priority Country:** Spain

**Inventors:** S. GIL, F.J. Martínez-Boza, F.J. Navarro, P. Partal, et al.

**Title:** Device for measuring creep properties in solid-fluid compaction processes

**Application Number:** ES239501

**Date:** 24-05-2011

**Applicant:** DITECPESA, S.A. and Universidad de Huelva

**Priority Country:** Spain