Part A. Personal Information

DATE	14/01/2025

Surname(s)	CAMPOS GOMEZ	
Forename	MONICA	
Gender	Female	GTP research group
Researcher codes	WoS Researcher ID	B-5213-2012
	SCOPUS Author ID	7202803714
	ID ORCID	0000-0002-8360-9561

A.1. Current position

Professional Category	FULL PROFESSOR	Initial date: June 2021
UNESCO Code	230318, 331200, 331208, 331209, 331511, 510210	
Key Words	Powder Metallurgy, design microstructures of metallic alloys, additive manufacturing, sintered steels, ODS Ferritic steels, Co-base superalloys, High Entropy Alloys, oxidation, corrosion, wear.	
Institution	Universidad Carlos III de Madrid	
	Department/Centre	Mater. Sci. & Eng.
	Full Address	Avd de la Universidad 30, 28911 Leganés
	Country	Spain
	Phone Number	+34 91 624 99 16

A.2: Previous Positions.

Period	Position/Institution
1999-2000	Predoctoral Fellow (FPU)
2000-2002	Predoctoral Teaching Assistant
2002-2005	Teaching Assistant with PhD
2005-2008	Lecturer / UC3M
2008-2021	Associate Professor / UC3M

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Physics	Complutense University of Madrid (UCM)	1995
Materials Engineering	Technical University of Madrid (UPM)	1998
PhD in Industrial Technologies	Universidad Carlos III de Madrid (UC3M) (OUTSTANDING THESIS AWARD)	2002 2003

A.4. Indicators of Quality in Scientific Production

Complete Scopus report: Total Documents:142, WOS documents 81; total Times Cited: 1627; h-index: 23; Average citations per document: 11.45, average citations per year: 65.7 Open access: 51%. International Collaboration 52.4%. Academic-Corporate Collaboration 6.1%. Percent of documents in the top 25% journals by Cited Score: 59.1%

Part B. Free Summary of CV

In addition to teaching and research, I have served as the Vice President for Students and Equality at Carlos III University of Madrid (March 2019-April 2023) and as Deputy Vice President for Admission and Access (2014-2019); at present, I am a Full Professor there. My research activity has always been developed in an international frame, in close collaboration with research groups from at least 4 different European countries: Sweden (Chalmers Univ. Tech), Austria (Tech. Univ. Wien), Italy (Univ. Trento), Germany (Fraunhofer Inst. Manuf. Tech). As a result of these relationships, I am able to offer the laudatio of Prof. H. Danninger and Prof. A. Molinari as Doc. Honoris Causa of my University. My supervision included 13 PhD theses, nine of which received European mention and two of which were awarded the outstanding thesis award of the University. At present, I am supervising 3 other theses. I have contributed to project the image of UC3M within my scientific field (the research group GTP that I co-leader, is considered in the European Powder Metallurgy Association as a center of excellence,

together with 12 other groups from all over Europe EPMI). My lines of research are focused on the production, characterization, and analysis of the behavior of the final product, in sintered low alloy steels and alloys for extreme conditions. Focusing on ODS steels (nuclear reactors), new Co based super alloys, and I'm also involved in HEA's alloys for high temperature applications. I keep an active research activity since 1999, publishing in international journals (indexed in the JCR). I have participated in more than 80 publications in Censored Journals with anonymous peer review, 77 of them are in the WOS index, 44% as Q1. In addition, I regularly review scientific and technical journals, having collaborated with more than 20 of them. Currently, I am a member of the editorial board of two journals indexed in WOS. I have been a mean researcher in 11 out of 45 competitive research projects, and 35 private financing projects. I have organized more than a dozen symposia at international conferences, I have been part of the scientific committee on about ten occasions. I have been authored or co-authored almost a hundred contributions at international conferences, more than twenty-five at national conferences, and given ten plenary talks at international conferences. Aside from my research activities, I have lectured in more than thirteen different undergraduate courses and taught in two Master's programs with more than eight different subjects. Over 44 undergraduate and 13 master's dissertations have been supervised by me.
I count on 4 positive evaluations of research ("Sexenios"), 1 positive transfer evaluation ("Sexenio de transferencia") and 5 positive teaching evaluations ("quinquenios").

Part C. Recent and relevant accomplishments (stressing last 5 years)

C.1. Publications

- Cordova, L., **Campos, M.,** Tinga, T. Revealing the Effects of Powder Reuse for Selective Laser Melting by Powder Characterization JOM, 2019. https://doi.org/10.1007/s11837-018-3305-2
- A. Meza, E. Macía, A. García-Junceda, LA Díaz, P. Chekhonin, E. Altstadt, M. Serrano, ME Rabanal, **M. Campos.** *Development of new 14 Cr ODS steels by using new oxides formers and B as inhibitor of the grain growth.* Metals 10 (10), 2020. https://doi.org/10.3390/met10101344
- S. Banait, X. Jin, **M. Campos**, MT Perez-Prado. *Precipitation-induced transition in the mechanical behavior of 3D printed Inconel 718 bcc lattices.* Scripta Materialia, 2021. https://doi.org/10.1016/j.scriptamat.2021.114075
- E. Reverte, M. Calvo-Dahlborg, U. Dahlborg, **M. Campos**, P. Alvaredo, P. Martin-Rodriguez, E. Gordo, J. Cornide. *Design and Production of a New FeCoNiCrAlCu High-Entropy Alloy: Influence of Powder Production Method on Sintering*. Materials. 2021. https://doi.org/10.3390/ma14154342
- Meza, A., Macía, E., Chekonin, P., Altstadt E., Rabanal,ME., .Torralba, J.M., **Campos, M**. The effect of composition and microstructure on the creep behaviour of 14 Cr ODS steels consolidated by SPS. Materials Science and Engineering A, 2022, https://doi.org/10.1016/j.msea.2022.143441
- Banait, S., Liu, C., **Campos, M**., Pham, M.S., Pérez-Prado, M.T. Coupled effect of microstructure and topology on the mechanical behavior of Inconel718 additively manufactured lattices Mater & Design, 2022. https://doi.org/10.1016/j.matdes.2022.111294
- Banait, S., Campos, M., Pérez-Prado, M.T. Dynamic strain aging in Inconel718 additively manufactured lattices Materials Letters, 2023, https://doi.org/10.1016/j.matlet.2023.135314
- Banait, S., Liu, C., Campos, M., Pham, M.S., Pérez-Prado, M.T. Effect of microstructure on the effectiveness of hybridization on additively manufactured Inconel718 lattices Materials and Design, 2023. https://doi.org/10.1016/j.matdes.2023.112484
- Reverte, E., Keller, C., Calvo-Dahlborg, G. Alcala,Campos, M., Cornide, J. Effect of Y2O3 addition on the microstructure and mechanical properties of an Al1.8CoCrCu0.5FeNi BCC HEA Journal of Alloys and Compounds, 2023. https://doi.org/10.1016/j.jallcom.2023.170647
- L. Cordova, T.Bor, E. Macía, T. Tinga, **M. Campos**. In-situ mechanical and microstructural characterization of miniaturized Al-Mg-Sc-Zr and AlSi10Mg specimens processed by laser powder-bed fusion (PBF-LB) J. Mater. Researc & Tech. Ene. 2024 https://doi.org/10.1016/j.jmrt.2024.03.084
- Meza A.; Macía E.; Serrano M.; Merten C; Gaitzsch U; Weissgarber T; **Campos M**. Enhancement of FeCrAl-ODS steels through optimised SPS parameters and addition of novel nano-oxide formers. Nuclear Engineering and Technology, 2024. https://doi.org/10.1016/j.net.2024.02.018

- Garcia de la Cruz L, Alvaredo P, Torralba JM, **Campos M**. Material extrusion: A promising tool for processing CoCrMo alloy with excellent wear resistance for biomedical applications**.** Materials and Design. 2024**.** https://doi.org/10.1016/j.matdes.2024.113089.
- Masari, F., Szakalos, P., Petersson, C., Torralba, J.M., Campos, M. Corrosion and mechanical behavior of novel alumina forming steels in molten lead. Journal of Nuclear Materials, 2025, 605, 155587. 10.1016/j.jnucmat.2024.155587

C.2.Research Projects and Grants

Participation in 28 competitive research projects (international, national, regional calls), and I leader 11 projects as P.I. among them:

MAT2013-47460-C5-5-P. Procesado pulvimetalúrgico de nuevas aleaciones ferríticas ODS (FeAl (CrZr). MINECO. (01/01/2014-31/12/2016) 83.959€ **P.I. M. Campos**.

S2013/MIT-2775. DIMMAT-CM. Diseño multiescala de materiales avanzados. CAM-Consejería Educación – Comunidad de Madrid. (01/10/2014-30/09/2016) 37.000€ **P.I. M. Campos**.

MAT2016-80875-C3-3-R ESTABILIDAD MICROESTRUCTURAL DE ACEROS FERRITICOS ODS. MINECO. (30-12-2016-30/12/2019) 100.000 €. **P.I. M. Campos**.

PID2019-109334RB-C32. SINTERMAF. DESARROLLO DE NUEVOS ACEROS SINTERIZADOS MARTENSÍTICOS FORMADORES DE ALÚMINA. MINISTERIO DE CIENCIA E INNOVACIÓN, (01-06-2020/ 29/02/2024) 145.200€, **P.I. M. Campos**.

CPP2021-008682 DAMAS Agencia Estatal de Investigación (01/09/2022-31/08/2025) 169.702 €. Mean Researcher

PLEC2023-010190 IRIDISCENTE: Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación, (01/01/2024 - 31/12/2027) 558.585,0€ **P.I. M. Campos**

C.3. Contracts, technological or transfer merits

Contracts

Participation in 26 research projects with industrial companies; 1 patents; NDAs signed with companies such as Arcelor Mittal, CEIT Atmozing. As an example:

- Höganäs AB

"ADDENDA A LA CÁTEDRA HÖGANÄS DE I+D EN PULVIMETALURGIA" 6 Ed.Company: Höganäs AB (Suecia) (Ene. 2014,Dec. 2016) PI: J.M. Torralba Castelló & Mónica Campos. 149.700 €

- AMES

VIABILIDAD DEL PROCESO DE ATOMIZACIÓN DE FE-XMN-YC EN GAS. ESTUDIO DE VARIABLES FÍSICAS Y QUÍMICAS Y PARÁMETROS PARA SU INDUSTRIALIZACIÓN. Company ALEACIONES DE METALES SINTERIZADOS, S.A., (01-07-2013, 30-06-2014) PI: J.M. Torralba Castelló & Mónica Campos. 55.000 €

- Arcelor-Mittal.

"FEASIBILITY OF GAS ATOMIZATION FOR LOW ALLOY STEELS" (01-04-17-30-03-2018) P.I.M.Campos 54.500€

"FEASIBILITY OF GAS ATOMIZATION FOR LOW ALLOY STEELS. II" (31-03-2019/31-12-2020) P.I. M.Campos. 68.565€

Patents

European Patent: Invention nr3/2014-HB 761 Cooper Master Alloy
Inventors: R. Frykholm, JM Torralba, M Campos, E Bernardo.
Owner: Höganäs AB Nº. Patent EP 14161413.1

Other transfer activities

Participation "**Diccionario Español de Ingeniería"** (RAING) **(**2ª Ed, May 2024)

C.5. Congress, Invited/plenary sessions:

- Designing Master Alloys. Euro PM'13. Oral: Gotteborg, Sweden, Sept. 2013
- "Towards high performance in Powder Metallurgy" Int. Metall. Symp. 50th Anniversary of CENIM, Madrid, Oct. 2013.
- "Understanding the contribution of the microstructure in the fracture behaviour of sintered steels" Keynote Award Presentation, European Powder Metallurgy Congress, Saltzburg, Aust., Oct. 2014.
- "Enhancing properties through liquid phase sintering". Sintering, San Diego USA Nov. 2017.

C.6. Organizing Committees of Internationals y National Conferences

- EUROMAT 2013. International. Symposium Organizer. High Strength ODS steels:
- AMPT'15. Symposium Organizer Dec. 2015, International.
- National Conference on Materials, 2017, Gijón. Symposium Organizer.
- Symposium Organizer in EUROMAT 2019 (Stockolhm) in EUROMAT 2021 (online edition)
- National Conference on Materials, 2022, Ciudad Real. Symposium Organizer

C.7. Thesis Supervisored

- *Sistemas de alta densidad en aceros de baja aleación sinterizados*. Laura Blanco Puebla. July 2007
- *Obtención de aleaciones maestras mediante molienda mecánica para la modificación de aceros de baja aleación*. Jose A. Sicre Artalejo. Oct. 2009
- *Diseño de aleaciones maestras para la sinterización con fase líquida de aceros al Mn-Si*. Raquel de Oro Calderón March 2012
- *Desarrollo de nuevos aceros sinterizados de alta resistencia aleados mecánicamente con Nb*. L. Fuentes Pacheco. Nov. 2012
- *Desarrollo de nuevos materiales de baja aleación con Cromo*. Piedad García Álvarez, June 2013
- *Desarrollo de Nuevos aceros ferríticos ODS para aplicaciones nucleares*. N. García Rodríguez. Sept. 2014
- *Diseño de Fases Líquidas para sistemas de alta densidad*. Elena Bernardo Quijada. Nov 2014
- *Aleaciones base Co sinterizadas resistentes al calor para aplicaciones en ambientes extremos*. R. Casas, Dec. 2018.
- *Desarrollo y optimización de las propiedades de aleaciones en base Co y-y´para aplicaciones de alta temperatura*. Marta Cartón Cordero, Feb. 2019
- *Diseño de fases líquidas multifuncionales para aceros de baja aleación sinterizados*. A. Galán Salazar, July 2019
- Development of new ferritic 14Cr ODS steels with four oxides formers (Y, Ti, Zr, Al) for nuclear applications. E.Macía Rodríguez, Dec. 2019
- *Nuevas formulaciones de aceros ODS de alto rendimiento*. A. Meza Manzaneque, July 2021.
- Effect of microstructure on architected materials fabricated by AM. Shruti Banait. June 2023

C8. Awards and recognitions.

Award of Merit in APMI International's Excellence in Metallography Competition "A New Approach to Understand the Contribution of the Microstructure in the Fracture Behaviour of Sintered Steels" Authors: JM Torralba, E. Bernardo, A. Galán-Salazar, and **M. Campos**. San Diego 2015

EPMA Keynote Paper Award 2015: Contribution 'Tailoring Master Alloys for liquid phase sintering: Effect of Introducing Oxidation Sensitive Elements. Authors: R. Oro, E. Bernardo, **M Campos**, C. Griel, H.Danninger, JM Torralba. Euro PM'15 Oct. Reims France

EPMA Keynote Paper Award 2014: Contribution 'Understanding the contribution of microstructure in the fracture behaviour of sintered steels'. JM Torralba, L- Esteban, E. Bernardo, **M Campos**. Euro PM'14

Outstanding Thesis Award, from Universidad Carlos III de Madrid, 2003.

C.9. Institutional responsibilities

- Academic Secretary of Mater.Sci. Dept. at UC3M 2005-2009
- Director of "ÁLVARO ALONSO BARBA" Inst. of chemistry and materials tech., UC3M, (2013-2014).
- Deputy Director of ""ÁLVARO ALONSO BARBA" Inst. of chemistry and materials tech., UC3M, (2014-2019)
- Deputy Vice President for Access (UC3M) 2014/2015.
- Deputy Vice President for Admission & Access (UC3M) 2015/2019
- Vice President for Students and Equality (UC3M). 2019-2023