Part A. PERSONAL INFORMATION

CV date	23/05/2022

First and Family name	Sergio Pinilla Yanguas	
Researcher codes	WoS Researcher ID	**AAX-3551-2021**
	SCOPUS Author ID	**57191243098**
	Open Researcher and Contributor ID (ORCID)	**0000-0002-9969-1651**

A.1. Current position

Name of University/Institution	IMDEA Energia			
Department	Electrochemical processes unit			
Address and Country	Av. Ramón de La Sagra, 3, 28935 Móstoles, Madrid			
Phone number	917 37 11 20	E-mail	sergio.pinilla@imdea.org	
Current position	Marie Curie research fellow		From	4/04/2022
Key words	Electrochemistry, battery materials, advanced manufacturing, nanomaterials			

A.2. Previous positions.

Periodo	**Puesto / Institución / País / Motivo interrupción**
2019 - 2022	Marie Curie research fellow / Trinity College Dublin / Ireland
2019 - 2019	Post-Doctoral Researcher / IFIMAC / Spain
2018 - 2019	Visiting Post-Doc / MEET – University of Munster / Germany
2017 - 2018	Post-Doctoral Researcher / UAM – Applied Physics / Spain
2013 - 2017	PhD Student / UAM – Applied Physics / Spain
2016 - 2016	Lecturer / Boston University / Spain
2015 - 2015	Lecturer / Boston University / Spain
2013 - 2014	Lecturer / Escuela Superior del Vidrio / Spain

A.3. Education

Title	University	Year
PhD in Advanced materials and nanotechnology	Universidad Autónoma de Madrid	2017
MSc in advanced materials	Universidad Autónoma de Madrid	2012
Licenciado en Ciencias Físicas	Universidad Autónoma de Madrid	2011

Part B. CV SUMMARY

My scientific background is material science applied to electrochemical energy storage, a line of research that I have been pursuing most of my PhD and Post-Doc experience. I obtained my PhD with distinction (international mention and Cum Laude) in 2017 at the UAM, Spain. During my PhD I participated in 3 industry-funded projects which led to an industrially exploited patent. This industrial partnership was in the field of mechanical reinforcement of polymers, which gave me experience and skills different from those obtained on my PhD research. Also, in parallel to my PhD, I worked as a lecturer for other institutions (Boston University and Instituto Nacional del Vidrio) for a total of 3 years.

Throughout my career, I have shown substantial international mobility (39 months). I have done 2 short research stays one at TCD, Ireland (pre-doctoral) and one at MEET, Germany (post-doctoral). Both in very highly renowned groups in the field of nanomaterials and battery technology (Prof. Nicolosi at TCD and Prof. Martin Winter at MEET). Afterwards, I joined Prof. Nicolosi group at TCD where I worked for almost 3 years carrying my MSCA project "3DprintBatt". Recently, I moved to IMDEA energia, Spain after being awarded with another MSCA, this time under the E4F program with Iberdrola, to develop the project "PoliSolidBat".
In total, I have been awarded 3 very competitive grants as principal investigator, 2 post-doctoral Marie Sklodowska-Curie actions and one "Fundacion Iberdrola" research grant during my PhD. All these grants, especially the MSCA's, has knowledge transfer activities with relevant companies in the sector. The MSCA project at TCD counted with the collaboration of NOKIA bell labs and the MSCA in IMDEA counts with the collaboration of Iberdrola.
I am co-author of 1 patent and 18 scientific papers, 9 of which I'm the first author or equally contributor. I have over 660 citations (WoS) and I serve as a reviewer for several scientific journals, including Energy Storage Materials and npj 2D Materials and Applications. I have supervised 4 Master and 2 PhD students during my stage as Post-Doc and carried out public engagement and outreach activities including participating in the European Researchers Nights and other Marie Skłodowska-Curie Ambassadors actions.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1 Scientific paper. Sergio Pinilla, João Coelho, Ke Li, Ji Liu, Valeria Nicolosi. 2022. Two-Dimensional Materials Inks. Nature reviews materials.

2 Scientific paper. Liu, Ji; Mckeon, Lorcan; Garcia, James; Pinilla, Sergio; Nicolosi, Valeria. 2021. Additive Manufacturing of Ti3C2-MXene-Functionalized Conductive Polymer Hydrogels for Electromagnetic-Interference Shielding. Advanced Materials. pp.2106253-2106253.

3 Scientific paper. Machín, Abniel; Fontánez, Kenneth; Arango, Juan C; et al; Márquez, Francisco. 2021. One-Dimensional (1D) Nanostructured Materials for Energy Applications. Materials. 14-10, pp.2609-2609. ISSN 1996-1944.

4 Scientific paper. Ares, Pablo; Santos, Hernán; Lazic, Snezana; et al; Zamora, Félix. 2021. Direct Visualization and Effects of Atomic-Scale Defects on the Optoelectronic Properties of Hexagonal Boron Nitride. Advanced Electronic Materials. pp.2001177-2001177. ISSN 2199-160X.

5 Scientific paper. Mateo Moreno, Javier; Calvo Membibre, Rodrigo; Pinilla Yanguas, Sergio; Rubio Zuazo, Juan; Manso Siván, Miguel. (3/5). 2020. Montecarlo Simulation and HAXPES Analysis of Organosilane Segregation in Titania Xerogel Films; Towards a Generic Surface Chemofunctionalization Process. Surfaces. 3-3, pp.352-365. ISSN 2571-9637.

6 Scientific paper. Coelho, J; Kremer, M.P.; Pinilla, S; Nicolosi, V. (3/4). 2020. An outlook on printed microsupercapacitors: Technology status, remaining challenges, and opportunities. Current Opinion in Electrochemistry. 21, pp.69-75. ISSN 24519103.

7 Scientific paper. Pinilla, Sergio; Park, Sang-Hoon; Fontanez, Kenneth; Márquez, Francisco; Nicolosi, Valeria; Morant, Carmen. 2020. 0D-1D Hybrid Silicon Nanocomposite as Lithium-Ion Batteries Anodes. Nanomaterials. 10-3, pp.515-515. ISSN 2079-4991.

8 Scientific paper. Li, Ke; Liang, Meiying; Wang, Hao; et al; Pinilla, Sergio; Xu, Yuxi. (7/11). 2020. 3D MXene Architectures for Efficient Energy Storage and Conversion. Advanced Functional Materials. 30-47, pp.1-22. ISSN 16163028.

9 Scientific paper. Lazic, Snezana; Espinha, André; Pinilla Yanguas, Sergio; et al; van der Meulen, Herko P.(3/12). 2019. Dynamically tuned non-classical light emission from atomic defects in hexagonal boron nitride. Communications Physics. 2-1, pp.113-113. ISSN

2399-3650, ISBN 4200501902. 3

10 Scientific paper. Pinilla, Sergio; Campo, Teresa; Sanz, José María; Márquez, Francisco; Morant, Carmen. 2019. Highly ordered metal-coated alumina membranes: Synthesis and RBS characterization. Surface and Coatings Technology. Elsevier. 377-August, pp.124883-124883. ISSN 02578972.

11 Scientific paper. Campo, Teresa; Pinilla, Sergio; Gálvez, Santos; Sanz, José María; Márquez, Francisco; Morant, Carmen. 2019. Synthesis Procedure of Highly Densely Packed Carbon Nanotube Forests on TiN. Nanomaterials. 9-4, pp.571-571. ISSN 2079-4991.

12 Scientific paper. Soto-Vázquez, Loraine; Rolón-Delgado, Frankie; Rivera, Keila; Cotto, María; Ducongé, José; Morant, Carmen; Pinilla, Sergio; Márquez-Linares, Francisco M.2019. Catalytic use of TiO2 nanowires in the photodegradation of Benzophenone-4 as an active ingredient in sunscreens. Journal of Environmental Management. Elsevier. 247-April, pp.822-828. ISSN 03014797.

13 Scientific paper. Pinilla, Sergio; Barrio, Rocio; González, Nieves; Pérez Casero, Rafael; Márquez, Francisco; Sanz, José María; Morant, Carmen. 2018. Role of Hydrogen in the Preparation of Amorphous Silicon Nanowires by Metal-Assisted Chemical Etching. The Journal of Physical Chemistry C. 122-39, pp.22667-22674. ISSN 1932-7447.

14 Scientific paper. Machín, Abniel; Cotto, María; Duconge, José; et al; Márquez, Francisco. 2018. Hydrogen production via water splitting using different Au@ZnO catalysts under UV–vis irradiation. Journal of Photochemistry and Photobiology A: Chemistry. Elsevier B.V.. 353, pp.385-394. ISSN 10106030.

15 Scientific paper. Pinilla, Sergio; Machín, Abniel; Park, Sang-Hoon; Arango, Juan Camilo; Nicolosi, Valeria; Márquez -Linares, Francisco; Morant, Carmen. 2018. TiO 2 -Based Nanomaterials for the Production of Hydrogen and the Development of Lithium-Ion Batteries. The Journal of Physical Chemistry B. American Chemical Society. 122-2, pp.972-983. ISSN 1520-6106.

16 Scientific paper. Zhang, Chuanfang (John); Pinilla, Sergio; McEvoy, Niall; et al; Nicolosi, Valeria. (2/15). 2017. Oxidation Stability of Colloidal Two-Dimensional Titanium Carbides (MXenes). Chemistry of Materials. 29-11, pp.4848-4856. ISSN 0897-4756.

17 Scientific paper. Pinilla, Sergio; Mollá, Germán; Pau, José Luis; Morant, Carmen. 2016. Impact of the oxide layer on the electrical properties of silicon nanowires fabricated by metal-assisted chemical etching. physica status solidi (a). 213-11, pp.2884-2889. ISSN 18626300.

18 Scientific paper. Pinilla, Sergio; Balenzategui, J.L.; Morant, C.; Elizalde, E.2016. Carbon nanotube net as a conductive and transparent film for solar energy conversion. International Journal of Nanotechnology. 13-8/9, pp.612-612. ISSN 1475-7435.

C.2. Conferences.

1 Oral Contribution. Sergio Pinilla, Sean Ryan, Lorcan McKeon, Meiying Lian, Ahin Roy, Sebastien Vaesen, Valeria Nicolosi. 3D printing of Batteries: Comparison between fabrication processes. MRS spring meeting 2022. The Material Research Society. 2022.

2 Oral Contribution. Sergio Pinilla Yanguas; Sean Ryan; Lorcan Mckeon; Joao Coelho; Valeria Nicolosi. Towards 3D Printed Batteries: A Comparative Study between Electrode Fabrication Processes. PRiME 2020. The electrochemical society. 2020.

3 Oral Contribution. Sergio Pinilla Yanguas; Francisco Márquez-Linares; Jose María Sanz; Carmen Morant Zacarés. Amorphous silicon nanowires by MACE for Li-ion batteries. E-MRS Spring Meeting 2018. European Material Research Society. 2018. Francia.

4 Oral Contribution. Sergio Pinilla Yanguas; Germán Mollá; Jose Luis Pau; Carmen Morant Zacarés. Electrical properties of silicon nanowires fabricated by metal assisted chemical etching. EMRS 2016 SPRING MEETING. European material research society. 2016. Francia.

5 Oral Contribution. Sergio Pinilla Yanguas; Jose Lorenzo Balenzategui; Carmen Morant; Eduardo Elizalde. Carbon nanotube net as a conductive and transparent film for solar energy conversion. TNT2015 International Conference. FUNDACION PHANTOMS. 2015. Francia.

C.3. Projects and research lines*.*

1 Project. PoliSolidBat. MSCA E4F. European Union and Iberdrola Foundation. I.P: Sergio Pinilla Yanguas. (IMDEA energía, Spain). 5/04/2022-5/04/2023. ~120.000 €. Contribución: Investigador principal y coordinador.

2 Project. 3DPrintBatt. MSCA EDGE. European Union. I.P: Sergio Pinilla Yanguas. (Trinity College of Dublin, Ireland). 21/07/2019-21/03/2022. 128.144 €. Contribución: Investigador principal y coordinador.

3 Project. Dispositivos nanoestructurados para la generación y almacenamiento de la energia. Ministerio de Ciencia e Innovación. I.P: Carmen Morant Zacarés. (Universidad Autónoma de Madrid, Spain). 2014-2018. 114.000 €. Contribución: Trabajo experimental y publicación de resultados.

4 Project. Desarrollo de nanoestructuras de silicio para baterías de ión litio de altas prestaciones. Fundacion Iberdrola. I.P: Sergio Pinilla Yanguas. (Universidad Autónoma de Madrid). 01/09/2016-01/09/2017. 19.822 €. Contribución: Investigador principal y coordinador.

5 Project. Mejora de las propiedades del papel reciclado mediante la incorporación de nanofibras de carbono. Fundación Mapfre. I.P: Eduardo Elizalde Perez-Grueso. (Universidad Autónoma de Madrid, Spain). 27/01/2014-27/01/2015. 15.000 €. Contribución: Trabajo experimental y publicación de resultados.

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

1 Patent. Francisco Sahagún Casanova; Eduardo Elizalde Pérez-Grueso; Carmen Morant Zacarés; Teresa Campo Perfecto; Sergio Pinilla Yanguas; Alfonso Lantero Machieraldo. P201430697. Composición adhesiva, método de obtención y su uso en la fabricación de productos. España. 19/09/2016. APLICACIONES DE NANOTECNOLOGÍA, S.L.

2 Contract. Desarrollo de un equipo dispensador automático para la incorporación de nanofibras de carbono en el proceso de fabricación de colas Eduardo ElizaldePerez-Grueso. Microlan S.A. 10/05/2013-09/11/2013.

3 Contract. Estudio comparativo de diversos tipos de nanofibras de carbono usadas para la mejora de la adherencia en el proceso de encolado de cartones Eduardo Elizalde Perez-Grueso. Microlan S.A. 01/02/2012-01/08/2012.

4 Contract. Estudio de la mejora de adherencia en el proceso de encolado de cartones mediante la incorporación de nanofibras de carbono Eduardo Elizalde Perez-Grueso. Microlan S.A. 01/06/2011-30/11/2011.

C.5 Research stays

1 *Host intitution*: University of Münster
Departmen/Centre: MEET
City and country: Münster, Münster, Alemania

Start and end dates: 04/10/2018 - 23/12/2018
Position: Visiting Posdoctoral research fellow

2 *Host institution*: Trinity College Dublin
Department/Centre: CRANN
City and country: Dublin, Ireland
Start and end dates: 01/06/2016 - 31/08/2016
Position: Visiting PhD student

C.6 Teaching and mentoring

1 Name of the subject/course: Electric Circuit Theory
University degree: Degree in Science
Start date: 18/01/2016 End date: 13/05/2016
Hiring institution: Boston University

2 Name of the subject/course: Electric Circuit Theory
University degree: Degree in Science
Start date: 05/02/2015 End date: 31/05/2015
Hiring institution: Boston University

3 Name of the subject/course: Cálculo
University degree: Grado en artes Plasticas: Vidrio
Start date: 01/2014 End date: 06/2014
Hiring institution: Escuela superior del vidrio

4 Name of the subject/course: Algebra
University degree: Grado en artes Plasticas: Vidrio
Start date: 09/2013 End date: 01/2014
Hiring institution: Escuela superior del vidrio