



**Antonia Pajares Vicente**

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## General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

Nº de sexenios de investigación- 5 (fecha del último sexenio 1 de enero de 2020)

Nº de tesis doctorales dirigidas- 7

Web of Science:

Citas totales- 3400

Promedio citas/publicación- 42

Indice h- 34



## Antonia Pajares Vicente

**Surname(s):** Pajares Vicente  
**Name:** Antonia  
**Date of birth:** 07/05/1963  
**Gender:** Female  
**Nationality:** Spain  
**Country of birth:** Spain  
**Aut. region/reg. of birth:** Extremadura  
**Contact province:** Badajoz  
**City of birth:** Miajadas (Cáceres)  
**Contact address:** Escuela de Ingenierías Industriales. Universidad de Extremadura  
**Rest of contact address:** Avda de Elvas, s/n  
**Postcode:** 06060  
**Contact country:** Spain  
**Contact aut. region/reg.:** Extremadura  
**Contact city:** Badajoz  
**Land line phone:** (34) 924289300 - 86771  
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**Email:** apajares@unex.es

### Current professional situation

**Employing entity:** Universidad de Extremadura     **Type of entity:** University  
**Department:** Ingeniería Mecánica, Energética y de los Materiales, Escuela de Ingenierías Industriales  
**Professional category:** Catedrático de Universidad  
**Start date:** 13/11/2007  
**Type of contract:** Civil servant     **Dedication regime:** Full time  
**Primary (UNESCO code):** 331208 - Material properties  
**Secondary (UNESCO code):** 331203 - Ceramics  
**Tertiary (UNESCO code):** 331402 - Prosthetic devices  
**Performed tasks:** Docencia e Investigación. Propiedades Mecánicas (plasticidad, fractura, fatiga) y caracterización microestructural de materiales de interés tecnológico (cerámicos avanzados, láminas delgadas, recubrimientos, materiales multicapa). Desarrollo y caracterización de materiales para aplicaciones biomédicas.

### Previous positions and activities

	Employing entity	Professional category	Start date
1	Universidad de Extremadura	Titular de Universidad	18/12/1997
2	Universidad de Extremadura	Profesor Asociado	01/11/1995
3	Universidad de Extremadura	Profesor Ayudante	01/10/1991
4	Universidad de Extremadura	Becaria Plan Nacional Materiales	01/01/1989
5	Universidad de Extremadura	Profesor Titular Interino Escuela Universitaria	01/03/1988



- 1** **Employing entity:** Universidad de Extremadura **Type of entity:** University  
**Professional category:** Titular de Universidad  
**Start-End date:** 18/12/1997 - 12/11/2007
  
- 2** **Employing entity:** Universidad de Extremadura **Type of entity:** University  
**Professional category:** Profesor Asociado  
**Start-End date:** 01/11/1995 - 17/12/1997
  
- 3** **Employing entity:** Universidad de Extremadura **Type of entity:** University  
**Professional category:** Profesor Ayudante  
**Start-End date:** 01/10/1991 - 31/10/1995
  
- 4** **Employing entity:** Universidad de Extremadura **Type of entity:** University  
**Professional category:** Becaria Plan Nacional Materiales  
**Start-End date:** 01/01/1989 - 30/09/1991
  
- 5** **Employing entity:** Universidad de Extremadura **Type of entity:** University  
**Professional category:** Profesor Titular Interino Escuela Universitaria  
**Start-End date:** 01/03/1988 - 31/12/1988



## Education

### University education

#### 1st and 2nd cycle studies and pre-Bologna degrees

- 1 University degree:** Higher degree  
**Name of qualification:** Licenciado con Grado en Ciencias Físicas  
**Degree awarding entity:** Universidad de Extremadura **Type of entity:** University  
**Date of qualification:** 1987
- 2 University degree:** Higher degree  
**Name of qualification:** Licenciado en Ciencias Físicas  
**Degree awarding entity:** Universidad de Extremadura **Type of entity:** University  
**Date of qualification:** 1986

#### Doctorates

**Doctorate programme:** Doctor en Ciencias Físicas  
**Degree awarding entity:** Universidad de Extremadura **Type of entity:** University  
**Date of degree:** 20/09/1993

### Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English		C1	C1	C1	C1

## Teaching experience

### Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Effect Of Coating On The Mechanical Behaviour And Bioactivity Of Robocast Bioceramic Scaffolds  
**Co-director of thesis:** Pedro Miranda González  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Azadeh Motealleh  
**Obtained qualification:** Sobresaliente cum laude  
**Date of reading:** 15/12/2015  
**European doctorate:** Yes **Date of recognition:** 15/12/2015



- 2** **Project title:** Efecto De Parámetros Geométricos En Las Prestaciones Mecánicas De Estructuras Porosas Cerámicas Y Estructuras Híbridas Interpenetradas Cerámico/Polímero Fabricadas Mediante Moldeo Robotizado  
**Co-director of thesis:** Pedro Miranda González  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Carolina Godoy Romero  
**Obtained qualification:** Sobresaliente cum laude  
**Date of reading:** 09/12/2015
  
- 3** **Project title:** Robocasting Of Bioactive Glass-Ceramic Scaffolds For Tissue Engineering Applications  
**Co-director of thesis:** Pedro Miranda González  
**Entity:** Universidad de Extremadura **Type of entity:** University  
**Student:** Siamak Eqtesadi  
**Obtained qualification:** Sobresaliente Cum laude  
**Date of reading:** 30/07/2015  
**European doctorate:** Yes **Date of recognition:** 30/07/2015
  
- 4** **Project title:** Design and fabrication by robocasting of bioactive ceramic/polymer composites for bone implant applications.  
**Co-director of thesis:** Pedro Miranda González  
**Entity:** Universidad de Extremadura Facultad / Escuela: **Type of entity:** University  
Escuela de Ingenierías Industriales  
**Student:** Francisco Javier Martínez Vázquez  
**Obtained qualification:** Sobresaliente Cum Laude (por unanimidad)  
**Date of reading:** 28/03/2012  
**European doctorate:** Yes **Date of recognition:** 28/03/2012
  
- 5** **Project title:** Desarrollo y optimización microestructural y mecánica de andamiajes biocerámicos para ingeniería de tejido óseo fabricados mediante moldeo robotizado.  
**Co-director of thesis:** Pedro Miranda González  
**Entity:** Universidad de Extremadura Facultad / Escuela: **Type of entity:** University  
Escuela de Ingenierías Industriales  
**Student:** Fidel Hugo Perera Martínez  
**Obtained qualification:** Sobresaliente Cum Laude (por unanimidad)  
**Date of reading:** 09/03/2012
  
- 6** **Project title:** Propiedades mecánicas de cerámicos bajo tensiones de contacto a temperaturas inferiores a 1500 °C  
**Co-director of thesis:** Pedro Miranda González  
**Entity:** Universidad de Extremadura Facultad / Escuela: **Type of entity:** University  
Escuela de Ingenierías Industriales  
**Student:** Estíbaliz Sánchez González  
**Obtained qualification:** Sobresaliente Cum Laude (por unanimidad)  
**Date of reading:** 13/06/2008
  
- 7** **Project title:** Diseño de materiales multicapa resistentes al daño por contacto  
**Co-director of thesis:** Fernando Guiberteau Cabanillas  
**Entity:** Universidad de Extremadura Facultad / Escuela: **Type of entity:** University  
Escuela de Ingenierías Industriales  
**Student:** Pedro Miranda González  
**Obtained qualification:** Sobresaliente Cum Laude (por unanimidad)  
**Date of reading:** 10/04/2003



## Scientific and technological experience

### Scientific or technological activities

#### R&D projects funded through competitive calls of public or private entities

- 1** **Name of the project:** Fabricacion aditiva de materiales híbridos ceramico/polimero con microestructuras bioinspiradas para aplicaciones dentales (PID2021-123218OB-100)  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** Pedro Miranda González  
**Nº of researchers:** 3  
**Funding entity or bodies:** Ministerio de Ciencia e Innovación **Type of entity:** State agency  
**Start-End date:** 01/09/2022 - 31/08/2025  
**Total amount:** 217.800 €
- 2** **Name of the project:** Additive Manufacturing of Actively Cooled Thermal Shields  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** Pedro Miranda González  
**Nº of researchers:** 6  
**Funding entity or bodies:** M-ERA.NET, Agencia Estatal de Investigación (Proyectos colaboracion Internacional, PCI)  
**Start-End date:** 01/05/2022 - 30/04/2025  
**Participating entity/entities:** CNRS-PROMES, France; IberEspacio, Spain; QuesTtek Europe AB, Sweden; University West, Sweden  
**Total amount:** 287.500 €
- 3** **Name of the project:** Fabricación aditiva de piezas cerámicas reforzadas con núcleo dúctil (RTI2018-095566-B-100)  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** Pedro Miranda González  
**Nº of researchers:** 3  
**Funding entity or bodies:** Ministerio de Ciencia e Innovación. Universidades **Type of entity:** State agency  
**Start-End date:** 01/01/2019 - 31/12/2021  
**Total amount:** 96.800 €
- 4** **Name of the project:** Desarrollo de materiales híbridos basados en placas cerámicas multisegmentadas fabricadas mediante moldeo robotizado para protección personal y prevención de lesiones. (IB16094)  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** Pedro Miranda González  
**Nº of researchers:** 4

**Funding entity or bodies:**

Gobierno de Extremadura

**Start-End date:** 03/06/2017 - 02/06/2020**Total amount:** 145.290 €

- 5 Name of the project:** DESARROLLO MEDIANTE MOLDEO ROBOTIZADO Y OPTIMIZACION MECÁNICA DE ANDAMIAJES HÍBRIDOS COAXIALES CERÁMICO/POLÍMERO PARA APLICACIONES BIOMÉDICAS

**Entity where project took place:** Universidad de Extremadura      **Type of entity:** University

**Name principal investigator (PI, Co-PI...):** PEDRO MIRANDA GONZÁLEZ

**Nº of researchers:** 5

**Funding entity or bodies:**

MINISTERIO ECONOMIA Y COMPETITIVIDAD

**Start-End date:** 01/01/2016 - 31/12/2018**Total amount:** 145.200 €

- 6 Name of the project:** Optimización mecánica y caracterización in vitro de andamiajes vitrocerámicos bioactivos fabricados mediante moldeo robotizado para regeneración ósea

**Entity where project took place:** Universidad de Extremadura      **Type of entity:** University

**City of entity:** Badajoz, Extremadura, Spain

**Name principal investigator (PI, Co-PI...):** Pedro Miranda González

**Nº of researchers:** 5

**Funding entity or bodies:**

Gobierno de Extremadura

**Start-End date:** 31/07/2014 - 30/07/2016**Total amount:** 58.960 €

- 7 Name of the project:** NATURAL INORGANIC POLYMERS AND SMART FUNCTIONALIZED MICRO-UNITS APPLIED IN CUSTOMIZED RAPID PROTOTYPING OF BIOACTIVE SCAFFOLDS

**Entity where project took place:** FP7-NMP-2013-EU-China (604036 Bio-Scaffolds CP-FP).

**Name principal investigator (PI, Co-PI...):** Pedro Miranda González (UEx).

**Nº of researchers:** 7

**Funding entity or bodies:**

Comisión Europea

**Type of entity:** Body, others**Start-End date:** 01/06/2013 - 31/05/2016**Duration:** 3 years

**Participating entity/entities:** Brno University of Technology; Ltd.; NanotecMARIN GmbH; Ortoma AB; Peking University; Shenzhen Lando Biomaterials Co.; Tsinghua University; Universidad de Extremadura (UEx); Universitätsmedizin der Johannes Gutenberg-Universität Mainz (Coordinador)

**Total amount:** 352.000 €

- 8 Name of the project:** ADQUISICIÓN DE CÁMARA DE ULTRA-ALTA VELOCIDAD CON GRAN RESOLUCION PARA EL ANÁLISIS DE PROCESOS MECÁNICOS O FLUIDOMECAÑICOS

**Entity where project took place:** Universidad de Extremadura      **Type of entity:** University

**Name principal investigator (PI, Co-PI...):** EMILIO JOSÉ VEGA RODRÍGUEZ

**Nº of researchers:** 18

**Funding entity or bodies:**

MINISTERIO ECONOMIA Y COMPETITIVIDAD

**Start-End date:** 01/01/2013 - 31/12/2015





**Total amount:** 170.150 €

- 9** **Name of the project:** EQUIPAMIENTO DE FLUORESCENCIA DE RAYOS-X (WDXRF)  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** MARÍA LUISA GONZÁLEZ MARTÍN  
**Nº of researchers:** 35  
**Funding entity or bodies:** MINISTERIO ECONOMIA Y COMPETITIVIDAD  
**Start-End date:** 01/01/2013 - 31/12/2015  
**Total amount:** 214.290,72 €
- 10** **Name of the project:** HORNO DE S/NTERIZACIÓN POR DESCARGA ELÉCTRICA PULSADA  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** ÁNGEL LUIS ORTIZ SECO.  
**Nº of researchers:** 30  
**Funding entity or bodies:** MINISTERIO ECONOMIA Y COMPETITIVIDAD.  
**Start-End date:** 01/01/2013 - 31/12/2015  
**Total amount:** 252.000 €
- 11** **Name of the project:** SISTEMA DE LIMPIEZA Y LAVADO DE GAS DE SÍNTESIS GENERADO EN UNA PLANTA DE GASIFICACIÓN  
**Entity where project took place:** Universidad de Extremadura **Type of entity:** University  
**Name principal investigator (PI, Co-PI....):** JUAN FÉLIX GONZÁLEZ GONZÁLEZ.  
**Nº of researchers:** 16  
**Funding entity or bodies:** MINISTERIO ECONOMIA Y COMPETITIVIDAD.  
**Start-End date:** 01/01/2013 - 31/12/2015  
**Total amount:** 123.553 €
- 12** **Name of the project:** DESARROLLO Y OPTIMIZACIÓN MECÁNICA DE ANDAMIAJES HÍBRIDOS CERÁMICO/POLÍMERO PARA REGENERACIÓN DE TEJIDO ÓSEO FABRICADOS MEDIANTE MOLDEO ROTOTIZADO. (IB10006)  
**Entity where project took place:** Universidad de Extremadura  
**Name principal investigator (PI, Co-PI....):** Pedro Miranda González.  
**Nº of researchers:** 5  
**Funding entity or bodies:** Junta de Extremadura.  
**Start-End date:** 2011 - 2012 **Duration:** 2 years  
**Participating entity/entities:** UEx.  
**Total amount:** 43.700 €
- 13** **Name of the project:** RED DE NANOMECAÁNICA. (MAT2008-05071-E/MAT)  
**Name principal investigator (PI, Co-PI....):** Marc Anglada Gomila.  
**Funding entity or bodies:** MICINN



**Start date:** 01/04/2009

**Participating entity/entities:** Centro de Estudios e Investigaciones Técnicas de Gipuzkoa; Universidad de Extremadura; UPC; UPM.; Universidad Rey Juan Carlos

**Total amount:** 12 €

**14 Name of the project:** DESARROLLO DE ANDAMIAJES CERÁMICOS DE BETA-TCP CON GRADIENTE DE POROSIDAD MEDIANTE ROBOCASTING. (PET2008-0168-02)

**Name principal investigator (PI, Co-PI....):** PEDRO MIRANDA GONZÁLEZ.

**Nº of researchers:** 4

**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

**Start date:** 2009

**Duration:** 1 year

**Participating entity/entities:** ICTP-CSIC; Universidad Complutense de Madrid y las empresas Noricum y Oscatech Microinyección.; Universidad de Extremadura. Proyecto coordinado con ICMC-CSIC

**Total amount:** 17.182 €

**15 Name of the project:** RED DE NANOMECAÁNICA. (MAT2007-29286-E/)

**Name principal investigator (PI, Co-PI....):** Marc Anglada Gomila.

**Funding entity or bodies:**

Ministerio de Educación, Política Social y Deporte      **Type of entity:** State agency

**Start date:** 01/10/2007

**Participating entity/entities:** Centro de Estudios e Investigaciones Técnicas de Gipuzkoa; Universidad de Extremadura; UPC; UPM.; Universidad Rey Juan Carlos

**Total amount:** 15 €

**16 Name of the project:** OPTIMIZACIÓN DEL COMPORTAMIENTO MECÁNICO DE ESTRUCTURAS CERÁMICO/POLÍMERO FABRICADAS MEDIANTE ROBOCASTING PARA APLICACIONES EN INGENIERÍA DE TEJIDO ÓSEO. (MAT2006-08720)

**Name principal investigator (PI, Co-PI....):** ANTONIA PAJARES VICENTE.

**Nº of researchers:** 5

**Funding entity or bodies:**

Ministerio de Educación, Política Social y Deporte      **Type of entity:** State agency

**Start date:** 2006

**Duration:** 3 years

**Participating entity/entities:** UEx.

**Total amount:** 120 €

**17 Name of the project:** PROPIEDADES MECANICAS DE CAPAS CERAMICAS SOMETIDAS A TENSIONES DE CONTACTO A  $T_a < T < 1500^{\circ}C$ . (MAT2003-05584)

**Name principal investigator (PI, Co-PI....):** ANTONIA PAJARES VICENTE.

**Nº of researchers:** 5

**Funding entity or bodies:**

M.C.Y.T.

**Start date:** 2003

**Duration:** 3 years

**Participating entity/entities:** UEx.

**Total amount:** 150 €

**18 Name of the project:** RESPUESTA MECÁNICA DE MATERIALES MULTICAPA PROTOTIPO BAJO LA ACCIÓN DE TENSIONES DE CONTACTO.

**Name principal investigator (PI, Co-PI....):** ANTONIA PAJARES VICENTE.

**Nº of researchers:** 4

**Funding entity or bodies:**

Junta de Extremadura.

**Start date:** 2000**Duration:** 2 years**Participating entity/entities:** UEx.**Total amount:** 16.275 €

- 19** **Name of the project:** MECANISMOS DE DAÑO POR CONTACTO EN CERÁMICOS AVANZADOS.  
**Name principal investigator (PI, Co-PI...):** FERNANDO GUIBERTEAU CABANILLAS.  
**Nº of researchers:** 4  
**Funding entity or bodies:**  
Comisión de Intercambio Científico entre España y EEUU.  
**Start date:** 01/06/1998 **Duration:** 1 year  
**Participating entity/entities:** N.I.S.T. (U.S.A.) y UEx.
- 20** **Name of the project:** COMPORTAMIENTO MECÁNICO DE MATERIALES MULTICAPA DEL SISTEMA Al<sub>2</sub>O<sub>3</sub>/ZrO<sub>2</sub>. ESTUDIO A BAJAS TEMPERATURAS. (Proyecto nº MAT97-0562-CO2-02).  
**Name principal investigator (PI, Co-PI...):** FERNANDO GUIBERTEAU CABANILLAS.  
**Nº of researchers:** 4  
**Funding entity or bodies:**  
C.I.C.Y.T.  
**Start date:** 1997 **Duration:** 2 years  
**Participating entity/entities:** Universidad de Sevilla y UEx.
- 21** **Name of the project:** INFLUENCE OF MICROSTRUCTURE ON CRACK PROPAGATION AND IONIC CONDUCTIVITY OF Y-DOPED ZIRCONIA.  
**Name principal investigator (PI, Co-PI...):** Arturo Domínguez Rodríguez.  
**Nº of researchers:** 7  
**Funding entity or bodies:**  
Acción Integrada Hispano-Alemana HA-022.  
**Start date:** 1994 **Duration:** 1 year  
**Participating entity/entities:** Uex y KFA-Alemania.; Universidad de Sevilla
- 22** **Name of the project:** RECUBRIMIENTO ANTICORROSIVO DEL ACERO AUSTENÍTICO AISI 304 POR EL MÉTODO SOL-GEL. (Proyecto nº MAT94-0676).  
**Name principal investigator (PI, Co-PI...):** LUIS MARÍA ESQUIVIAS FEDRIANI.  
**Nº of researchers:** 5  
**Funding entity or bodies:**  
C.I.C.Y.T.  
**Start date:** 1994 **Duration:** 2 years  
**Participating entity/entities:** Universidad de Cádiz y UEx.
- 23** **Name of the project:** INFLUENCE OF MICROSTRUCTURE ON CRACK PROPAGATION BEHAVIOUR OF Y-DOPED ZIRCONIA.  
**Name principal investigator (PI, Co-PI...):** FERNANDO GUIBERTEAU CABANILLAS.  
**Nº of researchers:** 6  
**Funding entity or bodies:**  
Acción Integrada Hispano-Alemana HA-086.  
**Start date:** 1992 **Duration:** 1 year



**Participating entity/entities:** Uex y KFA-Alemania.; Universidad de Sevilla

**24 Name of the project:** ESTUDIO MICROESTRUCTURAL Y COMPORTAMIENTO MECANICO EN POLICRISTALES DEL SISTEMA ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>. (Proyecto nº MAT91-1196-C02-02).

**Name principal investigator (PI, Co-PI....):** FRANCISCO LUIS CUMBRERA HERNANDEZ.

**Nº of researchers:** 4

**Funding entity or bodies:**

C.I.C.Y.T.

**Start date:** 1991

**Duration:** 2 years

**Participating entity/entities:** Universidad de Sevilla y UEx.

**25 Name of the project:** COMPORTAMIENTO MECÁNICO Y ESTUDIO MICROESTRUCTURAL DE LA CIRCONIA PARCIALMENTE ESTABILIZADA CON Y<sub>2</sub>O<sub>2</sub>. (Proyecto nº MAT88-0181-CO2-02).

**Name principal investigator (PI, Co-PI....):** Fernando Guiberteau Cabanillas.

**Nº of researchers:** 4

**Funding entity or bodies:**

C.I.C.Y.T.

**Start date:** 1988

**Duration:** 2 years

**Participating entity/entities:** Universidad de Sevilla y UEx.

**26 Name of the project:** AYUDA A EQUIPOS DE INVESTIGACIÓN COMPETITIVOS DE LA UNIVERSIDAD DE EXTREMADURA. (Proyecto nº EIA95-19).

**Name principal investigator (PI, Co-PI....):** FERNANDO GUIBERTEAU CABANILLAS.

**Nº of researchers:** 4

**Funding entity or bodies:**

Junta de Extremadura.

**Participating entity/entities:** UEx.

## R&D non-competitive contracts, agreements or projects with public or private entities

**1 Name of the project:** Servicio de fabricación y caracterización de andamiajes paciente específico que se utilizarán para implantación en animales

**Name principal investigator (PI, Co-PI....):** Antonia Pajares

**Nº of researchers:** 2

**Participating entity/entities:** Universidad de Extremadura

**Funding entity or bodies:**

Universidad de Sevilla

**Type of entity:** University

**City funding entity:** Sevilla, Andalusia, Spain

**Start date:** 05/07/2019

**Duration:** 2 years

**Total amount:** 24.000 €

**2 Name of the project:** Caracterización del óxido de grafeno y del óxido de grafeno reducido

**Name principal investigator (PI, Co-PI....):** Pedro Miranda

**Nº of researchers:** 2

**Participating entity/entities:** Universidad de Extremadura

**Funding entity or bodies:**

Abalonyx AS

**Type of entity:** Business

**City funding entity:** Oslo, Norway



**Start date:** 11/07/2017  
**Total amount:** 8.000 €

**Duration:** 2 years

**3 Name of the project:** Manufacturing of scaffolds for bone regeneration

**Name principal investigator (PI, Co-PI....):** Pedro Miranda

**Nº of researchers:** 2

**Participating entity/entities:** Universidad de Extremadura

**Funding entity or bodies:**

Affiliated Stomatology Hospital of Guangzhou Medical University

**City funding entity:** Guangzhou, China

**Start date:** 01/10/2016

**Duration:** 1 year

**Total amount:** 14.000 €

**4 Name of the project:** Análisis de la viabilidad científico-técnica sobre materiales plásticos y compuestos para desarrollar filamentos reciclados y ecológicos para impresión 3D FFF de bajo coste

**Name principal investigator (PI, Co-PI....):** Pedro Miranda

**Nº of researchers:** 2

**Participating entity/entities:** Universidad de Extremadura

**Funding entity or bodies:**

Pablo Gil Fernández (Dolphin Boy)

**City funding entity:** Badajoz, Extremadura, Spain

**Start date:** 17/06/2015

**Duration:** 4 years

**Total amount:** 2.420 €

**5 Name of the project:** Asesoramiento, fabricación y caracterización de materiales cerámicos diversos

**Name principal investigator (PI, Co-PI....):** Pedro Miranda

**Nº of researchers:** 5

**Participating entity/entities:** Universidad de Extremadura

**Funding entity or bodies:**

Ceramics 3D Design Develop Discover S.L.

**City funding entity:** Badajoz, Extremadura, Spain

**Start date:** 01/07/2011

**Duration:** 2 years - 7 months

**Total amount:** 1.666 €

## Results

### Industrial and intellectual property

**Title registered industrial property:** Andamiaje Híbrido Bioactivo, Método de Fabricación y Uso Para Ingeniería de Tejido Óseo

**Type of industrial property:** Patent of invention

**Inventors/authors/obtainers:** Pedro Miranda González; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas; Francisco Javier Martínez Vázquez; Fidel Hugo Perera Martínez

**Entity holder of rights:** Universidad de Extremadura

**Nº of application:** 2011311602

**Country of inscription:** Spain

**Date of register:** 2013

**Conferral date:** 05/09/2013



Nº of patent: ES-2404733\_B2

## Scientific and technological activities

### Scientific production

#### Publications, scientific and technical documents

- 1 Claudia Paredes; Francisco J. Martínez Vázquez; Antonia Pajares Vicente; Pedro Miranda González. Co-Continuous Calcium Phosphate/Polycaprolactone Composite Bone Scaffolds Fabricated By Digital Light Processing And Polymer Melt Suction. *Ceram Int.*2021. Available on-line at: <<https://doi.org/10.1016/j.ceramint.2021.03.093>>.

**Type of production:** Scientific paper **Format:** Journal
- 2 Juan Mora Macías; Pablo García Florencio; Antonia Pajares Vicente; Pedro Miranda González; Jaime Domínguez Abascal; Esther Reina Romo. Elastic Modulus Of Woven Bone: Correlation With Evolution Of Porosity And X-Ray Greyscale. *Ann. Biomed. Eng.*49, pp. 180 - 190. 2021. Available on-line at: <<https://doi.org/10.1007/s10439-020-02529-6>>.

**Type of production:** Scientific paper **Format:** Journal
- 3 Claudia Paredes; Francisco J. Martínez Vázquez; Hamada Elsayed; Paolo Colombo; Antonia Pajares Vicente; Pedro Miranda González. Evaluation Of Direct Light Processing For The Fabrication Of Bioactive Ceramic Scaffolds: Effect Of Pore/Strut Size On Manufacturability And Mechanical Performance. *J. Europ. Ceram Soc.*41, pp. 892 - 900. 2021.

**Type of production:** Scientific paper **Format:** Journal
- 4 Francisco J. Martínez Vázquez; Estíbaliz Sánchez González; Óscar Borrero López; Pedro Miranda González; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas. Novel Bioinspired Composites Fabricated By Robocasting For Dental Applications. *Ceram Int.*2021. Available on-line at: <<https://doi.org/10.1016/j.ceramint.2021.04.142>>.

**Type of production:** Scientific paper **Format:** Journal
- 5 Claudia Paredes; Francisco J. Martínez Vázquez; Hamada Elsayed; Paolo Colombo; Antonia Pajares Vicente; Pedro Miranda González. Using ductile cores for enhancing the mechanical performance of hollow strut beta-TCP scaffolds fabricated by digital light processing. *Ceramics International.* 47, pp. 10163 - 10173. 2021. Available on-line at: <[10.1016/j.ceramint.2020.12.165](https://doi.org/10.1016/j.ceramint.2020.12.165)>.

**Type of production:** Scientific paper **Format:** Journal
- 6 Pedro Miranda González; Antonia Pajares Vicente; Marc André Meyers. Bioinspired Composite Segmented Armor: Numerical Simulations. *Journal of Materials Research and Technology.* 8, pp. 1274 - 1287. Elsevier, 2019.

**Type of production:** Scientific paper **Format:** Journal
- 7 Claudia Paredes; Francisco Javier Martínez-Vázquez; Antonia Pajares; Pedro Miranda. Development By Robocasting And Mechanical Characterization Of Hybrid Ha/Pcl Coaxial Scaffolds For Biomedical Applications. *J. Europ. Ceram Soc.*39, pp. 4375 - 4383. 2019.

**Type of production:** Scientific paper **Format:** Journal
- 8 Claudia Paredes; Francisco Javier Martínez-Vázquez; Antonia Pajares; Pedro Miranda. Novel Strategy For Toughening Robocast Bioceramic Scaffolds Using Polymeric Cores. *Ceram Int.*45, pp. 19572 - 19576. 2019.

**Type of production:** Scientific paper **Format:** Journal



- 9** Azadeh Motealleh; Siamak Eqtesadi; Fidel Hugo Perera; Angel Luis Ortiz; Pedro Miranda; Antonia Pajares; Rune Wendelbo. Reinforcing 13-93 bioglass scaffolds fabricated by robocasting and pressureless spark plasma sintering with graphene oxide. *J. Mech. Behav. Biomed. Mater.*97, pp. 108 - 116. 2019.  
**Type of production:** Scientific paper **Format:** Journal
- 10** Francisco J. Martínez-Vázquez; Antonia Pajares; Pedro Miranda. A Simple Graphite-Based Support Material For Robocasting Of Ceramic Parts. *J. .Europ. Ceram Soc.*38, pp. 2247 - 2250. 2018.  
**Type of production:** Scientific paper **Format:** Journal
- 11** Víctor Pablo Galván Chacón; Siamak Eqtesadi; Antonia Pajares Vicente; Pedro Miranda González; Fernando Guiberteau Cabanillas. Elucidating the role of 45S5 bioglass content in the density and flexural strength of robocast beta-TCP/45S5 composites. *Ceramic International.* 44 - 11, pp. 12717 - 12722. Elsevier, 2018.  
**Type of production:** Scientific paper **Format:** Journal
- 12** Azadeh Motealleh; Siamak Eqtesadi; Antonia Pajares Vicente; Pedro Miranda Gonzalez. Enhancing the mechanical and in vitro performance of robocast bioglass scaffolds by polymeric coatings: Effect of polymer composition. *Journal of the Mechanical Behavior of Biomedical Materials.* 84, pp. 35 - 45. Elsevier, 2018.  
**Type of production:** Scientific paper **Format:** Journal
- 13** Siamak Eqtesadi; Azadeh Motealleh; Fidel H. Perera; Pedro Miranda; Antonia Pajares; Rune Wendelbo; Fernando Guiberteau; Angel Luis Ortiz. Fabricating geometrically-complex B4C ceramic components by robocasting and pressureless spark plasma sintering. *Scripta Materialia.* 145, pp. 14 - 18. 2018.  
**Type of production:** Scientific paper **Format:** Journal
- 14** Azadeh Motealleh; Siamak Eqtesadi; Antonia Pajares; Pedro Miranda; David Salamon; Gastkova Klara. Case study: Reinforcement of 45S5 bioglass robocast scaffolds by HA/PCL nanocomposite coatings. *Journal of the Mechanical Behavior of Biomedical Materials.* 75, pp. 114 - 118. Elsevier, 2017.  
**Type of production:** Scientific paper **Format:** Journal
- 15** Francisco J. Martínez-Vázquez; Antonia Pajares; Pedro Miranda. Effect Of The Drying Process On The Compressive Strength And Cell Proliferation Of Hydroxyapatite-Derived Scaffolds. *Int. J. Appl. Ceram. Technol.*14, pp. 1101 - 1106. 2017.  
**Type of production:** Scientific paper **Format:** Journal
- 16** Juan Mora Macías; Antonia Pajares Vicente; Pedro Miranda González; Jaime Domínguez Abascal; Esther Reina Romo. Mechanical characterization via nanoindentation of the woven bone developed during bone transport. *J. Mech. Behav. Biomed. Mater.*74, pp. 236 - 244. 2017.  
**Type of production:** Scientific paper **Format:** Journal
- 17** Azadeh Motealleh; Siamak Eqtesadi; Ana Civantos; Antonia Pajares; Pedro Miranda. Robocast 45S5 bioglass scaffolds: in vitro behaviour. *Journal of Materials Science.* 52, pp. 9179 - 9191. 2017.  
**Type of production:** Scientific paper **Format:** Journal
- 18** Siamak Eqtesadi; Azadeh Motealleh; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas; Pedro Miranda González. Improving Mechanical Properties Of 13–93 Bioactive Glass Robocast Scaffold By Poly (Lactic Acid) And Poly (?-Caprolactone) Melt Infiltration. *Journal of Non-Crystalline Solids.* 432, pp. 111 - 119. 2016.  
**Type of production:** Scientific paper **Format:** Journal
- 19** Siamak Eqtesadi; Azadeh Motealleh; Antonia Pajares Vicente; Fidel Hugo Perera; Pedro Miranda González. Poly-(Lactic Acid) Infiltration of 45S5 Bioglass® Robocast Scaffolds: Chemical Interaction and Its Deleterious Effect in Mechanical Enhancement. *Materials Letters.* 163, pp. 196 - 200. 2016.  
**Type of production:** Scientific paper **Format:** Journal



- 20** Paul J. Constantino; Oscar Borrero López; Antonia Pajares Vicente; Brian R. Lawn. Simulation of enamel wear for reconstruction of diet and feeding behavior in fossil animals: A micromechanics approach. *Bioessays*. 38, pp. 89 - 99. 2016.  
**Type of production:** Scientific paper
- 21** Azadeh Motealleh; Siamak Eqtesadi; Fidel Hugo Perera; Antonia Pajares; Fernando Guiberteau; Pedro Miranda. Understanding the role of dip-coating process parameters in the mechanical performance of polymer-coated bioglass robocast scaffolds. *Journal of the Mechanical Behavior of Biomedical Materials*. 64, pp. 253 - 261. 2016.  
**Type of production:** Scientific paper **Format:** Journal
- 22** Siamak Eqtesadi; Azadeh Motealleh; Antonia Pajares Vicente; Pedro Miranda González. Effect Of Milling Media On Processing And Performance Of 13-93 Bioactive Glass Scaffolds Fabricated By Robocasting. *Ceramic International*. 41, pp. 1379 - 1389. 2015.  
**Type of production:** Scientific paper **Format:** Journal
- 23** Siamak Eqtesadi; Azadeh Motealleh; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas; Pedro Miranda González. Influence Of Sintering Temperature On The Mechanical Properties Of  $\beta$ -PCL-Impregnated 45S5 Bioglass-Derived Scaffolds Fabricated By Robocasting. *Journal of the European Ceramic Society*. 35, pp. 3985 - 3993. 2015.  
**Type of production:** Scientific paper **Format:** Journal
- 24** Oscar Borrero López; Antonia Pajares Vicente; Paul J. Constantino; Brian R. Lawn. Mechanics of microwear traces in tooth enamel. *Acta Biomaterialia*. 14, pp. 146 - 153. 2015.  
**Type of production:** Scientific paper
- 25** David B. Marshall; Robert F. Cook; Nitin P. Padture; Michelle L. Oyen; Antonia Pajares Vicente; Jodie E. Bradby; Ivar E. Reimanis; Rajan Tandon; Trevor F. Page; George M. Pharr; Brian R. Lawn. The Compelling Case for Indentation as a Functional Exploratory and Characterization Tools. *Journal of the American Ceramic Society*. 98 - 9, pp. 2671 - 2680. 2015.  
**Type of production:** Scientific paper **Format:** Journal
- 26** Oscar Borrero López; Antonia Pajares Vicente; Paul J. Constantino; Brian R. Lawn. A model for predicting wear rates in tooth enamel. *Journal of the Mechanical Behavior of Biomedical Materials*. 37, pp. 226 - 234. 2014.  
**Type of production:** Scientific paper
- 27** Francisco Javier Martínez Vázquez; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas; Pedro Miranda González. Effect of Polymer Infiltration on the Flexural Behavior of  $\beta$ -Tricalcium Phosphate Robocast Scaffolds. *Materials*. 7, pp. 4001 - 4018. 2014.  
**Type of production:** Scientific paper **Format:** Journal
- 28** Siamak Eqtesadi; Azadeh Motealleh; Pedro Miranda; Antonia Pajares; Alexandra Lemos; Jose M. F. Ferreira. Robocasting of 45S5 bioactive glass scaffolds for bone tissue engineering. *Journal fo the European Ceramic Society*. 34, pp. 107 - 118. 2014.  
**Type of production:** Scientific paper **Format:** Journal
- 29** F.J. MARTÍNEZ-VÁZQUEZ; F. H. PERERA; I. VAN DER MEULEN; A. HEISE; A. PAJARES; P. MIRANDA. Impregnation Of Beta-Tricalcium Phosphate Robocast Scaffolds By In-Situ Polymerization. *J. Biomed. Mater. Res. Part A*. 101 - 11, pp. 3086 - 3096. 382013.  
**Type of production:** Scientific paper **Format:** Journal





- 30** F. J. MARTÍNEZ-VÁZQUEZ; P. MIRANDA; F. GUIBERTEAU; A. PAJARES. Reinforcing Bioceramic Scaffolds With In-Situ Synthesized  $\gamma$ -Polycaprolactone Coatings. *J. Biomed. Mater. Res. Part A.* 101 - 12, pp. 3551 - 3559. 2013.  
**Type of production:** Scientific paper **Format:** Journal
- 31** E. SANCHEZ-GONZALES; P. MIRANDA; F. GUIBERTEAU; A. PAJARES. Effect of microstructure on the mechanical properties of liquid-phase-sintered silicon carbide at pre-creep temperatures. *J. Eur. Ceram. Soc.*31, pp. 1131 - 1139. 2011.  
**Type of production:** Scientific paper
- 32** F. H. PERERA; A. PAJARES; J. J. MELÉNDEZ. Strength of aluminium titanate/mullite composites containing thermal stabilizers. *J. Eur. Ceram. Soc.*31, pp. 1695 - 1701. 2011.  
**Type of production:** Scientific paper
- 33** F. H. PERERA; F. J. MARTINEZ-VAZQUEZ; P. MIRANDA; A. L. ORTIZ; A. PAJARES. Clarifying the effect of sintering conditions on the microstructure and mechanical properties of  $\gamma$ -tricalcium phosphate,. *Ceramic International.* 36, pp. 1929 - 1935. 2010.  
**Type of production:** Scientific paper
- 34** F. J. MARTINEZ-VAZQUEZ; F. H. PERERA; P. MIRANDA; A. PAJARES; F. GUIBERTEAU. Improving the compressive strength of bioceramic robocast scaffolds by polymer infiltration,. *Acta Biomaterialia.* 6, pp. 4361 - 4368. 2010.  
**Type of production:** Scientific paper
- 35** E. SANCHEZ-GONZALES; P. MIRANDA; F. GUIBERTEAU; A. PAJARES. Effect of temperature on the pre-creep mechanical properties of silicon nitride. *J. Eur. Ceram. Soc.*29(12), pp. 2635 - 2641. 2009.  
**Type of production:** Scientific paper
- 36** P. MIRANDA; A. PAJARES; F. GUIBERTEAU. Finite element modeling as a tool for predicting the fracture behavior of robocast scaffolds,. *Acta Biomaterialia.* 4(6), pp. 1715 - 1724. 2008.  
**Type of production:** Scientific paper
- 37** P. MIRANDA; A. PAJARES; E. SAIZ; A. P. TOMSIA; F. GUIBERTEAU. Mechanical properties of calcium phosphate scaffolds fabricated by robocasting,. *J. Biomed. Mater. Res.*85A, pp. 218 - 227. 2008.  
**Type of production:** Scientific paper
- 38** E. SANCHEZ-GONZALEZ; J. J. MELÉNDEZ; A. PAJARES; P. MIRANDA; F. GUIBERTEAU; B.R. LAWN. Application of Hertzian tests to measure stress-strain characteristic of ceramics at elevated temperatures,. *J. Am. Ceram. Soc.*90 (1), pp. 149 - 153. 2007.  
**Type of production:** Scientific paper
- 39** E. SANCHEZ-GONZALES; P. MIRANDA; J. J. MELÉNDEZ; F. GUIBERTEAU; A. PAJARES. Contact properties of yttria-partially-stabilized zirconia up to 1000 °C,. *J. Am. Ceram. Soc.*90(11), pp. 3572 - 3577. 2007.  
**Type of production:** Scientific paper
- 40** P. MIRANDA; A. PAJARES; E. SAIZ; A. P. TOMSIA; F. GUIBERTEAU. Fracture modes under uniaxial compression in hydroxyapatite scaffolds fabricated by robocasting,. *J. Biomed. Mater. Res.*83A, pp. 646 - 655. 2007.  
**Type of production:** Scientific paper
- 41** O. BORRERO-LÓPEZ; A. PAJARES; A. L. ORTIZ; F. GUIBERTEAU. Hardness degradation in liquid-phased-sintered SiC with prolonged sintering,. *J. Eur. Ceram. Soc.* 27 (11), pp. 3359 - 3364. 2007.  
**Type of production:** Scientific paper



- 42** E. SANCHEZ-GONZALES; P. MIRANDA; J. J. MELÉNDEZ; F. GUIBERTEAU; A. PAJARES. Temperature dependence of mechanical properties of alumina up to the onset of creep,. J. Eur. Ceram. Soc. 27 (11), pp. 3345 - 3349. 2007.  
**Type of production:** Scientific paper
- 43** E. SANCHEZ-GONZALES; P. MIRANDA; A. DIAZ-PARRALEJO; A. PAJARES; F. GUIBERTEAU. Influence of zirconia sol-gel coatings on the fracture strength of brittle materials,. J. Mater. Res.20 (6), pp. 1544 - 1550. 2005.  
**Type of production:** Scientific paper
- 44** Y.G. YUNG; A. PAJARES and B. R. LAWN. Effect of oxide and nitride films on strength of silicon: A study using controlled small-scale flaws. J. Mater. Res.19 (12), pp. 3569 - 3575. 2004.  
**Type of production:** Scientific paper
- 45** E. SANCHEZ-GONZALES; P. MIRANDA; A. PAJARES; F. GUIBERTEAU. Effectt of sol-gel think coatings on the fracture strength of glass. J. Mater. Res.19(3), pp. 896 - 901. 2004.  
**Type of production:** Scientific paper
- 46** Y. ZHANG; A. PAJARES and B. R. LAWN. Fatigue and damage tolerance of Y-TZP ceramics in layered biomechanical systems. J. Biomed. Mater. Res. B.71 (1), pp. 166 - 171. 2004.  
**Type of production:** Scientific paper
- 47** B. R. LAWN; A. PAJARES; Y. ZHANG; Y. DENG; M. POLACK; I. LLOYD; E. REKOW; V. THOMPSON. Materials design in the performance of all-ceramic crowns. Biomaterials.25, pp. 2885 - 2892. 2004.  
**Type of production:** Scientific paper
- 48** A. PAJARES; M. CHUMAKOV and B. R. LAWN. Strength of silicon containing nanoscale flaws. J. Mater. Res.19(2), pp. 657 - 660. 2004.  
**Type of production:** Scientific paper
- 49** Y. GIL; A. PAJARES; R. BANERJEE and B. R. LAWN. Strength of silicon, shapphire, and glass in the subthreshold flaw region. Acta Mater.52(12), pp. 3459 - 3466. 2004.  
**Type of production:** Scientific paper
- 50** P. MIRANDA; A. PAJARES; F. GUIBERTEAU; Y. DENG and B. R. LAWN. Designing Damage-Resistant Brittle-Coating Structures: I. Bilayers. Acta Mater.51, pp. 4347 - 4356. 2003.  
**Type of production:** Scientific paper
- 51** P. MIRANDA; A. PAJARES; F. GUIBERTEAU; Y. DENG; H. ZHAO and B. R. LAWN. Designing Damage-Resistant Brittle-Coating Structures: II. Trilayers. Acta Mater.51, pp. 4357 - 4365. 2003.  
**Type of production:** Scientific paper
- 52** Y. DENG; P. MIRANDA; A. PAJARES; F. GUIBERTEAU and B. R. LAWN. Fracture of ceramic/ceramic/polymer trilayers for biomechanical applications. J. Biomed. Mater.Res Part A.67A (3), pp. 828 - 833. 2003.  
**Type of production:** Scientific paper
- 53** B. R. LAWN; Y. DENG; P. MIRANDA; A. PAJARES; H. CHAI and D. K. KIM.. Overview: Damage in brittle layer structures from concentrated loads.J. Mater. Res.17 (12), pp. 3019 - 3036. 2002.  
**Type of production:** Scientific paper



- 54** C. LEE; D. KIM; J. SANCHEZ; P. MIRANDA; A. PAJARES; and B. R. LAWN.. Rate effects in critical loads for radial cracking in ceramic coatings.J. Am. Ceram. Soc.85 (8), pp. 2019 - 2024. 2002.  
**Type of production:** Scientific paper
- 55** A. PAJARES; P. MIRANDA; F. GUIBERTEAU; F. L. CUMBRERA.. Caracterización mecánica de materiales para aplicaciones dentales.Rev. Metal. Madrid.37, pp. 316 - 329. 2001.  
**Type of production:** Scientific paper
- 56** P. MIRANDA; A. PAJARES; F. GUIBERTEAU and B.R. LAWN.. Contact fracture of brittle bilayer coatings on soft substrats.J. Mater. Res.16(1), pp. 115 - 126. 2001.  
**Type of production:** Scientific paper
- 57** H-W KIM; Y. DENG; P. MIRANDA; A. PAJARES; D. K. KIM; H-E KIM and B. R. LAWN.. Effect of flaw state on the strength of brittle coatings on soft substrates.J. Am. Ceram. Soc.84 (10), pp. 2377 - 2384. 2001.  
**Type of production:** Scientific paper
- 58** P. MIRANDA; A. PAJARES; F. GUIBERTEAU; F. L. CUMBRERA and B. R. LAWN.. Role of flaw statistics in contact fracture of brittle coatings.Acta Mater.49, pp. 3719 - 3726. 2001.  
**Type of production:** Scientific paper
- 59** B.R. LAWN; L.S. LEE; H. CHAI; A. PAJARES; D.K. KIM; S. WUTTIPHAN; I.M. PETERSON; and X. HU.. Damage-resistant brittle coatings.Advances Engineering Materials. 2 (11), pp. 745 - 748. 2000.  
**Type of production:** Scientific paper
- 60** Y.G. JUNG; I.M. PETERSON; A. PAJARES and B.R. LAWN.. Contact damage resistance and Strength Degradation of Glass-Infiltrated Alumina and Spinel.J. Dent. Res.78, pp. 804 - 814. 1999.  
**Type of production:** Scientific paper
- 61** I.M. PETERSON; A. PAJARES; B.R. LAWN; V.P. THOMPSON and E.A. REKOW.. Mechanical characterization of dental ceramics using Hertzian contacts.J. Dent. Res.77 (4), pp. 589 - 602. 1998.  
**Type of production:** Scientific paper
- 62** S. WUTTIPHAN; A. PAJARES; B.R. LAWN and C.C. BERNT.. Effect of substrate and bond coat on contact damage in Zirconia-based plasma sprayed coatings.Thin Solid Films.293, pp. 251 - 260. 1997.  
**Type of production:** Scientific paper
- 63** A. PAJARES; F. GUIBERTEAU; F.L. CUMBRERA; R.W. STEINBRECH and A. DOMÍNGUEZ RORÍGUEZ.. Analysis of Kidney-Shaped indentation cracks in 4Y-PSZ.Acta Metall. Mater.44, pp. 4387 - 4394. 1996.  
**Type of production:** Scientific paper
- 64** A. PAJARES; L. WEI; B.R. LAWN and C.C. BERNDT.. Contact damage in alumina-based plasma sprayed coatings.J. Am. Ceram. Soc.79 (7), pp. 1907 - 1914. 1996.  
**Type of production:** Scientific paper



- 65** L. WEI; A. PAJARES and B.R. LAWN.. Effect of mechanical damage on thermal conduction of plasma sprayed coatings.J. Mater. Res.11 (6), pp. 1329 - 1332. \_\_\_\_\_ 1996.  
**Type of production:** Scientific paper
- 66** A. PAJARES; L. WEI; B.R. LAWN; N.P. PADTURE and C.C. BERNDT.. Mechanical characterization of plasma sprayed ceramic coating on metal substrates by contac testing.Mater. Sci. Eng.208(A), pp. 158 - 165. \_\_\_\_\_ 1996.  
**Type of production:** Scientific paper
- 67** A.C. FISCHER-GRIPPS; B.R. LAWN; A. PAJARES and L. WEI.. Stress analysis of elasctic-plastic contact damage in ceramic coatings on metal substrates.J. Am. Ceram. Soc.79, pp. 2619 - 2625. \_\_\_\_\_ 1996.  
**Type of production:** Scientific paper
- 68** A. PAJARES; L. WEI and B.R. LAWN.. Damage accumulation and cyclic fatigue in Mg-PSZ at Hertzian contacts.J. Mater. Res.10 (10), pp. 2613 - 2625. \_\_\_\_\_ 1995.  
**Type of production:** Scientific paper
- 69** A. PAJARES; F. GUIBERTEAU; B.R. LAWN and S. LATHABAI.. Hertzian contact damage in magnesia-partially-stabilized zirconia.J. Am. Ceram. Soc.78 (4), pp. 1083 - 1086. \_\_\_\_\_ 1995.  
**Type of production:** Scientific paper
- 70** A. PAJARES; F. GUIBERTEAU; R.W. STEINBRECH and A. DOMÍNGUEZ RODRÍGUEZ.. Residual streses around Vickers indents.Acta Metall. Mater.43 (10), pp. 3649 - 3659. \_\_\_\_\_ 1995.  
**Type of production:** Scientific paper
- 71** M.S. KALISZEWSKI; G. BENRENS; A.H. HEUER; M.C. SHAW; D.B. MARSHALL; G.W. DRANSMANN; R.W. STEINBRECH; A. PAJARES; F. GUIBERTEAU; F.L. CUMBRERA and A. DOMÍNGUEZ RODRÍGUEZ.. Indentation studies on Y2O3-stabilized ZrO2: I. Development of indentation-induced cracks.J. Am. Ceram. Soc.77 (5), pp. 1185 - 1193. \_\_\_\_\_ 1994.  
**Type of production:** Scientific paper
- 72** G.W. DRANSMANN; R.W. STEINBRECH; A. PAJARES; F. GUIBERTEAU; A. DOMÍNGUEZ RODRÍGUEZ; G. BENRENS and A.H. HEUER.. Indentation studies on Y2O3-stabilized ZrO2: II. Toughness determination from stable growth of indentation-induced cracks.J. Am. Ceram. Soc.77 (5), pp. 1194 - 1201. \_\_\_\_\_ 1994.  
**Type of production:** Scientific paper
- 73** L.M. GONZÁLEZ; F.L. CUMBRERA; F. SÁNCHEZ-BAJO and A. PAJARES.. Measurement of Fiber orientation in Short-Fiber composites.Acta Metall. Mater.42 (3), pp. 689 - 694. \_\_\_\_\_ 1994.  
**Type of production:** Scientific paper
- 74** A. PAJARES; F. GUIBERTEAU; F.L. CUMBRERA; A. DOMÍNGUEZ RODRÍGUEZ.. Tensiones residuales de indentación en 4Y-PSZ.Anales de Mecánica de la Fractura.11, pp. 303 - 309. \_\_\_\_\_ 1994.  
**Type of production:** Scientific paper

- 75** A. PAJARES; F. GUIBERTEAU; K.M. WESTMACOTT and A. DOMÍNGUEZ RODRÍGUEZ.. Tem characterization on indented polycrystalline Y-PSZ. *Journal of Mat. Sci.* 28, pp. 6709 - 6714. \_\_\_\_\_ 1993.  
**Type of production:** Scientific paper
- 76** A. PAJARES; F. GUIBERTEAU; F.L. CUMBRERA; A. DOMÍNGUEZ RODRÍGUEZ.. Un modelo para explicar la configuración de fisuras generadas mediante ensayos Vickers a diferentes cargas en 4Y-PSZ. *Anales de Mecánica de la Fractura*. 9, pp. 22 - 29. \_\_\_\_\_ 1992.  
**Type of production:** Scientific paper
- 77** A. PAJARES; F. GUIBERTEAU; A. DOMÍNGUEZ RODRÍGUEZ and A.H. HEUER.. Indentation-induced cracks and the toughness anisotropy of 9.4 mol %-yttria-stabilized cubic zirconia single crystals. *J. Am. Ceram. Soc.* 74 (4), pp. 859 - 862. \_\_\_\_\_ 1991.  
**Type of production:** Scientific paper
- 78** F. GUIBERTEAU; A. PAJARES; A. DOMÍNGUEZ RODRÍGUEZ.. Estimación de la tenacidad en circonia estabilizada con yttria mediante ensayos Vickers y Knoop. *Bol. Soc. Esp. Ceram. Vidr.* 28 (4), pp. 269 - 274. \_\_\_\_\_ 1989.  
**Type of production:** Scientific paper
- 79** A. PAJARES; F. GUIBERTEAU; A. DOMÍNGUEZ RODRÍGUEZ and A.H. HEUER.. Microhardness and toughness anisotropy in cubic zirconium oxide single crystals. *J. Am. Ceram. Soc.* 71 (7), pp. 332 - 333. \_\_\_\_\_ 1988.  
**Type of production:** Scientific paper
- 80** A. PAJARES; F. GUIBERTEAU; A. DOMÍNGUEZ RODRÍGUEZ and A.H. HEUER.. Microhardness anisotropy in cubic ZrO<sub>2</sub>. *Rev. Phys. Appl.* 23, pp. 719 - 719. \_\_\_\_\_ 1988.  
**Type of production:** Scientific paper
- 81** M. ELICES; M.. *Anales de mecánica de la fractura*. BA-75-93. 10, Badajoz \_\_\_\_\_ Secret. G.  
Español de la Fractura., 1993.  
**Type of production:** E  
**Source of citations:** A. PAJARES y A. DOMÍNGUEZ-RODRÍGUEZ.  
**Source of citations:** S

### Works submitted to national or international conferences

- 1** **Title of the work:** Fabrication of bioinspired structures for dental applications by indirect DLP  
**Name of the conference:** 15th Conference for Young Scientists in Ceramics (CYSC)  
**Type of participation:** Participatory - oral communication  
**City of event:** Novi Sad, Serbia  
**Date of event:** 11/10/2023  
**End date:** 14/10/2023  
Sergio Moreno-Martínez; Antonia Pajares; Óscar Borrero-López; Pedro Miranda.



- 2** **Title of the work:** Towards The Development Through Additive Manufacturing Of Osteoregenerative Hybrid Ceramic/Polymer Scaffolds Suitable For Load-Bearing Applications  
**Name of the conference:** 14th Pacific Rim Conference (PACRIM14)  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Vancouver, Canada  
**Date of event:** 13/12/2021  
**End date:** 06/12/2021  
Pedro Miranda; Claudia Paredes; Francisco Javier Martínez-Vázquez; Antonia Pajares.
- 3** **Title of the work:** Mechanical Performance Of Hybrid Coaxial Scaffolds Fabricated By Additive Manufacturing  
**Name of the conference:** ACGMA  
**Type of participation:** Participatory - oral communication  
**City of event:** Brno, Czech Republic  
**Date of event:** 04/11/2019  
**End date:** 05/11/2019  
Claudia Paredes; Francisco Javier Martínez-Vázquez; Antonia Pajares; Pedro Miranda.
- 4** **Title of the work:** Evaluation Of Direct Light Processing For The Fabrication Of Bioactive Ceramic Scaffolds  
**Name of the conference:** YouCGMed  
**Type of participation:** Participatory - oral communication  
**City of event:** Madrid, Spain  
**Date of event:** 10/10/2019  
**End date:** 11/10/2019  
Claudia Paredes; Francisco Javier Martínez-Vázquez; Antonia Pajares; Pedro Miranda; H. Elsayed; Paolo Colombo.
- 5** **Title of the work:** Bioinspired Ceramic/Polymer Segmented Armour  
**Name of the conference:** The 10th Pacific Rim International Conference on Advanced Materials and Processing (PRICM-10)  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Xian, China  
**Date of event:** 18/08/2019  
**End date:** 22/08/2019  
Pedro Miranda; Antonia Pajares; Carlos Galán; Fidel H. Perera; Mario Acedo; Marc A. Meyers.
- 6** **Title of the work:** Fabrication And Mechanical Behaviour Of Ceramic/Polymer Fabrication And Mechanical Behaviour Of Ceramic/Polymer Porous Scaffolds With Core/Shell Architecture For Bone Tissue Regeneration  
**Name of the conference:** XVI ECerS CONFERENCE  
**Type of participation:** Participatory - oral communication  
**City of event:** Turin, Italy  
**Date of event:** 16/06/2019  
**End date:** 20/06/2019  
Francisco Javier Martínez-Vázquez; Claudia Paredes; Antonia Pajares; Pedro Miranda.
- 7** **Title of the work:** Micro- and macro-wear of human dental enamel. A materials science perspective  
**Name of the conference:** 88th Annual Meeting of the American-Association-of-Physical-Anthropologists (AAPA)  
**Type of participation:** Participatory - poster  
**City of event:** Cleveland, United States of America  
**Date of event:** 27/03/2019



**End date:** 30/03/2019

Oscar Borrero López; Antonia Pajares Vicente; Paul J. Constantino; Brian Rich Lawn.

- 8** **Title of the work:** Development By Robocasting And Mechanical Characterization Of Hybrid Ceramic/Polymer Coaxial Scaffolds For Biomedical Applications  
**Name of the conference:** V Congreso Hispano-Luso de Cerámica y Vidrio y LVI Congreso de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** 'Participatory - poster  
**City of event:** Barcelona, Spain  
**Date of event:** 08/10/2018  
**End date:** 11/10/2018  
Claudia Isabel Paredes Sánchez; Francisco Javier Martínez Vázquez; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas; Pedro Miranda González.
- 9** **Title of the work:** Strategies To Optimize The Mechanical Performance Of Bioceramic Scaffolds For Bone  
**Name of the conference:** V Congreso Hispano-Luso de Cerámica y Vidrio y LVI Congreso de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Barcelona, Spain  
**Date of event:** 08/10/2018  
**End date:** 11/10/2018  
Antonia Pajares Vicente; Claudia Isabel Paredes Sánchez; Azadeh Motealleh; Siamak Eqtesadi; Francisco Javier Martínez Vázquez; Fidel Hugo Perera Martínez; Pedro Miranda González; Fernando Guiberteau Cabanillas.
- 10** **Title of the work:** Developing Ceramic/Polymer Composites With Enhanced Mechanical Performance Using Robocasting  
**Name of the conference:** International Materials Symposium  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** Providence, United States of America  
**Date of event:** 16/07/2018  
**End date:** 17/07/2018  
Pedro Miranda González; Claudia Isabel Paredes Sánchez; Azadeh Motealleh; Siamak Eqtesadu; Francisco Javier Martínez Vázquez; Fidel Hugo Perera Martínez; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas.
- 11** **Title of the work:** Development Of Hybrid TCP/PCL Coaxial Scaffolds Fabricated By Robocasting For Biomedical Applications  
**Name of the conference:** Young Ceramists Additive Manufacturing Forum (Ycam 2018)  
**Type of participation:** Participatory - oral communication  
**City of event:** Padua, Italy  
**Date of event:** 03/05/2018  
**End date:** 04/05/2018  
Claudia Isabel Paredes Sánchez; Francisco Javier Martínez Vázquez; Pedro Miranda González; Antonia Pajares Vicente.
- 12** **Title of the work:** Robocasting: A Mature Additive Manufacturing Technology For Ceramics / Moldeo Robotizado: Una Técnica Consolidada Para La Fabricación Aditiva De Materiales Cerámicos  
**Name of the conference:** Vi Congreso Nacional De Pulvimetalurgia Y I Congreso Iberoamericano De Pulvimetalurgia  
**Type of event:** Conference  
**Type of participation:** Participatory - invited/keynote talk



**City of event:** Ciudad Real, Spain

**Date of event:** 07/06/2017

**End date:** 09/06/2017

Pedro Miranda González; Azadeh Motealleh; Siamak Eqtesadi; Francisco Javier Martínez Vázquez; Fidel Hugo Perera Martínez; Antonia Pajares Vicente; Fernando Guiberteau Cabanillas.

**13 Title of the work:** Mechanical And In Vitro Performance Of Bioceramic Robocast Scaffolds Coated With Biodegradable Polymers

**Name of the conference:** 6th International Congress On Ceramics

**Type of participation:** Participatory - oral communication

**City of event:** Dresden, Germany

**Date of event:** 2016

Pedro Miranda; Azadeh Motealleh; Siamak Eqtesadi; Francisco Javier Martínez-Vázquez; Fidel Hugo Perera; Antonia Pajares; Fernando Guiberteau.

**14 Title of the work:** Mechanical Performance Of Porous Ceramics Fabricated By Robocasting

**Name of the conference:** 6th International Congress On Ceramics

**Type of participation:** Participatory - oral communication

**City of event:** Dresden, Germany

**Date of event:** 2016

Pedro Miranda; Azadeh Motealleh; Siamak Eqtesadi; Francisco Javier Martínez-Vázquez; Fidel Hugo Perera; Antonia Pajares; Fernando Guiberteau.

**15 Title of the work:** Processing And Mechanical Behaviour Of Ceramic-Based Scaffolds By Robocasting  
**Name of the conference:** 91st DKG Annual Conference & Symposium On High Performance Ceramics 2016

**Type of participation:** Participatory - oral communication

**City of event:** Freiberg, Germany

**Date of event:** 2016

Pedro Miranda; Azadeh Motealleh; Siamak Eqtesadi; Francisco Javier Martínez-Vázquez; Fidel Hugo Perera; Antonia Pajares; Fernando Guiberteau.

**16 Title of the work:** Design of titanium macroporous scaffolds combining gel-casting and robocasting techniques

**Name of the conference:** Creating Life In 3D "Frontiers In Material And Life Sciences"

**Type of participation:** Participatory - oral communication

**City of event:** Madrid, Spain

**Date of event:** 2015

**End date:** 16/12/2015

Esther Molero; Hugo Perera; Pedro Miranda; Antonia Pajares; Elena Gordo; Antonio J. Sanchez-Herencia; Begoña Ferrari.

**17 Title of the work:** Effects Of Dip Coating Parameters On Mechanical Properties Of Robocast Bioglass Scaffolds

**Name of the conference:** 14th International Conference of the European Ceramic Society (ECERS2015)

**Type of participation:** Participatory - poster

**City of event:** Toledo, Spain

**Date of event:** 2015

**End date:** 25/06/2015

Azadeh Motealleh; Siamak Eqtesadi; Fidel H. Perera; Pedro Miranda; Antonia Pajares; Fernando Guiberteau.





- 18** **Title of the work:** In Vitro Degradation Of Infiltrated 45S5 Bioglass Fabricated By Robocasting  
**Name of the conference:** 14th International Conference of the European Ceramic Society (ECERS2015)  
**Type of participation:** Participatory - oral communication  
**City of event:** Toledo, Spain  
**Date of event:** 2015  
**End date:** 25/06/2015  
Azadeh Motealleh; Siamak Eqtesadi; Fidel H. Perera; Pedro Miranda; Antonia Pajares.
- 19** **Title of the work:** The Influence Of Shape And Size Of HA Nanoparticles On Robocast 45S5 Scaffolds Coated With HA-PCL Composites  
**Name of the conference:** Creating Life In 3D "Frontiers In Material And Life Sciences"  
**Type of participation:** 'Participatory - poster  
**City of event:** Brno, Czech Republic  
**Date of event:** 2015  
**End date:** 04/09/2015  
Azadeh Motealleh; Siamak Eqtesadi; D Salamon; Pedro Miranda; Antonia Pajares.
- 20** **Title of the work:** Variación espacio-temporal de las propiedades mecánicas del hueso inmaduro durante el transporte óseo  
**Name of the conference:** V Reunión del Capítulo Español de la Sociedad Europea de Biomecánica (ESB)  
**Type of participation:** Participatory - oral communication  
**City of event:** Madrid, Spain  
**Date of event:** 2015  
**End date:** 20/11/2015  
Juan Mora-Macias; Esther Reina-Romo; Antonia Pajares; Pedro Miranda; Jaime Dominguez.
- 21** **Title of the work:** Desarrollo Y Fabricación De Andamiajes Para Ingeniería De Tejido Óseo Mediante Moldeo  
**Name of the conference:** LIV Congreso Anual de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** Participatory - oral communication  
**City of event:** Badajoz, Spain  
**Date of event:** 2014  
**End date:** 22/11/2014  
Fidel H. Perera; A Heitor; Pedro Miranda; Antonia Pajares.
- 22** **Title of the work:** Development And Optimization Of Biphasic Bioceramics For Bone Tissue Engineering.  
**Name of the conference:** LIV Congreso Anual de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** 'Participatory - poster  
**City of event:** Badajoz, Spain  
**Date of event:** 2014  
**End date:** 22/11/2014  
Victor P. Galvan; Antonia Pajares; Pedro Miranda.
- 23** **Title of the work:** Development Of ??Tricalcium Phosphate/1393 Bioactive Glass Composites  
**Name of the conference:** LIV Congreso Anual de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** 'Participatory - poster  
**City of event:** Badajoz, Spain  
**Date of event:** 2014  
**End date:** 22/11/2014  
Azadeh Motelleh; Siamak Eqtesadi; Fernando Guiberteau; Antonia Pajares; Pedro Miranda.



- 24** **Title of the work:** Efecto Del Desplazamiento Entre Capas En La Resistencia A Fractura De Biomateriales Fabricados Mediante Moldeo Robotizado  
**Name of the conference:** LIV Congreso Anual de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** 'Participatory - poster  
**City of event:** Badajoz, Spain  
**Date of event:** 2014  
**End date:** 22/11/2014  
Carolina Godoy; Pedro Miranda; Fernando Guiberteau; Antonia Pajares.
- 25** **Title of the work:** Efecto Del Desplazamiento Entre Capas En Las Propiedades Mecánicas De Estructuras De TCP Y TCP/PLA Fabricados Mediante Moldeo Robotizado  
**Name of the conference:** XIV Congreso de Propiedades Mecánicas de Sólidos  
**Type of participation:** Participatory - oral communication  
**City of event:** Linares, Spain  
**Date of event:** 2014  
**End date:** 19/09/2014  
Carolina Godoy; Miguel Barrero; Laura Sánchez; Fernando Guiberteau; Pedro Miranda; Antonia Pajares.
- 26** **Title of the work:** Enhancing The Mechanical Performance Of 13-93 Bioactive Glass Robocast Scaffold By Polymer Infiltration  
**Name of the conference:** 26th Symposium and Annual Meeting of the International Society for Ceramics in Medicine (BIOCERAMICS 26)  
**Type of participation:** Participatory - oral communication  
**City of event:** Barcelona, Spain  
**Date of event:** 2014  
**End date:** 08/11/2014  
Siamak Eqtesadi; Azadeh Motealleh; Pedro Miranda; Antonia Pajares.
- 27** **Title of the work:** Improving Mechanical Properties Of Robocast 45S5 Bioglass® Scaffolds By Polymer-Melt Infiltration  
**Name of the conference:** 1st Joint Meeting of DGG – ACerS GOMD  
**Type of participation:** Participatory - oral communication  
**City of event:** Aachen, Germany  
**Date of event:** 2014  
**End date:** 30/05/2014  
Siamak Eqtesadi; Azadeh Motealleh; Pedro Miranda; Antonia Pajares.
- 28** **Title of the work:** Improving Mechanical Properties Of Robocast 45s5 Scaffolds By Polymeric Coating  
**Name of the conference:** 26th Symposium and Annual Meeting of the International Society for Ceramics in Medicine (BIOCERAMICS 26)  
**Type of participation:** 'Participatory - poster  
**City of event:** Barcelona, Spain  
**Date of event:** 2014  
**End date:** 08/11/2014  
Azadeh Motealleh; Siamak Eqtesadi; Pedro Miranda; Antonia Pajares.
- 29** **Title of the work:** Mejora De Las Propiedades Mecánicas De Andamiajes De Biovidrio 13-93 Fabricados Por Moldeo Robotizado Mediante Infiltración Con Polímero  
**Name of the conference:** XIV Congreso de Propiedades Mecánicas de Sólidos  
**Type of participation:** Participatory - oral communication  
**City of event:** Linares, Spain  
**Date of event:** 2014



**End date:** 19/09/2014

Siamak Eqtesadi; Azadeh Motealleh; Fernando Guiberteau; Antonia Pajares; Pedro Miranda.

**30 Title of the work:** Optimizing Processing Of 13-93 Bioactive Glass Fabricated By Robocasting Method

**Name of the conference:** 1st Joint Meeting of DGG – ACerS GOMD

**Type of participation:** Participatory - oral communication

**City of event:** Aachen, Germany

**Date of event:** 2014

**End date:** 30/05/2014

Azadeh Motealleh; Siamak Eqtesadi; Pedro Miranda; Antonia Pajares.

**31 Title of the work:** Reinforcing Robocast 45S5 Bioglass Scaffolds By PCL Infiltration

**Name of the conference:** LIV Congreso Anual de la Sociedad Española de Cerámica y Vidrio

**Type of participation:** Participatory - oral communication

**City of event:** Badajoz, Spain

**Date of event:** 2014

**End date:** 22/11/2014

Siamak Eqtesadi; Azadeh Motealleh; Fidel H. Perera; Antonia Pajares; Pedro Miranda.

**32 Title of the work:** Efecto de Parámetros Geométricos en la Resistencia a Compresión de Andamiajes de TCP Fabricados Mediante Moldeo Robotizado

**Name of the conference:** LIII Congreso de la Sociedad Española de Cerámica y Vidrio

**Type of participation:** Participatory - poster

**City of event:** L'Alcora, Valencian Community, Spain

**Date of event:** 2013

**End date:** 10/2013

Carolina Godoy; Pedro Miranda; Fernando Guiberteau; Antonia Pajares.

**33 Title of the work:** Fabrication of Bioactive Glasses Scaffolds by Robocasting

**Name of the conference:** 13th Conference of the European Ceramic Society

**Type of participation:** Participatory - oral communication

**City of event:** Limoges, France

**Date of event:** 2013

**End date:** 06/2013

Pedro Miranda; Siamak Eqtesadi; Antonia Pajares; Azadeh Motealleh; Hugo Perera Martínez.

**34 Title of the work:** Microfabricación De Estructuras Mediante Moldeo Robotizado

**Name of the conference:** Workshop en Microsistemas y Nanotecnología IBERNAM 2013

**Type of participation:** Participatory - invited/keynote talk

**City of event:** Badajoz, Spain

**Date of event:** 2013

**End date:** 22/11/2013

Fidel Hugo Perera; Pedro Miranda; Antonia Pajares.

**35 Title of the work:** Processing And Mechanical Properties Of Organic-Inorganic Scaffolds By Robocasting

**Name of the conference:** Biobone Workshop: Mechanical characterization of ceramic-based materials at different scales

**Type of participation:** Participatory - invited/keynote talk

**City of event:** Villeurbanne, France

**Date of event:** 2013

**End date:** 07/11/2013



Pedro Miranda; Francisco Javier Martínez-Vázquez; Antonia Pajares; Fernando Guiberteau.

- 36** **Title of the work:** Propiedades Mecánicas y Bioactividad de Andamiajes de Biovidrio 45S5 Fabricados Mediante Moldeo Robotizado  
**Name of the conference:** LIII Congreso de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** Participatory - invited/keynote talk  
**City of event:** L'Alcora, Valencian Community, Spain  
**Date of event:** 2013  
**End date:** 10/2013  
Siamak Eqtesadi; Azadeh Motealleh; Pedro Miranda; Fernando Guiberteau; Antonia Pajares.
- 37** **Title of the work:** Resistencia del Esmalte Dental Humano al Desgaste por Contacto Deslizante  
**Name of the conference:** LIII Congreso de la Sociedad Española de Cerámica y Vidrio  
**Type of participation:** 'Participatory - poster  
**City of event:** L'Alcora, Valencian Community, Spain  
**Date of event:** 2013  
**End date:** 10/2013  
Alberto Palomares; Óscar Borrero; Antonia Pajares; Fernando Guiberteau.
- 38** **Title of the work:** Strengthening and Toughening of Tricalcium Phosphate Scaffolds by Coating with Polycaprolactone through Different Methods  
**Name of the conference:** 13th Conference of the European Ceramic Society  
**Type of participation:** 'Participatory - poster  
**City of event:** Limoges, France  
**Date of event:** 2013  
**End date:** 06/2013  
Pedro Miranda; Francisco J. Martínez Vázquez; Antonia Pajares; Fernando Guiberteau.
- 39** **Title of the work:** Developing Robocast Ceramic/Polymer Scaffolds For Bone Implants  
**Name of the conference:** European Orthopaedic Research Society 20th Annual Meeting (EORS 2012)  
**City of event:** Amsterdam, Holland  
**Date of event:** 2012  
P. Miranda; F. J. Martínez-Vázquez; F. H. Perera; A. Pajares; F. Guiberteau. 2012.
- 40** **Title of the work:** Fabricación De Andamiajes Cerámico/Polímero Mediante Moldeo Robotizado Para Implantes Óseos  
**Name of the conference:** XIII Congreso Nacional de Propiedades Mecánicas de Sólidos (PMS 2012)  
**City of event:** Alcoy, Spain  
**Date of event:** 2012  
F. J. Martínez-Vázquez; A. Pajares; P. Miranda; F. Guiberteau. 2012.
- 41** **Title of the work:** Influencia De La Molienda En Las Prestaciones Mecánicas De Materiales Compuestos TCP/PLA  
**Name of the conference:** XIII Congreso Nacional de Propiedades Mecánicas de Sólidos (PMS 2012)  
**City of event:** Alcoy, Spain  
**Date of event:** 2012  
D. Ciria; P. Miranda; F. Guiberteau; A. Pajares. 2012.
- 42** **Title of the work:** Optimización Mecánica De La Arquitectura De Poros De Andamiajes De HAp  
**Name of the conference:** LII Congreso Anual de la Sociedad Española de Cerámica y Vidrio  
**City of event:** Burgos, Spain



**Date of event:** 2012

C. Godoy; P. Miranda; F. Guiberteau; A. Pajares. 2012.

- 43 Title of the work:** An improvement of the compressive strength of robocast HAp scaffolds through hydrothermal apatite deposition  
**Name of the conference:** 12 th Conference of the European Ceramic Society  
**City of event:** Stockholm, Sweden  
**Date of event:** 2011  
F. H. Perera; Y. Liu; F. J. Martínez-Vázquez; P. Miranda; A. Pajares; Z. Shen; F. Guiberteau. 2011.
- 44 Title of the work:** Influence of microstructure on the pre-creep mechanical properties of liquid-phase sintered silicon carbide  
**Name of the conference:** 12 th Conference of the European Ceramic Society  
**City of event:** Stockholm, Sweden  
**Date of event:** 2011  
E. Sánchez-González; P. Miranda; A. Pajares; F. Guiberteau. 2011.
- 45 Title of the work:** Novel composite robocast scaffolds for bone tissue engineering  
**Name of the conference:** Biofuture 2011  
**City of event:** Ghent, Belgium  
**Date of event:** 2011  
F. J. Martínez-Vázquez; F. H. Perera; P. Miranda; A. Pajares. 2011.
- 46 Title of the work:** Robocast scaffolds for maxillofacial reconstruction  
**Name of the conference:** 12 th Conference of the European Ceramic Society  
**City of event:** Stockholm, Sweden  
**Date of event:** 2011  
P. Miranda; F. H. Perera; F. J. Martínez-Vázquez; A. Pajares; F. Guiberteau; F. L. López; R. Martínez. 2011.
- 47 Title of the work:** Efecto de la presencia de aditivos en la resistencia a fractura de composites titanato de aluminio/mullita  
**Name of the conference:** XII Congreso Nacional de Propiedades Mecánicas de Sólidos  
**City of event:** Aránzazu-Oñate,  
**Date of event:** 2010  
F. H. Perera; F. J. Martínez-Vázquez; A. Pajares; J. J. Meléndez. 2010.
- 48 Title of the work:** Estudio de sinterización de hidroxiapatita para aplicaciones en ingeniería de tejido óseo  
**Name of the conference:** XII Congreso Nacional de Propiedades Mecánicas de Sólidos  
**City of event:** Aránzazu-Oñate,  
**Date of event:** 2010  
F. H. Perera; F. J. Martínez-Vázquez; P. Miranda; A. Pajares; F. Guiberteau. 2010.
- 49 Title of the work:** FEM prediction of the fracture behavior of calcium phosphates scaffolds fabricated by robocasting  
**Name of the conference:** The 6th Latin American Congress of Artificial Organs and Biomaterials  
**City of event:** Gramado, Brazil  
**Date of event:** 2010  
F. H. Perera; F. J. Martínez-Vázquez; P. Miranda; A. Pajares; F. Guiberteau. 2010.



- 50** **Title of the work:** Fabricación y optimización de andamiajes cerámicos para regeneración de tejido óseo  
**Name of the conference:** 50 Congreso de la Sociedad Española de Cerámica y Vidrio  
**City of event:** Madrid.,  
**Date of event:** 2010  
P. Miranda; F. H. Perera; F. J. Martínez-Vázquez; A. Pajares; F. Guiberteau. 2010.
- 51** **Title of the work:** Optimizing the mechanical resistance of robocast ceramic/polymer scaffolds for bone implants  
**Name of the conference:** The 6th Latin American Congress of Artificial Organs and Biomaterials  
**City of event:** Gramado, Brazil  
**Date of event:** 2010  
A. Pajares; F. J. Martínez-Vázquez; F. H. Perera; P. Miranda; F. Guiberteau. 2010.
- 52** **Title of the work:** Effect of polimer infiltration on the mechanical behavior under uniaxial compression of robocast ceramic scaffolds for bone tissue engineering applications  
**Name of the conference:** 22nd European Conference on Biomaterials  
**City of event:** Lausanne, Switzerland  
**Date of event:** 2009  
F. J. Martínez-Vázquez; F. H. Perera; P. Miranda; A. Pajares; F. Guiberteau. 2009.
- 53** **Title of the work:** Effect of sintering parameters on the mechanical behaviour, grain growth and densification of beta-TCP  
**Name of the conference:** 11th International Conference and Exhibition of the European Ceramic Society  
**City of event:** Cracovia, Poland  
**Date of event:** 2009  
F. H. Perera; F. J. Martínez-Vázquez; P. Miranda; A. Pajares; F. Guiberteau. 2009.
- 54** **Title of the work:** Elastic-Plastic properties of silicon nitride from room temperature up to the onset of creep.  
**Name of the conference:** 11th International Conference and Exhibition of the European Ceramic Society  
**City of event:** Cracovia, Poland  
**Date of event:** 2009  
E. Sánchez-González; P. Miranda; F. Guiberteau; A. Pajares. 2009.
- 55** **Title of the work:** Application of Hertzian tests to measure mechanical properties of advanced ceramics up to the onset of creep  
**Name of the conference:** International Workshop on Mechanics-Based Design of Materials.  
**City of event:** Perth, Australia  
**Date of event:** 2008  
E. Sánchez-González; P. Miranda; J. J. Meléndez; F. Guiberteau; A. Pajares. 2008.
- 56** **Title of the work:** Efecto de la temperatura y el tiempo de sinterización en la resistencia a fractura, crecimiento de grano y densificación del beta-fosfato tricálcico  
**Name of the conference:** XI Congreso Nacional de Propiedades Mecánicas de Sólidos.  
**City of event:** El Bosque,  
**Date of event:** 2008  
F. J. Martínez-Vázquez; F. H. Perera; P. Miranda; A. Pajares; F. Guiberteau. 2008.
- 57** **Title of the work:** Effect of sol-gel thin coatings on the fracture strength of brittle materials  
**Name of the conference:** International Workshop on Mechanics-Based Design of Materials.  
**City of event:** Perth, Australia  
**Date of event:** 2008



E. Sánchez-González; P. Miranda; A. D. Parralejo; A. Pajares; F. Guiberteau. 2008.

- 58** **Title of the work:** Evolución del tamaño de grano y densificación de  $\beta$ -fostato tricálcico con la temperatura y el tiempo de sinterización  
**Name of the conference:** X Congreso Nacional de Materiales.  
**City of event:** San Sebastian, Spain  
**Date of event:** 2008  
F. H. Perera; P. Miranda; A. L. Ortiz; A. Pajares; F. Guiberteau. 2008.
- 59** **Title of the work:** Mechanical optimization of robocast scaffolds for bone implants  
**Name of the conference:** International Workshop on Mechanics-Based Design of Materials.  
**City of event:** Perth, Australia  
**Date of event:** 2008  
P. Miranda; F. H. Perera; F. Guiberteau; A. Pajares. 2008.
- 60** **Title of the work:** Modelado mediante elementos finitos y predicción del comportamiento a fractura de andamiajes para ingeniería de tejidos fabricados por robocasting  
**Name of the conference:** XI Congreso Nacional de Propiedades Mecánicas de Sólidos.  
**City of event:** El Bosque,  
**Date of event:** 2008  
P. Miranda; F. H. Perera; F. J. Martínez-Vázquez; A. Pajares; F. Guiberteau. 2008.
- 61** **Title of the work:** Propiedades mecánicas de Y-TZP a temperaturas intermedias ( $T < 1000^\circ\text{C}$ )  
**Name of the conference:** X Congreso Nacional de Materiales.  
**City of event:** San Sebastian, Spain  
**Date of event:** 2008  
E. Sánchez-González; P. Miranda; J. J. Meléndez; A. Pajares; F. Guiberteau. 2008.
- 62** **Title of the work:** Propiedades mecánicas de cerámicos a base de alfa-SiC a temperaturas intermedias  
**Name of the conference:** XI Congreso Nacional de Propiedades Mecánicas de Sólidos.  
**City of event:** El Bosque,  
**Date of event:** 2008  
E. Sánchez-González; P. Miranda; A. Pajares; F. Guiberteau. 2008.
- 63** **Title of the work:** Compression fracture modes in robocast scaffold  
**Name of the conference:** 21 European Conference in Biomaterials.  
**City of event:** Brighton, United Kingdom  
**Date of event:** 2007  
P. Miranda; A. Pajares; E. Saiz; A. P. Tomsia; F. Guiberteau. 2007.
- 64** **Title of the work:** Mechanical behaviour under uniaxial compression of robocast calcium phosphate scaffold  
**Name of the conference:** ECM8: Bond Tissue Engineering.  
**City of event:** Davos, Switzerland  
**Date of event:** 2007  
P. Miranda; A. Pajares; E. Saiz; A. P. Tomsia; F. Guiberteau. 2007.
- 65** **Title of the work:** Determination of mechanical properties of  $\text{Al}_2\text{O}_3$  at intermediate temperatures using hertzian tests.  
**Name of the conference:** Mechanical Properties in Advanced Materials: Recent Insights.  
**City of event:** Fuenteheridos-Huelva, Spain  
**Date of event:** 2006



E. Sánchez-González; P. Miranda; J. J. Meléndez; F. Guiberteau; A. Pajares. 2006.

**66** **Title of the work:** Hardness degradation of liquid-phased-sintered silicon carbide with prolonged sintering  
**Name of the conference:** Mechanical Properties in Advanced Materials: Recent Insights.  
**City of event:** Fuenteheridos-Huelva, Spain  
**Date of event:** 2006

O. Borrero-López; A. Pajares; A. L. Ortiz; F. Guiberteau. 2006.

**67** **Title of the work:** Propiedades mecánicas de cerámicos a temperaturas intermedias.  
**Name of the conference:** IX Congreso Nacional de Materiales.  
**City of event:** Vigo, Spain  
**Date of event:** 2006

E. Sánchez-González; P. Miranda; J. J. Meléndez; F. Guiberteau A. Pajares. 2006.

**68** **Title of the work:** Efecto de la temperatura en las propiedades mecánicas de la alúmina.  
**Name of the conference:** X Congreso Nacional de Tratamientos Térmicos y de Superficie.  
**City of event:** Sevilla, Spain  
**Date of event:** 2005

E. Sánchez-González; P. Miranda; J. J. Meléndez-Martínez; A. Pajares F. Guiberteau. 2005.

**69** **Title of the work:** Efecto de los recubrimientos sol-gel de zirconia sobre la fractura de materials frágiles.  
**Name of the conference:** XXII Encuentro del Grupo Español de Fractura.  
**City of event:** Almagro, Spain  
**Date of event:** 2005

E. Sánchez-González; A. Pajares; P. Miranda; A. Díaz-Parralejo; F. Guiberteau. 2005.

**70** **Title of the work:** Efecto de los recubrimientos sol-gel de zirconia sobre la fractura del vidrio.  
**Name of the conference:** IX Congreso Nacional de Propiedades Mecánicas de Sólidos.  
**Type of participation:** Participatory - poster  
**City of event:** Fuenteheridos, Spain  
**Date of event:** 2004

E. Sánchez-González; P. Miranda; A. Díaz-Parralejo; A. Pajares; F. Guiberteau .2004.

**71** **Title of the work:** Effect of thin films on the strength of silicon in the region of small-scale flaws.  
**Name of the conference:** MRS Fall Meeting.  
**City of event:** Boston,  
**Date of event:** 2004

Y. G. Yung; A. Pajares; B. R. Lawn. 2004.

**72** **Title of the work:** Resistencia de materiales frágiles a escala nanométrica.  
**Name of the conference:** IX Congreso Nacional de Propiedades Mecánicas de Sólidos.  
**City of event:** Fuenteheridos, Spain  
**Date of event:** 2004

A. Pajares; Y. G. Yung; R. Banerjee; B. R. Lawn. 2004.

**73** **Title of the work:** Nanomechanic of ceramic-based materials issues of scale.  
**Name of the conference:** MRS Spring Meeting.  
**City of event:** San Francisco,  
**Date of event:** 2003

B. R. Lawn; A. Pajares; H. Chai.2003.





- 74** **Title of the work:** Caracterización mecánica de recubrimientos Sol-Gel de zirconia.  
**Name of the conference:** VIII Congreso Nacional de propiedades mecánicas de sólidos.  
**City of event:** Valencia, Spain  
**Date of event:** 2002  
C. Pérez; A. Diaz-Parralejo; R. Caruso; P. Miranda; A. Pajares; F. Guiberteau.2002.
- 75** **Title of the work:** Diseño de materiales multicapa para aplicaciones de contacto.  
**Name of the conference:** VII Reunión Nacional de Materiales.  
**City of event:** Madrid, Spain  
**Date of event:** 2002  
P. Miranda; A. Pajares; F. Guiberteau; F.L. Cumbreira; B. R. Lawn.2002.
- 76** **Title of the work:** Fatiga de sistemas bicapa cerámico/polímero.  
**Name of the conference:** VIII Congreso Nacional de propiedades mecánicas de sólidos.  
**City of event:** Valencia, Spain  
**Date of event:** 2002  
J. Sánchez; P. Miranda; A. Pajares; F. Guiberteau; C. S. Lee; B. R. Lawn.2002.
- 77** **Title of the work:** Influencia de la distribución de defectos en la fractura de recubrimientos frágiles.  
**Name of the conference:** XIX Encuentro del Grupo Español de Fractura.  
**City of event:** Gerona, Spain  
**Date of event:** 2002  
P. Miranda; A. Pajares; F. Guiberteau; F.L. Cumbreira; B. R. Lawn.2002.
- 78** **Title of the work:** Rate effects in radial fracture of ceramic/polymer bilayers.  
**Name of the conference:** AustCeram 2002.  
**City of event:** Perth, Australia  
**Date of event:** 2002  
J. Sánchez; P. Miranda; A. Pajares; F. Guiberteau; C.S. Lee; D.K. Kim; B. R. Lawn.2002.
- 79** **Title of the work:** Propiedades mecánicas de cerámicos.  
**Name of the conference:** Reunión Nacional de Física de Estado Sólido.  
**City of event:** Madrid, Spain  
**Date of event:** 2001  
A. Pajares.2001.
- 80** **Title of the work:** Caracterización mecánica de materiales para aplicaciones dentales.  
**Name of the conference:** VII Congreso Nacional de propiedades mecánicas de sólidos.  
**City of event:** Segovia, Spain  
**Date of event:** 2000  
A. Pajares; P. Miranda; F. Guiberteau; F.L. Cumbreira.2000.
- 81** **Title of the work:** Contact damage modes in multilayered structures for dental applications.  
**Name of the conference:** 2000 MRS Fall Meeting.  
**City of event:** Boston,  
**Date of event:** 2000  
P. Miranda A. Pajares; F. Guiberteau; F.L. Cumbreira; B. R. Lawn.2000.
- 82** **Title of the work:** Modos de fractura en materiales multicapa.  
**Name of the conference:** VII Congreso Nacional de propiedades mecánicas de sólidos.  
**City of event:** Segovia, Spain



**Date of event:** 2000

P. Miranda; A. Pajares; F. Guiberteau; F.L. Cumbreira.2000.

**83 Title of the work:** Fractura de materiales multicapa bajo la acción de tensiones de contacto.

**Name of the conference:** VI Reunión Nacional de Materiales.

**City of event:** San Sebastián, Spain

**Date of event:** 1999

A. Pajares; P. Miranda; F.L. Cumbreira; F. Guiberteau.1999.

**84 Title of the work:** Effect of contact damage on strength in infiltrated alumina.

**Name of the conference:** 99th Annual Meeting of the American Ceramic Society.

**City of event:** Cincinnati,

**Date of event:** 1997

I.M. Peterson; A. Pajares and B.R. Lawn.1997.

**85 Title of the work:** Analysis of contact damage in YSZ Plasma-Sprayed Coatings.

**Name of the conference:** 98th Annual Meeting of the American Ceramic Society.

**City of event:** Indianapolis,

**Date of event:** 1996

S. Wuttiaphan; A. Pajares and B.R. Lawn.1996.

**86 Title of the work:** Contact damage in dental ceramics.

**Name of the conference:** Gordon Research Conference on Solid State Studies in Ceramics.

**City of event:** Meriden,

**Date of event:** 1996

I. Peterson; A. Pajares and B.R. Lawn.1996.

**87 Title of the work:** Damage and Fatigue in Mg-PSZ at Hertzian Contacts.

**Name of the conference:** 97th Annual Meeting of the American Ceramic Society.

**City of event:** Cincinnati,

**Date of event:** 1995

A. Pajares; L. Wei; F. Guiberteau and B.R. Lawn.1995.

**88 Title of the work:** Tensiones residuales de Indentación en 4Y-PSZ.

**Name of the conference:** XI Encuentro del Grupo Español de Fractura.

**City of event:** San Sebastián, Spain

**Date of event:** 1994

A. Pajares; F. Guiberteau; F.L. Cumbreira; A. Domínguez-Rodríguez.1994.

**89 Title of the work:** Stable Growth of Indentation Cracks in Ytria Stabilized Zirconia.

**Name of the conference:** European Ceramic Society, Third Conference.

**City of event:** Madrid,

**Date of event:** 1993

A. Pajares; F. Guiberteau; A. Domínguez-Rodríguez; G.W. Dransmann and R.W. Steinbrech.1993.

**90 Title of the work:** Estudio del campo de tensiones residuales alrededor de impresas Vickers en 4Y-PSZ.

**Name of the conference:** III Reunión de propiedades mecánicas de sólidos.

**City of event:** La Rábida, Spain

**Date of event:** 1992

A. Pajares; F. Guiberteau; A. Domínguez-Rodríguez; G.W. Dransmann and R.W. Steinbrech.1992.



- 91** **Title of the work:** Un modelo para explicar la configuración de fisuras generales mediante ensayos Vickers a diferentes cargas en 4Y-PSZ.  
**Name of the conference:** IX Encuentro del grupo español de Fractura y I Encuentro Hispano-Francés de Fractura.  
**City of event:** Aiguablava,  
**Date of event:** 1992  
A. Pajares; F. Guiberteau; F.L. Cumbreira; A. Domínguez-Rodríguez.1992.
- 92** **Title of the work:** Propagation of short surface cracks in Y-TZP.  
**Name of the conference:** European Ceramic Society, Second Conference.  
**City of event:** Augsburg, Germany  
**Date of event:** 1991  
A. Pajares; F. Guiberteau; A. Domínguez-Rodríguez; G.W. Dransmann and R.W. Steinbrech.1991.
- 93** **Title of the work:** Configuración de Fisuras Introducidas en Y-PSZ mediante ensayos Vickers.  
**Name of the conference:** II Reunión de Propiedades Mecánicas de Sólidos.  
**City of event:** La Rábida, Spain  
**Date of event:** 1990  
J.C. Chavero; A. Pajares; F. Guiberteau; A. Domínguez-Rodríguez.1990.
- 94** **Title of the work:** Configuración de fisuras introducidas por Indentación sobre Caras (100) de FSZ (Y2O3 9.4 mol%). Determinación de la tenacidad.  
**Name of the conference:** XXVII Reunión Anual de la Sociedad Española de Cerámica y Vidrio.  
**City of event:** Mérida, Spain  
**Date of event:** 1987  
A. Pajares; F. Guiberteau; A. Domínguez-Rodríguez.1987.

## R&D management and participation in scientific committees

### Organization of R&D activities

- 1** **Title of the activity:** 14th International Conference European Ceramic Society  
**Type of activity:** Congreso  
**City of event:** Toledo, Castile-La Mancha, Spain  
**Type of participation:** Organiser  
**Start-End date:** 21/06/2015 - 25/06/2015
- 2** **Title of the activity:** LIV Congreso de la Sociedad Española de Cerámica y Vidrio (SECV)  
**Type of activity:** Congreso  
**City of event:** Badajoz, Extremadura, Spain  
**Type of participation:** Secretary  
**Start-End date:** 19/11/2014 - 22/11/2014
- 3** **Title of the activity:** VI Congreso Nacional de Propiedades Mecánicas de Sólidos.  
**Type of activity:** Secretaria del Comité Organizador. **Geographical area:** N  
**Start date:** 1998
- 4** **Title of the activity:** X Encuentro del Grupo Español de Fractura y II Encuentro Hispano-Luso de Fractura.  
**Type of activity:** Secretaria Comité Organizador. **Geographical area:** I  
**Start date:** 1993



## Other achievements

### Stays in public or private R&D centres

- 1** **Entity:** MATERIALS SCIENCE AND ENGINEERING LABORATORY. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.  
**City of entity:** GAITHERSBURG, M.D.,  
**Start date:** 2002  
**Name of programme:** Resistencia de materiales frágiles a escala nanométrica.  
**Goals of the stay:** Guest
- 2** **Entity:** MATERIALS SCIENCE AND ENGINEERING LABORATORY. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.  
**City of entity:** GAITHERSBURG, M.D.,  
**Start date:** 2000  
**Name of programme:** Influencia del estado superficial en los modos de daño por contacto.  
**Goals of the stay:** Guest
- 3** **Entity:** MATERIALS SCIENCE AND ENGINEERING LABORATORY. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.  
**City of entity:** GAITHERSBURG, M.D.,  
**Start date:** 1999  
**Name of programme:** Modos de fractura en materiales multicapa.  
**Goals of the stay:** Guest
- 4** **Entity:** MATERIALS SCIENCE AND ENGINEERING LABORATORY. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.  
**City of entity:** GAITHERSBURG, M.D.,  
**Start date:** 1998  
**Name of programme:** Mecanismos de daño por contacto en cerámicos avanzados.  
**Goals of the stay:** Guest
- 5** **Entity:** MATERIALS SCIENCE AND ENGINEERING LABORATORY. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.  
**City of entity:** GAITHERSBURG, M.D.,  
**Start date:** 1996  
**Name of programme:** Deformación y fractura de cerámicos utilizados en restauraciones dentales.  
**Goals of the stay:** Guest
- 6** **Entity:** MATERIALS SCIENCE AND ENGINEERING LABORATORY. NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.  
**City of entity:** GAITHERSBURG, M.D.,  
**Start date:** 1994  
**Name of programme:** Fatiga por contacto de cerámicos tenaces.  
**Goals of the stay:** Post-doctoral
- 7** **Entity:** FORSCHUNGSZENTRUM JULICH GMBH.  
**City of entity:** JULICH, Germany  
**Start date:** 1990



**Name of programme:** Fractura en policristales Y-PSZ (4 mol %).

**Goals of the stay:** Doctorate