MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

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

CV date	01/04/2022

Part A. PERSONAL INFORMATION

First name	Paloma		
Family name	Trueba Muñoz		
Gender (*)	Female	Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0003-1941-7781	

(*) Mandatory

A.1. Current position

Position	Profesora Contratada Doctora		
Initial date			
Institution	University of Seville		
Department/Center	Ingeniería y Ciencia de los Materiales y del Transporte	Higher Polytechnic School	
Country	Spain	Teleph. number	
Key words	Porous titanium, gradient porosity, powder metallurgy		

A.2. Previous positions (research activity interuptions, art. 14.2.b))

Period	Position/Institution/Country/Interruption cause
2012-2018	Profesora Colaboradora T.C./ University of Seville, Spain
2007-2012	Profesora Asociada T.P.13/ University of Seville, Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD in Advanced Design of Mechanical Engineering	Higher Technical School of Engineers, University of Seville (Spain)	2017
Master's in advanced design of Mechanical Engineering	Higher Technical School of Engineers, University of Seville (Spain)	2013
Mechanical Industrial Technical Engineer	Higher Polytechnic School, University of Seville (Spain)	2006

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

I would like to summarize my work activity in the last 10 years, based on the three areas that's supports my work as PDI (investigation and docent personal) in University of Seville: research, teaching and management. **Concerning my research activity**, it has been totally developed in TEP-123 group, Metallurgy and Materials Engineering, in the field of design, manufacture and characterization of porous materials for biomedical applications (I defended my Doctoral Thesis in 2017 in this topic). As a result of this activity, I have 19 JCR publications: 13 Q1; 3 Q2, 2 Q3 and 1 Q4; 4 scientific publications in non-indexed journals; 30 contributions to national and international Congresses; 8 contributions to Conferences and Seminars and 5

Research Projects like teamwork. Also, I am a co-author of a Spanish Patent and having another patentability study in progress. In addition, I have been recognized 1 six-year period of research, by the National Agency for Quality Assessment and Accreditation (ANECA) from 2013 to 2018. **About my teaching activity**, I am teaching in 10 different subjects in Degrees, Double Degrees and Master's in Engineering, in Metallurgy and Materials Science Area, with more than 30 positive evaluations from the University of Seville in the last decade. I have been codirected more than 30 Final Study Work (since 2013), I have been tutored of 1 intern students (2018-2019), 1 visiting student internship (2018-19). Now a days, I co-direct 2 Doctoral Theses in progress (one of this in second year and another in third year) and 1 student with a collaboration grant from the Ministry of Education. Also, I have participated in 9 teaching innovation projects, I have made 13 contributions for teaching congresses (national and international) and I have assisted another 12 teaching congresses and seminars (national and international). **Relative to my experience in management**, I want to highlight that I am currently Secretary of the Department of Engineering and Science of Materials and Transport of the University of Seville (since September 2019). In addition, in the administration of the Higher Polytechnic School, I have been Coordinator of the Mechanical Degree in Engineering in courses 2017-18, 2018-19 and 2019-20 and member of the Commission for obtaining the EUR-ACE® seal of Mechanical Engineering during the course 2018-19 (seal obtained on May 28, 2019). In this same center, I have another 5 memberships in the following commissions: Credit Recognition of the Degree in Mechanical Engineering (October 2017-February 2020); Final Study Work of the Degree in Mechanical Engineering (October 2017-February 2020); Follow-up of Study Plans of Degree in Mechanical Engineering (October 2017- February 2020); Monitoring of Study Plans for Master's Degrees in Engineering (June 2018, to date) and Quality of Engineering Degrees (June 2018- February 2020). On the other hand, in the management of the Department of Engineering and Materials and Transport Sciences of the University of Seville, I have 4 memberships in the following commissions: Employment of Assistant Professors Doctors (November 2017-present); Permanent (June 2018 - present); Teaching (April 2014 - June 2018) and Employment of Associate Professors (April 2013 - November 2017). Finally, I would like to be noted a management activity outside the university. I have been Vice president of the Andalusian Sailing Federation, Department of Education and Sports, Junta de Andalucía (June 2016-June 2019).

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

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

1. **Scientific paper Q1.** Trueba, Paloma; Giner, Mercè; Rodríguez, Ángel; Beltrán, Ana M.; Amado, José M.; Montoya-García, María J.; Rodríguez-Albelo, Luisa M.; Torres, Yadir. Tribo-mechanical and cellular behavior of superficially modified porous titanium samples using femtosecond laser. 2021. Surface & Coatings Technology 422 (0257-8972). https://doi.org/10.1016/j.surfcoat.2021.127555
2. **Scientific paper Q1.** Trueba, Paloma; Navarro, Carlos; Rodríguez-Ortiz, José A.; Beltrán, Ana M.; García-García, Francisco J.; Torres, Yadir. 2021. Fabrication and characterization of superficially modified porous dental implants. Surface and Coatings Technology, 408, 126796. https://doi.org/10.1016/j.surfcoat.2020.126796
3. **Scientific paper Q1.** Civantos Fernandez, Ana Fátima, Trueba-Muñoz, Paloma, Arévalo Mora, Cristina, Torres Hernández, Yadir. 2020. In Vitro Bone Cell Behavior on Porous Titanium Samples: Influence of Porosity by Loose Sintering and Space Holder Techniques. Metals. 2020, 10 (5), 696. https://doi.org/10.3390/met10050696
4. **Scientific paper Q1.** Ángel Rodríguez; Paloma Trueba; José Manuel Amado; María José Tobar; Mercè Giner; Vicente Amigó; Yadir Torres. 2020. Surface Modification of Porous Titanium Discs Using Femtosecond Laser Structuring. Metals.10(6), 748. https://doi.org/10.3390/met10060748
5. **Scientific paper Q1.** Trueba-Muñoz Paloma; Beltrán Ana M; Bayo José M.; Rodríguez-Ortiz José A., Larios Diego F.; Alonso Esteban; Dunand David C; Torres Yadir. 2020. Porous Titanium Cylinders Obtained by the Freeze-Casting Technique: Influence of Process Parameters on Porosity and Mechanical Behavior. Metals 10(2): 188. https://doi.org/10.3390/met10020188

6. **Scientific paper Q1.** Sandra Castillo Sandra M.; Muñoz Sergio; Trueba-Muñoz Paloma; Díaz Eduardo; Torres Yadir. 2019. Influence of the Compaction Pressure and Sintering Temperature on the Mechanical Properties of Porous Titanium for Biomedical Applications. Metals 9 (12): 1249. https://doi.org/10.3390/met9121249
7. **Scientific paper Q1.** Torres-Hernández, Yadir; Trueba-Muñoz, Paloma; Pavón-Palacio, Juan José; Chicardi-Augusto, Ernesto; Rodriguez-Ortiz, Jose Antonio. 2016. Design, processing and characterization of titanium with radial graded porosity for bone implants. Materials and Design, 110, 179-187. https://doi.org/10.1016/j.matdes.2016.07.135
8. **Scientific paper Q1.** Pavón-Palacio, Juan José; Trueba-Muñoz, Paloma; Rodriguez-Ortiz, Jose Antonio; Torres-Hernández, Yadir. 2016. Design, processing and characterization of advanced titanium scaffolds with controlled radial porosity: a new sequential compaction device. Frontiers in Bioengineering and Biotechnology (2296-4185); 4. https://doi.org/10.3389/conf.fbioe.2016.01.03003
9. **Scientific paper Q1.** Pavón-Palacio, Juan José; Trueba-Muñoz, Paloma; Rodríguez-Ortiz, José Antonio; Torres-Hernández, Yadir; Alonso, Esteban; Hurtado Adrián; Dunand, David. 2016. Advanced titanium scaffolds obtained by directional freeze-drying: on the influence of processing conditions. Frontiers in Bioengineering and Biotechnology (2296-4185); 4. https://doi.org/10.3389/conf.FBIOE.2016.01.03006
10. **Scientific paper Q1.** Rodriguez-Ortiz, Jose Antonio; Torres-Hernández, Yadir; Trueba-Muñoz, Paloma; Pavón-Palacio, Juan José; Montealegre-Meléndez, Isabel. 2014. Designing, processing and characterisation of titanium cylinders with graded porosity: An alternative to stress-shielding solutions. Materials and Design, 63, 316-324. https://doi.org/10.1016/j.matdes.2014.06.012

C.2. Congress

1. **Oral contribution:** Trueba Muñoz, Paloma. Influencia de la porosidad en el comportamiento celular de superficies de titanio poroso obtenidos por Loose Sintering y la Técnica de Espaciadores. VII Congreso Español de Pulvimetalurgia and II Congreso Iberoamericano de Pulvimetalurgia. June 2019. Madrid, Spain.
2. **Oral contribution:** Trueba Muñoz, Paloma, Bayo, José Manuel, Beltrán Custodio, Ana María, Larios Marín, Diego Francisco, Alonso Álvarez, Esteban, et. al. Congelación dirigida en cilindros de Ti porosos: relación entre la evolución térmica del barro y la porosidad obtenida. VII Congreso Español de Pulvimetalurgia and II Congreso Iberoamericano de Pulvimetalurgia. June 2019. Madrid, Spain.
3. **Poster contribution:** Trueba Muñoz, Paloma. Manufacturing Process and Characterization of Biocative Gelatins Coated Porous Titanium. 11th International Conference on Porous Materials and Metallic Foams. August 2019. Dearborn, Michigan, United States.
4. **Oral contribution:** Trueba Muñoz, Paloma, Beltrán Custodio, Ana María, Bayo, José Manuel, Dunand, David, Larios Marín, Diego Francisco, et. al. Sensorization for the modelling and simulation of the Freeze-casting technique. 11th International Conference on Porous Metals and Metallic Foams. August 2019. Dearborn, Michigan, United States.
5. **Poster contribution:** Trueba Muñoz, Paloma, Burgos Gayoso, María, Donaire Falcón, Alicia, Beltrán Custodio, Ana María, Rodríguez Ortiz, José Antonio, et. al. Manufacturing and characterization of Ti cylinders with elongated porosity for biomedical applications by Freeze-casting techniques. XV Congreso Nacional de Materiales and I Iberian Meeting on Materials Science. July 2018. Salamanca, Spain.
6. **Oral contribution:** Trueba Muñoz Paloma, Dunand, David, Beltrán Custodio, Ana María, Alonso Álvarez, Esteban, Rodríguez Ortiz, José Antonio, Torres Hernández, Yadir. Design, Manufacture and Characterization of Tailor Made Porous Materials by differents Powder Metallurgical Routes. II Simposio de Biomateriales Avanzados. October 2018. Medellín, Colombia.
7. **Oral contribution:** Trueba Muñoz, Paloma, Rodríguez Ortiz, José Antonio, Torres Hernández, Yadir. Diseño y fabricación de un dispositivo para la obtención de cilindros

de Ti con porosidad dirigida. VI Congreso Nacional de Pulvimetalurgia and I Congreso Iberoamericano de Pulvimetalurgia. June 2017. Ciudad Real, Spain.

8. **Poster contribution:** Trueba Muñoz, Paloma, Bascón Suarez, Joaquín, Beltrán Custodio, Ana María, Rodríguez Ortiz, José Antonio, Torres Hernández, Yadir, et. al. A simple and economical device to process Ti cylinders with elongated porosity by freeze-casting techniques: design and manufacturing. 4th International Conference on Titanium Powder Metallurgy & Additive Manufacturing. September 2017. Xian, China.
9. **Poster contribution:** Trueba Muñoz, Paloma, Bascón, Joaquín; Beltrán Custodio, Ana María, Rodríguez Ortiz, José Antonio, Torres Hernández, Yadir, et. al. Titanium with elongated porosity: design, manufacture and optimization of freeze-casting device. 10th International Conference on Porous Metals and Metallic Foams; Metfoam. September 2017. Nanjing, China.
10. **Oral contribution**: Trueba Muñoz, Paloma, Rodríguez Ortiz, José Antonio, Pavón Palacio, Juan José, Chicardi, e, Arévalo Mora, Cristina, et. al. Desarrollo de un dispositivo de compactación novedosos para obtener porosidad gradiente radial en aplicaciones biomedicas y nucleares. V Congreso Nacional de Pulvimetalurgia. July 2015, Gerona, Spain. Best non-doctor presentation award.

C.3. Research projects

1. **Project.** Proyectos I+D+i PAIDI 2020. P18-FR-2308 Sistema de medida y electroestimulación para aplicaciones de diferenciación y motilidad celular. Alberto Yufera (University of Seville). 2020-23. 79.800€. Roll of Paloma Trueba-Muñoz: research team.
2. **Project.** Proyectos I+D+i FEDER Andalucía. US-1259771. Modelado e implementación de la técnica Freeze-Casting: gradientes de porosidad con un equilibrio tribo-mecánico y comportamiento celular electro-estimulado. Yadir Torres (University of Seville).2020-2022. 90.000€. Roll of Paloma Trueba-Muñoz: research team.
3. **Project.** P12-TEP-1401: Implementación caracterización y validación biológica de técnicas de modificación superficial del titanio poroso pulvimetalúrgico para aplicaciones biomédicas. Economy, Innovation and Science Counseling. Rodriguez-Ortiz, Jose Antonio (University of Seville). 2014-2019. 16.9984€. Roll of Paloma Trueba-Muñoz: research team.
4. **Project.** P12Obtención y caracterización de materiales porosos para aplicaciones biomédicas implementando la técnica de fundición selectiva por láser. Sokar Mechanics, S.L. 2013-2013. 5.000 €. Roll of Paloma Trueba-Muñoz: research team.

5. **Project.** P12IPT-2012-0419-310000: Investigación sobre material compuesto de granza de NFU, para sustitución de elementos de hormigón armado. Economy and Competitiveness Ministry - Feder Funds-OPN-INNPACTO. Nieto-García, Enrique José (University of Seville). 2012 -2015. 506.110,10 €. Roll of Paloma Trueba-Muñoz: research team.

C.4. Contracts, technological or transfer merits

1. **Patent.** P12P201600197: Rodriguez-Ortiz, Jose Antonio; Trueba-Muñoz, Paloma; Torres-Hernández, Yadir; Pavón-Palacio, Juan José. Dispositivo de compactación de polvos para obtener piezas sinterizadas con porosidad gradiente radial, procedimiento de obtención y uso. ES2632888. 2017. University of Seville.