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** | 21/01/2022 |
|---|---|

## Part A. PERSONAL INFORMATION

| | | | |
|---|---|---|---|
| First name | Mª Natividad | | |
| Family name | Antón Iglesias | | |
| Gender (*) | Woman | Birth date (dd/mm/yyyy) | [redacted] |
| Social Security, Passport, ID number | [redacted] | [redacted] | [redacted] |
| e-mail | [redacted] | URL Web - | |
| Open Researcher and Contributor ID (ORCID) (*) | | 0000-0002-5713-1429 | |

*(*) Mandatory*

### A.1. Current position

| | | | |
|---|---|---|---|
| Position | Full Professor (Senior Lecturer) | | |
| Initial date | 2002 | | |
| Institution | University of Salamanca | | |
| Department/Center | Construction and Agronomy | Polytechnic High School of Zamora | |
| Country | Spain | Teleph. number | 980545000 (3634) |
| Key words | Recycling, sintering, ceramic materials, industrial and construction wastes, acoustics, wear, image analysis, reliability | | |

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

| Period | Position/Institution/Country/Interruption cause |
|---|---|
| 2000 - 2002 | Interim Full Professor / Dep. Construction and Agronomy (University of Salamanca) |
| 2000 Nov.- 2000 Dic. | Visiting Lecturer / Dep. Material Science and Metallurgical Engineering (University Carlos III of Madrid) |
| 1998 - 2000 | Researcher / Dep. Material Science and Metallurgical Engineering (University Carlos III of Madrid) |
| 1997 - 2000 | Assistant Professor (3+3) / Dep. Engineering and Material Science (ETSII-Polytechnic University of Madrid) |
| 1997 - 1998 | Assistant Professor Full Time / Dep. Material Science and Metallurgical Engineering (University Carlos III of Madrid) |

### A.3. Education

| PhD, Licensed, Graduate | University/Country | Year |
|---|---|---|
| PhD Chemistry Sciences | E.T.S. of Mining Engineering (UPM) | 1998 |
| Degree Thesis | Faculty of Chemistry Sciences (UCM) | 1994 |
| Pedagogical Adaptation Course | University Institute of Education Sciences | 1993 |
| Licensed Chemistry Sciences | Faculty of Chemistry Sciences (UCM) | 1991 |

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

My scientific career began in 1993 when I did my degree thesis in Chemical Sciences at the Higher School of Mining Engineers of Madrid focused on sintered materials, more specifically on Metal Matrix Composite Materials. Later, I did my doctoral thesis focusing on Ceramic Matrix Composite Materials ("Obtención de nuevos materiales compuestos basados en el Clinker Portland: Estudio de sinterabilidad, propiedades mecánicas y tribológicas" 1998).

Until the year 2000, I was working at the Carlos III University of Madrid (UCIIIM) and Polytechnic University of Madrid (UPM), in different teaching and research positions. During those years, my scientific production was elevated, focusing on issues related to ceramic matrix composites, wear, image analysis, etc.

At the end of the year 2000, I started working as an interim Full Professor (Senior Lecturer) at the University of Salamanca (USAL), where I became an Full Professor in the Area of Materials Science and Metallurgical Engineering in 2002.

During a period of approximately five years, I continued collaborating with the UPM and UCIIIM especially in studies related to powder technology and wear (until 2005 approx.), as a result of which some publications were done. In 2006, I opened a new research line at the Higher Polytechnic School of Zamora (EPSZ - USAL) dedicated to the recycling of industrial and construction wastes. I have been IP in three projects dedicated to the recycling of waste financed (2 by National and 1 Regional) during period 2006 to 2010. I have two periods of 6 years on research work.

This work has been made compatible with management tasks (Academic Secretary of the EPSZ from 2007 to 2010), coordination of the Materials Engineering second cycle (since 2004) and teaching. During this period I was a member of various Commissions, currently I am still part of the Commissions for Teaching, End-of-Degree Projects, etc. To this day, I coordinate the Materials Engineering degree and the double degree with Mechanical Engineering, being responsible for the writing request and follow-up reports. The latest degree projects, that I direct, are related to the recycling of waste from wind turbine blades.

In the periods 2008-2012 and 2013-2018 I obtained the qualification of Excellent in the Docentia program. At present, I continue developing the line dedicated to the recycling of materials, started in 2006, which has led to various publications at conferences and a patent. I have made teaching and research compatible, generating a large number of final degree projects (55), masters (4), etc., focused on the use and recovery of different waste, preferably construction waste (CDW). Some of the students who have done their final degree projects with me have been able to develop doctoral theses in different parts of Spain, having served their final degree projects as initio of their research career. I have directed a doctoral thesis ("Aprovechamiento y reciclaje de residuos de construcción y demolición mediante técnicas de sinterización" 2017) on ceramic waste recycling and currently another three dedicated to same topic, without funding. During these years and because of the above, I have contacted different waste management companies near the Zamora area and in the provinces of Salamanca, León and Valladolid.

I have more than 85 publications, conferences, reports to companies and articles in international magazines, etc. During these years, I have collaborated with different Areas and Departments of the USAL on the issue of valorization and waste recycling. I am currently responsible researcher of the GIR "Materials, Construction and Industry: Sustainable Technologies and Heritage (MACOIN)" of the University of Salamanca.

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

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

1 - José G Fueyo; José A Cabezas; Manuel Domínguez; **Natividad Antón**; Alberto Villarino., "Energy Distribution in Dowel-Type Joints in Timber Structures When Using Expansive Kits". Forests. MDPI Multidisciplinary Digital Publishing Institute. 12-9, pp.1200 (2021). https://doi.org/10.3390/f12091200 ISSN 1999-4907 Q1.

2 - Alberto Villarino; Jorge López-Rebollo; **Natividad Antón**, "Analysis of Mechanical Behavior through Digital Image Correlation and Reliability of Pinus halepensis Mill.". Forests. MDPI Multidisciplinary Digital Publishing Institute. 11-11, pp.1232 (2020) https://doi.org/10.3390/f11111232 ISSN 1999-4907 (Cited by 2) Q1

3 - **Natividad Antón**; Álvaro González-Fernández; Alberto Villarino, "Reliability and Mechanical Properties of Materials Recycled from Multilayer Flexible Packages Materials". MDPI. Multidisciplinary Digital Publishing Institute. 13-18, pp.3992 (2020). https://doi.org/10.3390/ma13183992 ISSN 1996-1944 (Cited by 3) Q2

4 - Ana Belén Ramos Gavilán; María Paz Sáez; María Ascensión Rodríguez Esteban; **María Natividad Antón Iglesias**; Jesús Iñaki Gómez Domínguez; Paulo Piloto. "Thermal properties of fired clay bricks from waste recycling. A review of studies". Fire Research. PagePress. 3-1, pp.8-13 (2019). https://doi.org/10.4081/fire.2019.71 ISSN 2532-4748

5 - Ana Belén Ramos-Gavilán; María Ascensión Rodriguez Esteban; **María Natividad Antón Iglesias**; María Paz Sáez Perez; María Soledad Camino Olea; Julen Caballero Valdizán. "Experimental Study of the Mechanical Behavior of Bricks from 19th and 20th century's buildings in the province of Zamora (Spain)". Infrastructures. MDPI. Multidisciplinary Digital Publishing Institute. 3-38, pp.2-11 (2018) https://doi.org/10.3390/infrastructures3030038 ISSN 2412-3811 (Cited by 2) Q2

6 - Julio Javier Vara Rodríguez; Ascensión Murciego Murciego; **Natividad Antón Iglesias**; Juan Diego Fernández Silva. "Preparation and Characterization of Materials Obtained from Concrete and Paval Wastes". Revista de la Sociedad Española de Mineralogía Macla. 20-7, pp.145-146 (2015). ISSN : 1885-7264

7 - Julio Javier Vara Rodríguez; Ascensión Murciego Murciego; **Natividad Antón Iglesias**; Juan Diego Fernández Silva; Esther Álvarez Ayuso, "Preparation and Characterization of Materials Obtained from NMP and Brick Wastes". Revista de la Sociedad Española de Mineralogía - Macla -. 20-7, pp.147-148 (2015) ISSN : 1885-7264

**C.2. Congress**

1 - **Antón-Iglesias,** M. N.; Rodríguez-Esteban, M. A; Ramos-Gavilán, A. B.; Sáez-Pérez, M. P.; Camino-Olea, M. S.; Muñoz Gamazo, S.A. "Acoustic analysis of ancient clay bricks from Zamora (Spain) to determine its contribution in reduction environmental noise". In 8th REHABEND Euro-American Congress (2020), Construction Pathology, Rehabilitation Technology and Heritage Management. Universidad de Granada. España. 2020. (Oral Presentation)

2 - J.M. Caballero Valdizán; **N. Antón.** "Comportamiento frente al desgaste de piezas fabricadas a partir de RCD´s de una gestora". In VII Congreso Nacional de Pulvimetalurgia y II Congreso Iberoamericano de Pulvimetalurgia. Universidad Carlos III de Madrid. España. 2019. (Poster Presentation).

3 - J.M. Caballero Valdizán; M.D. Salvador; **N. Antón. "**Estudio para el aprovechamiento de RCD's mezclados con cemento Portland". In VII Congreso Nacional de Pulvimetalurgia y II Congreso Iberoamericano de Pulvimetalurgia. Universidad Carlos III de Madrid. España. 2019. (Oral Presentation)

5 - **N. Antón;** D. Fernández-Silva; S. Muñoz-Gamazo. "Mixed recycling of brick and second fusion aluminium wastes: Sinterability and tribological behavior". In XV Congreso Nacional de Materiales y I Iberian Meeting on Materials Science (CNMAT2018). Universidad de Salamanca. 2018. España. (Poster)

6 - J. Caballero-Valdizán; J. I. Gómez-Domínguez; **N. Antón. "**Recycling of construction and demolition wastes (CDWs) by mixing with kaolin". XV Congreso Nacional de Materiales y I Iberian Meeting on Materials Science (CNMAT2018). Universidad de Salamanca. España. 2018.(Oral Presentation)

7 - J.M. Caballero-Valdizán; S. Vieitez; M.D. Salvador; **N. Antón. "**Estudio previo para el aprovechamiento de residuos de una gestora de RCD para fabricar piezas cerámicas". VI Congreso Nacional de Pulvimetalurgia y I Congreso Iberoamericano de Pulvimetalurgia. Universidad de Castilla-La Mancha. España. 2017. (Poster Presentation)

8 - **N. Antón;** V.M. Domínguez; S. Picón; J. M. Caballero-Valdizán. "Sinterabilidad de residuos industriales y de la construcción para la fabricación de piezas cerámicas". In XIV Congreso Nacional de Materiales. Universidad de Oviedo. España. 2016. (Poster)

9 - **N. Antón**; J. Mezquita; M.V. Gonçalvez; J. M. Caballero-Valdizán. "Comportamiento Tribológico de Materiales fabricados a partir de residuos de ladrillo". In V Congreso Nacional de Pulvimetalurgia. Universitat de Girona. 2015. España. Póster.

10 - **N. Antón**; R. Blanco; A. A. García; J. Escuadra; M. L. Pérez-Delgado. "Comportamiento a compresión y fiabilidad de materiales procedentes de residuos de ladrillo fabricados mediante el método starch". In IV Congreso Nacional de Pulvimetalurgia. España. 2012. (Oral Presentation)

**C.3. Research projects**

1 - Project. "Fabricación y Caracterización de Material Cerámico con adición de residuos Industriales procedentes de la elaboración de Mezclas bituminosas en caliente". FUNDACION MEMORIA SAMUEL SOLORZANO. IP. Ana Belén Ramos Gavilán. (Universidad de Salamanca). 11/01/2021-30/04/2022. 404 €.

2 - Project. "Estudio de resistencia a compresión de las fábricas de ladrillo en los edificios de finales del siglo XIX y principios del siglo XX, en Zamora". FUNDACION MEMORIA SAMUEL SOLORZANO. IP. María Ascensión Rodríguez Esteban. (Universidad de Salamanca). 2015-2016. 1.552 €.

3- Contract. "Realización de ensayos de compresión sobre piezas poliméricas elaboradas mediante inyección". Company: Plásticos DUREX. S.A. IP: Natividad Antón Iglesias. Duración del 28 de abril de 2021 al 28 de mayo de 2021. 968€

3- Collaboration Scholarship Contract: "Determinación de propiedades acústicas y térmicas de materiales procedentes de residuos de construcción susceptibles de uso industrial". Student: Diego Vicente Benito Universidad de Salamanca – Ministerio de Educación Tutor: **Natividad Antón Iglesias** Facultad/Escuela: E.P.S. de Zamora – Ingeniería de Materiales (2011-2012).

4- Collaboration Scholarship Contract: "Aprovechamiento de residuos en la fabricación de diferentes tipos de piezas cerámicas". Student: José Carlos Rebollo Alburquerque Universidad de Salamanca – Ministerio de Educación. Tutor **Natividad Antón Iglesias** Facultad/Escuela: E.P.S. de Zamora – Ingeniería de Materiales Desde (2021-2022).

**C.4. Contracts, technological or transfer merits**

**María Natividad Antón Iglesias**; Julen Miguel Caballero Valdizán. ES1367.88. "Procedimiento de aprovechamiento de material de rechazo de la industria de la construcción y demolición". España. 2016. Universidad de Salamanca.