CURRICULUM VITAE ABREVIADO (CVA)

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

Part A. PERSONAL INFORMATION

First name	María José		
Family name	Abad López		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail		URL Web	
Open Researcher and Contributor ID (ORCID) (*)		0000-0001-9963-6735	

(*) Mandatory

A.1. Current position

Position	Professor		
Initial date	18/10/2022		
Institution	University of A Coruña		
Department/Center	Physic and Earth Sciences department	Centro de Investigación en Tecnoloxías Navais e Industriais (CITENI)	
Country	Spain	Teleph. number	
Key words	Conducting polymer composites, thermoplastic processing, rheology, polymer characterization		

A.2. Previous positions (research activity interuptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
1997-2002	Ayudante de Universidad/University of A Coruña/ Spain
2002-2004	Prof. Contratada laboral investigadora/ University of A Coruña/ Spain
2004-2010	Profesora Contratado Doctor/ University of A Coruña/ Spain
2010-2022	Associated Professor/ University of A Coruña/ Spain
2013	Birth of 1 twin (21/11/2013) 12 months
2013	Birth of 2 twin (21/11/2013) 12 months

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Graduate in Physical Sciences	University of Santiago de Compostela (USC)	1995
PhD in Applied Physics	University of Santiago de Compostela (USC)	1999

(Include all the necessary rows)

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

Since 2001, my research career has developed mainly in the field of rheology, processing and characterization of thermoplastic materials. The research work carried out has been focused, without losing sight of the applicability of the results at an industrial level. Therefore, I started with the development of polypropylene/EVOH blends suitable for food packaging (hence the first thesis I supervised), to continue with the study of wood plastic composites (WPC) (I supervised a second thesis on this subject) and polymeric composites filled with volatile ashes (subject of the third thesis I supervised). Since 2011, I have been working in the field of conducting polymers, using conductive fillers to increase the electrical properties of insulating thermoplastic matrices (I supervised a fourth PhD thesis in this issue). From 2012, I started to

research the incorporation of polyanilines, synthesized in our own laboratory, into different plastic matrices and the thermoelectric properties obtained (this topic was the aim of the fifth PhD thesis I supervised). During 2020-2024, I led the reLicom3D project, funded by MICIN, to develop conductive polymer composites for 3D printing using two different technologies: FDM and DLP. As a result, two new doctoral theses have been carried out under my supervision (the first one was defended in 2022 and the other one will be defended at the end of 2024).

During all these years, I have reconciled the most traditional research work (publications in specialized journals, doctoral thesis supervision, etc.) with the realization of development projects and innovation contracts with various companies. I am always looking for the transfer of our research results.

The general quality indices give an idea of the quality of my work during 23 years of research career:

-Four periods of 6 years on research work (sexenios) recognized by the national committee for the assessment of the research action (CNEAI) of the Ministry of Education and Science (1997-2002, 2003-2008, 2009-2014 and 2015-2020). Date of granting of the last one: 31/05/2021.

-One period of 6 years on knowledge transfer and innovation activities (sexenio transferencia) recognized by the national committee for the assessment of the research action (CNEAI) of the Ministry of Education and Science (2008-2013).

-Advisor or co-advisor of several scholarships (undergraduate), 7 completed PhD thesis (4 in the period 2014-2023). I am currently advising 3 PhD theses

-2941 citations (self-citations not included) with an average of **210 citations/year** during the last 5 years (self-citations not included). 34 papers published in first quartile journals (more 106 scientific papers). H-index: 27 (SCOPUS).

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

C.1. Publications *(see instructions)*

1-Tailoring the Multifunctional Properties of PA6/PA12 75/25 Conductive Polymer Composites With Carbon Nanotubes. Arnal, T.; Eisenberg, P.; Ares-Pernas, Ana; Abad, M.J.; Bernal, Celina. Macromolecular Materials and Engineering (DOI: 10.1002/mame.202400443) publicado on line, 2025.

2-Comparing Lignin and Spent Coffee Grounds as bio-fillers in PLA 3D-printable filaments. Silvia Lage-Rivera , Ana Ares-Pernas, M. Sonia Dopico-García, José Covas, **María-José Abad.** Polymer Composites (DOI: 10.1002/pc.28782) ,15(999) 1-14, 2024.

3- Enhancement of 3D Printability by FDM and Electrical Conductivity of PLA/MWCNT Filaments Using Lignin as Bio-Dispersant. Silvia Lage-Rivera , Ana Ares-Pernas, Juan Carlos Becerra Permuy, Anne Gosset, **María-José Abad.**.Polymers, 15(999), 1 -17, 2023.

4- Lignin as a High-Value Bioaditive in 3D-DLP Printable Acrylic Resins and Polyaniline Conductive Composite. Goretti Arias-Ferreiro, Aurora Lasagabáster-Latorre, Ana Ares-Pernas, Pablo Ligero, Sandra María García-Garabal, M. Sonia Dopico-García & **Maria-José Abad.** Polymers, 14(19), 4164, 2022.

5- Flexible 3D Printed Acrylic Composites based on Polyaniline/Multiwalled Carbon Nanotubes for Piezoresistive Pressure Sensors. Goretti Arias-Ferreiro, Aurora Lasagabáster-Latorre, Ana Ares-Pernas, M. Sonia Dopico-García, N. Pereira, P. Costa, S. Lanceros-Mendez & **Maria-José Abad**. Advanced Electronic Materials, 2200590, 1-13, 2022.

6- Polyethylene/ poly(3-hydroxybutyrate-co-3-hydroxyvalerate /carbon nanotube composites for eco-friendly electronic applications. David Fernández Armada, Victoria González

Rodríguez, Pedro Costa, Senentxu Lanceros-Mendez, Goretti Arias-Ferreiro, **María-José Abad**, Ana Ares-Pernas. Polymer Testing, 12, 107642, 2022.

7- Last developments in Polymers for Wearable Energy Storage Devices. Silvia Lage-Rivera, Ana Ares-Pernas, **María-José Abad**. International Journal of Energy Research, 46, 10475-10498, 2022.

8- Printability Study of a Conductive Polyaniline/Acrylic Formulation for 3D Printing. Goretti Arias-Ferreiro, Ana Ares-Pernas, Aurora Lasagabáster-Latorre, Nora Aranburu, Gonzaño Guerrica-Echevarria, M. Sonia Dopico-García, **María-José Abad**, Polymers, 13, 2068 – 2088, 2021.

9- Photocured conductive PANI/acrylate composites for digital light processing. Influence of HDODA crosslinker in rheological and physicochemical properties. Goretti Arias-Ferreiro, Ana Ares-Pernas, M. Sonia Dopico-García, Aurora Lasagabáster-Latorre, **María-José Abad**. European Polymer Journal, 136, 109887, 2020.

10- Piezoresistive polymer blends for electromechanical sensor applications. P. Costa, J. Oliveira, Laura Horta-Romarís, **María-José Abad**, J. Agostinho Moreira, I. Zapiráin, M. Aguado, S. Galván, S. Lanceros-Mendez. Composites Science and Technology, 168, 353- -362, 2018.

11- Multifunctional electromechanical and thermoelectric polyaniline-poly(vinyl acetate) latex composites for wearable devices. Laura Horta Romarís, M. Victoria González Rodríguez, Bincheng Huang, P. Costa, Aurora Lasagabáster Latorre, S. Lanceros-Mendez, **María José Abad López.** J.Mater.Chem.C, 6, 8502 – 8512, 2018.

12-Thermoelectric properties and intrinsic conduction processes in DBSA and NaSIPA doped polyanilines Laura Horta-Romarís, M. Victoria González-Rodríguez, Aurora Lasagabáster, Francisco Rivadulla, **María-José Abad**. Synthetic Metals, 243, 44-50, 2018.

C.2. Congress, indicating the modality of their participation (invited conference, oral presentation, poster)
Autores: **María-José Abad**, Ana Ares-Pernas, Silvia Lage-Rivera
Título: "Impact of Polyethylene Glycol and Lignin in the electrical conductivity and processability of Polylactic acid / MWCNT composites for 3D printing"
Tipo de participación: Poster
Congreso: XIXth International Congress on Rheology (ICR2023), Athens (Greece). 29 July- 4 August 2023
Autores: Silvia Lage-Rivera, Ana Ares-Pernas, **María-José Abad**, José Covas
Título: "Using lignin and coffe grounds as bio-additives for PLA processing by FDM 3D-printing"
Tipo de participación: Poster
Congreso: Materiais 2023 – XXI Congresso da Sociedade Portuguesa de Materiais and XII International Symposium on Materials. Guimaraes (Portugal). 3-6 April 2023
Autores: **María-José Abad**, Ana Ares-Pernas, Goretti Arias, Sonia Dopico, Aurora Lasagabaster
Título: "Diseño de compuestos poliméricos conductores fotopolimerizables para impresión 3D"
Tipo de participación: Comunicación Oral
Congreso: XV Simposio Argentino de Polímeros. I Congreso Argentino de Materiales Compuestos (SAP-COMAT 2023). Mar de Plata (Argentina). 4-7 diciembre 2023

C.3. Research projects, indicating your personal contribution. In the case of young researchers, indicate lines of research for which they have been responsible.
1- **Reference code:** PID2023-152428OB-I00
Title: IMPRESION 3D DE COMPUESTOS BASADOS EN PANI PARA ADSORCION DE CONTAMINANTES EN EL AGUA
Funding entity: Ministerio de Ciencia e Innovación
Principal researchers **María José Abad** / Ana Isabel Ares Pernas
Duratión: 01/09/2024-30/08/2027 Subsidy: 100.890 €
2- **Reference code:** PID2020-116976RB-I00
Title:Revalorización de lignina en compuestos poliméricos conductores para impresión 3D.

Funding entity: Ministerio de Ciencia e Innovación ()
Principal researchers **María José Abad** / Ana Isabel Ares Pernas
Duratión: 01/09/2021-30/08/2024 Subsidy: 72.600 €

3-Reference code: MAT2007-67677-B

Title: Caracterización de materiales basados en resinas epoxi modificadas con un polímero termoplástico

Funding entity: Ministerio de Educación y Ciencia – Dirección General de Investigación
Principal Researcher: Joaquín López Lago

Participation as researcher

Duration: 2007- 2010 Subsidy: 58.080,00 €

4- **Reference code/Title:** RURAL 4.0: ADITIVA 3D
Funding entity: Consellería Medio Rural and FEADER
Principal researcher: Javier Viña (UNEMSA)

Participation as principal researcher of UDC Team

Duration:19/02/2018 a 30/09/2020 Subsidy: 41.250,00 €

5- Reference code: XUGA-PGIDT06DPA172PR9

Title: Nuevos nanocompuestos de polipropileno con mayor resistencia al impacto para fabricación de piezas para industria de automoción.

Funding entity: Consellería de Innovación, de Industria e Comercio. Xunta de Galicia
Principal Researcher: Jesús Cano Malagón

Participation as researcher

Duration: Diciembre 2006-Diciembre 2009 Subsidy: 80.000,00 €

6-Reference code: IPT-420000-210-4.

Title: Diseño de nuevos composites plásticos conductores dotados de propiedades de apantallamiento radioeléctrico (COMPOCONDAR)

Funding entity**:** Ministerio de Economía y Competitividad - Programa INNPACTO
Principal researcher: Luis Barral Losada.

Participation as researcher

Duration: July 2010-December 2012 Subsidy: 258.150,00 €

7- Reference code: LIFE 07 ENV/E/000814

Title: 3R-FISH "Integral Management Model of recovery and reciclyng of the proper solid wastes from the fishing and port activities.

Funding entity: European Comisión-Directorate-General Environment-Programa LIFE
Principal researcher: Julio Taboada. Centro Tecnológico del Mar (CETMAR)

Participation as principal researcher of UDC Team

Duration: 01/01/2009 - 01/01/2012 Subsidy: 38.637,00 €

C.4. Contracts, technological or transfer merits,

Patent Title: Llave Electrónica y Método de Fabricación Asociado

Inventors: **María José Abad López**, Ana Isabel Ares Pernas, Juan Carlos Becerra Permuy, Silvia Lage Rivera, Anne Marie Elisabeth Gosset, Pablo Ligero Martínez-Risco, Goretti Arias Ferreiro

Number: P202230700. Priority Country: España. Priority data: 29/07/2022

Titular entity: Universidade da Coruña