



## Aránzazu Sierra Fernández

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## Aránzazu Sierra Fernández

Surname(s): **Sierra Fernández**  
Name: **Aránzazu**  
DNI: **71671629H**  
ORCID: **0000-0002-7874-4742**  
Date of birth: **06/01/1987**  
Gender: **Female**  
Nationality: **Spain**  
Country of birth: **Spain**  
Aut. region/reg. of birth: **Principality of Asturias**  
City of birth: **Oviedo**  
Contact country: **Spain**  
Contact city: **Madrid**  
Email: **arsierra@ucm.es**

### Current professional situation

**Employing entity:** Instituto de Geociencias (CSIC, UCM)      **Type of entity:** Public Research Body

**Department:** Instituto de Geociencias (CSIC, UCM)

**Professional category:** Research assistant

**Start date:** 03/06/2013

**Dedication regime:** Full time



## Education

### University education

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

- 1 University degree:** Higher degree  
**Name of qualification:** Master degree in Materials Science & Engineering  
**City degree awarding entity:** Leganés, Community of Madrid, Spain  
**Degree awarding entity:** Carlos III University of Madrid  
**Date of qualification:** 16/06/2014
- 2 University degree:** Higher degree  
**Name of qualification:** Master degree in Conservation & Restoration of Cultural Heritage  
**City degree awarding entity:** Valencia, Valencian Community, Spain  
**Degree awarding entity:** Polytechnic University of Valencia  
**Type of entity:** University  
**Date of qualification:** 10/09/2012
- 3 University degree:** Middle degree  
**Name of qualification:** Expert in Conservation & Management of Archaeological Monuments  
**City degree awarding entity:** Oviedo, Principality of Asturias, Spain  
**Degree awarding entity:** University of Oviedo  
**Type of entity:** University  
**Date of qualification:** 15/06/2009
- 4 University degree:** Higher degree  
**Name of qualification:** Degree in Fine Arts, Conservation & Restoration of Cultural Heritage  
**City degree awarding entity:** Spain  
**Degree awarding entity:** Superior School of Conservation & Restoration of Cultural heritage  
**Type of entity:** University  
**Date of qualification:** 08/09/2008  
**Prize:** End of degree award

#### Doctorates

**Doctorate programme:** Materials Science & Engineering and Chemical Engineering  
**Degree awarding entity:** Carlos III University of Madrid  
**Type of entity:** University  
**City degree awarding entity:** Leganés, Community of Madrid, Spain  
**Date of degree:** 10/11/2017  
**European doctorate:** Yes  
**Date of certificate:** 10/11/2017  
**Thesis title:** Design and optimization of new nanomaterials for the conservation of cultural heritage  
**Obtained qualification:** Sobresaliente cum laude  
**Recognition of quality:** Yes



## Scientific and technological activities

### Scientific production

#### Publications, scientific and technical documents

- 1 Luz Stella Gomez Villalba; Aránzazu Sierra Fernández; María Eugenia Rabanal; Rafael Fort. Correlation between microstructure and cathodoluminescence properties of Mg(OH)<sub>2</sub> (brucite) nanoparticles: effect of the synthesis method. Crystengcomm. 01/10/2018.

**Type of production:** Scientific paper **Format:** Journal
- 2 Montserrat Soria Castro; Susana del Carmen De la Rosa García; Patria Quintana; Sergio Gómez Cornelio; Aránzazu Sierra Fernández; Nikte Gómez Ortiz. Broad spectrum antimicrobial activity of Ca(Zn(OH)<sub>3</sub>)<sub>2</sub>·2H<sub>2</sub>O and ZnO nanoparticles synthesized by the sol-gel method. Journal of Sol-Gel Science and Technology. 10/09/2018.

**Type of production:** Scientific paper **Format:** Journal
- 3 William Santiago González Gómez; Patricia Quintana; Sergio Gómez Cornelio; Claudia García Solis; Aránzazu Sierra Fernández; Otto Ortega Morales; Susana del Carmen De la Rosa García. Calcium oxalates in biofilms on limestone walls of Maya buildings in Chichén Itzá, México. Environmental Earth Sciences. 77 - 230, 12/03/2018.

**Type of production:** Scientific paper **Format:** Journal
- 4 Aránzazu Sierra Fernández; Susana Del Carmen De la Rosa García; Luz Stella Gómez Villalba; Sergio Gómez Cornelio; María Eugenia Rabanal; Rafael Fort; Patricia Quintana. Synthesis, photocatalytic, and antifungal properties of MgO, ZnO and Mg<sub>1-x</sub>Zn<sub>x</sub>O nanoparticles for the protection of stone heritage. ACS Applied Materials and Interfaces. 9 - 29, pp. 24873 - 24886. 05/07/2017. Available on-line at: <<http://pubs.acs.org/doi/abs/10.1021/acsami.7b06130>>.

**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** Yes
- 5 Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort. New nanomaterials for applications in conservation and restoration of stony materials: A review. Materiales de Construcción. 67 - 325, pp. 1 - 18. 01/01/2017.

**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** Yes
- 6 Luz Stella Gómez Villalba; Aránzazu Sierra Fernández; Olivera Milošević; Rafael Fort; María Eugenia Rabanal. Atomic scale study of the dehydration/structural transformation in micro and nanostructured brucite (Mg(OH)<sub>2</sub>) particles: Influence of the hydrothermal synthesis conditions. Advanced Powder Technology. 28 - 1, pp. 61 - 72. 01/01/2017.

**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
- 7 Lidia Muñoz; Aránzazu Sierra Fernández; Gregorio Flores Carrasco; Olivera Milošević; María Eugenia Rabanal. Solvothermal synthesis of Ag/ZnO micro/nanostructures with different precursors for advanced photocatalytic applications. Advanced Powder Technology. 28 - 1, pp. 83 - 92. 01/01/2017.

**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee



- 8** Luz Stella Gómez Villalba; Aránzazu Sierra Fernández; María Eugenia Rabanal; Rafael Fort. TEM-HRTEM study on the dehydration process of nanostructured Mg-Ca hydroxide into Mg-Ca oxide. *Ceramics International*. 27 - 3, pp. 9455 - 9466. 01/06/2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
- 9** Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort; Levente Csóka. Application of magnesium hydroxide nanocoatings on cellulose fibers with different refining degrees. *RSC Advances*. 6, pp. 51583 - 51590. 19/05/2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** Yes
- 10** Lidia Muñoz; Aránzazu Sierra Fernández; Olivera Milošević; María Eugenia Rabanal. Solvothermal synthesis of Ag/ZnO and Pt/ZnO nanocomposites and comparison of their photocatalytic behaviors on dyes degradation. *Advanced Powder Technology*. 27 - 3, pp. 983 - 993. 01/05/2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
- 11** Gregorio Flores Carrasco; Salvador Alcántara Iniesta; Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Olivera Milošević. Propiedades estructurales, ópticas y eléctricas de películas de SnO<sub>2</sub> y SnO<sub>2</sub>:F depositadas por rocío ultrasónico. *Superficies y Vacío*. 27 - 4, pp. 126 - 132. 01/12/2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
- 12** Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Olivera Milošević; Rafael Fort; María Eugenia Rabanal. Synthesis and morpho-structural characterization of nanostructured magnesium hydroxide obtained by hydrothermal method. *Ceramics International*. 40 - 8, pp. 12285 - 12292. 01/09/2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** Yes
- 13** Gregorio Flores Carrasco; Jesús Carrillo; J. Alberto Luna; Rafael Martínez; Aránzazu Sierra Fernández; Olivera Milošević; María Eugenia Rabanal. Synthesis, characterization and photocatalytic properties of nanostructured ZnO particles obtained by low temperature air-assisted-USP. *Advanced Powder Technology*. 25 - 5, pp. 1435 - 1441. 01/09/2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee
- 14** Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort. New consolidant product based on nanoparticles to preserve the dolomitic stone heritage. *Proceedings of the 2nd International Congress on Science and Technology for the Conservation of Cultural Heritage*. pp. 139 - 144. CRC Press. Taylor & Francis Group, 27/06/2014. ISBN 978-1-138-02744-2  
**Type of production:** Scientific paper **Format:** Scientific and technical document or report  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee  
**Corresponding author:** Yes
- 15** Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Lidia Muñoz; Gregorio Flores Carrasco; Rafael Fort; María Eugenia Rabanal. Effect of temperature and reaction time of the synthesis of nanocrystalline brucite. *International Journal of Modern Manufacturing*. 6 - 1, pp. 50 - 54. 01/01/2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Degree of contribution:** Author or co-author of article in journal with external admissions assessment committee



**Corresponding author:** Yes

- 16** Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Susana del Carmen De la Rosa García; Sergio Gómez Cornelio; Patricia Quintana; María Eugenia Rabanal; Rafael Fort. Inorganic nanomaterials for the consolidation and antifungal protection of Stone heritage. Inorganic Nanomaterials for the Consolidation and Antifungal Protection. 1, Springer International Publishing, 02/2018.

**Type of production:** Book chapter

**Format:** Book

**Degree of contribution:** Author or co-author of chapter in book

**Corresponding author:** Yes

### Works submitted to national or international conferences

- 1** **Title of the work:** Assessment, design, and preparation of lime-based mortars reinforced with Ca(OH)<sub>2</sub> and SiO<sub>2</sub> nanoparticles for cultural heritage

**Name of the conference:** Green Conservation of Cultural Heritage

**Type of event:** Conference

**Type of participation:** 'Participatory - poster

**Corresponding author:** Yes

**City of event:** Palermo, Sicilia, Italy

**Date of event:** 16/11/2017

**End date:** 18/11/2017

**Organising entity:** Youth in Conservation of Cultural Heritage (YOCOUCU)

Aránzazu Sierra Fernández; Duygu Ergenç; María del Mar Barberó Barrera; Luz Stella Gómez Villalba; Rafael Fort.

- 2** **Title of the work:** Magnesium and calcium hydroxide nanoparticles: Multifunctional nanomaterials for the stone heritage conservation

**Name of the conference:** Green Conservation of Cultural Heritage

**Type of event:** Conference

**Type of participation:** 'Participatory - poster

**Corresponding author:** Yes

**City of event:** Palermo, Sicilia, Italy

**Date of event:** 16/11/2017

**End date:** 18/11/2017

**Organising entity:** Youth in Conservation of Cultural Heritage (YOCOUCU)

Aránzazu Sierra Fernández; Susana Del Carmen De la Rosa García; Luz Stella Gómez Villalba; Sergio Gómez Cornelio; María Eugenia Rabanal; Patricia Quintana; Rafael Fort.

- 3** **Title of the work:** Strategic use of nanomaterials based on inorganic hydroxides for conservation of stony heritage

**Name of the conference:** Green Conservation of Cultural Heritage

**Type of event:** Conference

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

**City of event:** Palermo, Sicilia, Italy

**Date of event:** 16/11/2017

**End date:** 18/11/2017

**Organising entity:** Youth in Conservation of Cultural Heritage (YOCOUCU)

Luz Stella Gómez Villalba; Rafael Fort; Aránzazu Sierra Fernández; Duygu Ergenç; Mónica Álvarez De Buergo.



- 4** **Title of the work:** Antimicrobial Broad Spectrum activity of the  $[Ca(Zn(OH)_3)_2 \cdot 2H_2O]$  (CZ) and ZnO nanosystems via sol-gel process (route)  
**Name of the conference:** The 19th International Sol-Gel Conference  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Liege, Belgium  
**Date of event:** 03/09/2017  
**End date:** 08/09/2017  
**Organising entity:** Sol-Gel Society (ISGS)  
Montserrat Soria Castro; Patricia Quintana; Susana Del Carmen De la Rosa García; Aránzazu Sierra Fernández; Sergio Gómez Cornelio; Uriel Zagada Dominguez.
- 5** **Title of the work:** Sol-Gel synthesis, characterization and antifungal properties of MgO, ZnO and Mg/Zn oxide nanoparticles developed for the protection of stone heritage  
**Name of the conference:** The 19th International Sol-Gel Conference  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Liege, Belgium  
**Date of event:** 03/09/2017  
**End date:** 08/09/2017  
**Organising entity:** Sol-Gel Society (ISGS)  
Aránzazu Sierra Fernández; Susana Del Carmen De la Rosa García; Sergio Gómez Cornelio; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort; Patricia Quintana.
- 6** **Title of the work:** Effect of multiple interactions between fungal species on the colonization of two limestone lithotypes  
**Name of the conference:** 3rd International Congress Science and Technology for the Conservation of Cultural Heritage  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Cadiz, Spain  
**Date of event:** 21/05/2017  
**End date:** 24/07/2017  
**Organising entity:** Universidad de Cadiz (UCA)  
Sergio Gómez Cornelio; Alejandro Morón Ríos; Aránzazu Sierra Fernández; Santiago González Gómez; Susana Del Carmen De la Rosa García; Silvia Cappello García; Patricia Quintana.
- 7** **Title of the work:** Multifunctional inorganic nanomaterials based on magnesium and calcium hydroxides for heritage conservation  
**Name of the conference:** 3rd International Congress Science and Technology for the Conservation of Cultural Heritage  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Cadiz, Spain  
**Date of event:** 21/05/2017  
**End date:** 24/07/2017  
**Organising entity:** Universidad de Cadiz (UCA)  
Aránzazu Sierra Fernández; Susana Del Carmen De la Rosa García; Sergio Gómez Cornelio; Luz Stella Gómez Villalba; María Eugenia Rabanal; Patricia Quintana; Rafael Fort.



- 8** **Title of the work:** Antifungal properties of MgO, ZnO and Mg/Zn oxide nanoparticles for the protection of stone heritage  
**Name of the conference:** V Conferencia Internacional YOCOCU 2016  
**Type of participation:** 'Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Madrid, Community of Madrid, Spain  
**Date of event:** 21/09/2016  
**End date:** 23/09/2016  
**Organising entity:** Instituto de Geociencias (CSIC-UCM), Departamento de Conservación-Restauración del Museo Reina Sofía and YOCOCU Youth in conservation of cultural heritage  
Aránzazu Sierra Fernández; Susana Del Carmen De la Rosa García; Luz Stella Gómez Villalba; María Eugenia Rabanal; Patricia Quintana; Rafael Fort.
- 9** **Title of the work:** Neutron radiography as a tool for monitoring the effectiveness of consolidant nanomaterials applied to the stone heritage  
**Name of the conference:** V Conferencia Internacional YOCOCU 2016  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Madrid, Community of Madrid, Spain  
**Date of event:** 21/09/2016  
**End date:** 23/09/2016  
**Organising entity:** Instituto de Geociencias (CSIC-UCM), Departamento de Conservación-Restauración del Museo Reina Sofía and YOCOCU Youth in conservation of cultural heritage  
Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort.
- 10** **Title of the work:** Síntesis, caracterización y propiedades fotocatalíticas y antifúngicas de nanopartículas de MgO y ZnO para la protección del patrimonio pétreo  
**Name of the conference:** XIV Congreso Nacional de Materiales  
**Type of participation:** 'Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Gijón, Principality of Asturias, Spain  
**Date of event:** 08/06/2016  
**End date:** 10/06/2016  
**Organising entity:** SOCIEMAT  
Aránzazu Sierra Fernández; Lidia Muñoz; Luz Stella Gómez Villalba; Susana del Carmen De la Rosa García; Patricia Quintana; Rafael Fort; María Eugenia Rabanal.
- 11** **Title of the work:** Making nanomaterials suitable for conservation and restoration of cultural heritage  
**Name of the conference:** Advances in Materials & Processing Technologies Conference  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Madrid, Community of Madrid, Spain  
**Date of event:** 14/12/2015  
**End date:** 17/12/2015  
**Organising entity:** IMDEA Materials Institute and Universidad Carlos III of Madrid  
Aránzazu Sierra Fernández; Lidia Muñoz; Gregorio Flores Carrasco; Luz Stella Gómez Villalba; Levente Csóka; Rafael Fort; María Eugenia Rabanal.
- 12** **Title of the work:** Studies on Structural, Optical and Electrical Properties of MO<sub>x</sub>F (M: Zn, Sn) Thin Films prepared by air assisted USP  
**Name of the conference:** Advances in Materials & Processing Technologies Conference  
**Type of participation:** Participatory - invited/keynote talk





**Corresponding author:** Yes

**City of event:** Madrid, Community of Madrid, Spain

**Date of event:** 14/12/2015

**End date:** 17/12/2015

**Organising entity:** IMDEA Materials Institute and Universidad Carlos III of Madrid

Gregorio Flores Carrasco; Jesús Carrillo; J.Alberto Luna López; Rafael Martínez Martínez; Luz Stella Gómez Villalba; Lidia Muñoz; Aránzazu Sierra Fernández; Olivera Milošević; María Eugenia Rabanal.

**13 Title of the work:** ZnO & noble metals nanostructured for advanced photocatalytic applications

**Name of the conference:** Advances in Materials & Processing Technologies Conference

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

**City of event:** Madrid, Community of Madrid, Spain

**Date of event:** 14/12/2015

**End date:** 17/12/2015

**Organising entity:** IMDEA Materials Institute and Universidad Carlos III of Madrid

Lidia Muñoz; Aránzazu Sierra Fernández; Gregorio Flores Carrasco; Luz Stella Gómez Villalba; Olivera Milošević; María Eugenia Rabanal.

**14 Title of the work:** Nuevos avances en el diseño de nanomateriales para la consolidación del patrimonio pétreo

**Name of the conference:** Congreso Nacional. Estudio y Conservación del Patrimonio Cultural (ECPC-2015)

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

**Corresponding author:** Yes

**City of event:** Málaga, Spain

**Date of event:** 16/11/2015

**End date:** 19/11/2015

**Organising entity:** Universidad de Málaga y Red de Ciencia y Tecnología para la Conservación del Patrimonio Cultural

Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Lidia Muñoz; María Eugenia Rabanal; Rafael Fort.

**15 Title of the work:** ZnO&Ag and ZnO&Pt system: synthesis and structural, morphological and functional characterization

**Name of the conference:** Advanced Ceramics and Application IV: New frontier in Multifunctional Materials Science and Processing

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

**City of event:** Belgrado, Serbia

**Date of event:** 21/09/2015

**End date:** 23/09/2015

**Organising entity:** Serbian Academy of Sciences and Arts

Lidia Muñoz; Aránzazu Sierra Fernández; Gregorio Flores Carrasco; Luz Stella Gómez Villalba; Olivera Milošević; María Eugenia Rabanal.

**16 Title of the work:** Well-known functional materials at nanometric scale to novel and singular application

**Name of the conference:** The 5th International Conference on the Characterization and Control of Interfaces for High Quality Advanced Materials (ICCCI 2015) and the 51st summer symposium on Powder Technology

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

**City of event:** Kurashiki, Japan

**Date of event:** 07/07/2015

**End date:** 10/07/2015

**Organising entity:** The Society of Powder Technology, Japan



Lidia Muñoz; Aránzazu Sierra Fernández; Gregorio Flores Carrasco; Luz Stella Gómez Villalba; Olivera Milošević; María Eugenia Rabanal.

- 17** **Title of the work:** Innovative inorganic nanomaterials for the conservation of cultural heritage: consolidation and deacidification  
**Name of the conference:** 14th International Conference European Ceramic Society  
**Type of participation:** Participatory - invited/keynote talk  
**Corresponding author:** Yes  
**City of event:** Toledo, Spain  
**Date of event:** 21/06/2015  
**End date:** 25/06/2015  
**Organising entity:** ECERS  
Aránzazu Sierra Fernández; Levente Csóka; Luz Stella Gómez Villalba; Rafael Fort; María Eugenia Rabanal.
- 18** **Title of the work:** Synthesis, characterization and photocatalytic behaviour of mesoporous ZnO-based nanohybrid systems through solvothermal and spray pyrolysis routes  
**Name of the conference:** 14th International Conference European Ceramic Society  
**Type of participation:** Participatory - oral communication  
**City of event:** Toledo, Spain  
**Date of event:** 21/06/2015  
**End date:** 25/06/2015  
**Organising entity:** ECERS  
Lidia Muñoz; Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Smilja Markovic; Olivera Milošević; María Eugenia Rabanal.
- 19** **Title of the work:** Novel Consolidant based on functional magnesium hydroxide nanoparticle for the preservation of stone heritage  
**Name of the conference:** 4th International Conference on Multifunctional, Hybrid and Nanomaterials  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Sitges, Spain  
**Date of event:** 09/03/2015  
**End date:** 13/03/2015  
Aránzazu Sierra Fernández; Lidia Muñoz; Gregorio Flores Carrasco; Luz Stella Gómez Villalba; Olivera Milošević; Rafael Fort; María Eugenia Rabanal.
- 20** **Title of the work:** Synthesis and Characterization of hybrid hierarchical systems based on metallic oxides obtained by solvothermal and spray pyrolysis methods for photocatalytic application  
**Name of the conference:** 4th International Conference on Multifunctional, Hybrid and Nanomaterials  
**Type of participation:** Participatory - poster  
**City of event:** Sitges, Spain  
**Date of event:** 09/03/2015  
**End date:** 13/03/2015  
Lidia Muñoz; Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Olivera Milošević; María Eugenia Rabanal.
- 21** **Title of the work:** Photocatalytic behavior of nanostructured systems based on Ag&ZnO synthesized by solvothermal method  
**Name of the conference:** 13th Young Researchers' Conference: Materials Science and Engineering  
**Type of participation:** Participatory - oral communication  
**City of event:** Belgrado, Serbia



**Date of event:** 09/12/2014

**End date:** 13/12/2014

**Organising entity:** Materials Research Society of Serbia

Lidia Muñoz; Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Olivera Milošević; María Eugenia Rabanal.

**22 Title of the work:** Synthesis and Characterization of Magnesium Hydroxide nanoparticles via hydrothermal method

**Name of the conference:** Advanced ceramic and Applications III: New Frontiers in Multifunctional Material Science and Processing

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

**City of event:** Belgrado, Serbia

**Date of event:** 29/09/2014

**End date:** 01/10/2014

**Organising entity:** Serbian Ceramic Society

Aránzazu Sierra Fernández; Gregorio Flores Carrasco; Luz Stella Gómez Villalba; Olivera Milošević; Rafael Fort; María Eugenia Rabanal.

**23 Title of the work:** Synthesis and Characterization of Nanostructured hybrid system of Ag&ZnO obtained by solvothermal method for photocatalytic application

**Name of the conference:** Advanced ceramic and Applications III: New Frontiers in Multifunctional Material Science and Processing

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

**City of event:** Belgrado, Serbia

**Date of event:** 29/09/2014

**End date:** 01/10/2014

**Organising entity:** Serbian Ceramic Society

Lidia Muñoz; Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; Olivera Milošević; María Eugenia Rabanal.

**24 Title of the work:** Influence of deposit temperature on the optical and Photocatalytic properties of Nanostructured ZnO particles obtained by USP method

**Name of the conference:** BIT's 5th Annual Global Congress of Catalysis

**Type of participation:** Participatory - poster

**City of event:** Qingdao, China

**Date of event:** 21/07/2014

**End date:** 23/09/2014

**Organising entity:** BIT Group Global Ltd

Jesús Carrillo López; Gregorio Flores Carrasco; Rafael Martínez Martínez; Salvador Alcántara Iniesta; Luz Stella Gómez Villalba; Aránzazu Sierra Fernández; Olivera Milošević; María Eugenia Rabanal.

**25 Title of the work:** New nanomaterial of magnesium hydroxide nanoparticles for the conservation of stone heritage

**Name of the conference:** Modtech International Conference

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

**Corresponding author:** Yes

**City of event:** Gliwice, Poland

**Date of event:** 13/07/2014

**End date:** 16/07/2014

**Organising entity:** Professional Association of Modern Manufacturing Technology

Aránzazu Sierra Fernández; Lidia Muñoz; Luz Stella Gómez Villalba; Gregorio Flores Carrasco; Rafael Fort; María Eugenia Rabanal.



- 26** **Title of the work:** New consolidant product based on nanoparticles to preserve the dolomitic stone heritage  
**Name of the conference:** 2nd International Congress on Science and Technology for the Conservation of Cultural Heritage  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Sevilla, Spain  
**Date of event:** 24/06/2014  
**End date:** 27/06/2014  
**Organising entity:** Red de Ciencia y Tecnología para la Conservación del Patrimonio cultural  
Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort.
- 27** **Title of the work:** New inorganic nanomaterial for the consolidation and protection of dolostone heritage  
**Name of the conference:** Youth in Conservation of Cultural Heritage  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Agsu, Azerbaijan  
**Date of event:** 28/05/2014  
**End date:** 30/05/2014  
**Organising entity:** Youth in Conservation of Cultural Heritage (YOCOCU)  
Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort.
- 28** **Title of the work:** Nuevos materiales nanoestructurados para la conservación del material pétreo dolomítico  
**Name of the conference:** LIII Congreso SECV 2013 and XII Congreso ATC  
**Type of participation:** Participatory - oral communication  
**Corresponding author:** Yes  
**City of event:** Castellón, Spain  
**Date of event:** 23/10/2013  
**End date:** 25/10/2013  
**Organising entity:** ESCAL  
Aránzazu Sierra Fernández; Luz Stella Gómez Villalba; María Eugenia Rabanal; Rafael Fort.
- 29** **Title of the work:** Calcium Hydroxide Nanoparticles in Cultural Heritage Conservation: Effectiveness Evaluation of Laspra Dolomite under High Relative Humidity Conditions and Presence of Soluble Salts  
**Name of the conference:** 1st International Conference on Innovation in Art Research and Technology  
**Type of participation:** Participatory - poster  
**Corresponding author:** Yes  
**City of event:** Évora, Portugal  
**Date of event:** 10/07/2013  
**End date:** 13/07/2013  
**Organising entity:** HERCULES Laboratory - University of Evora  
Aránzazu Sierra Fernández; Xavier Mas Barberà; Julia Osca Pons; Stephan Kröner.



## Other achievements

### Prizes, mentions and distinctions

- 1** **Description:** Best Oral Contribution of the session Protective and Functional Coatings and Thin Films. 19th International Sol-Gel Conference  
**Awarding entity:** Sol-Gel Society (ISGS) **Type of entity:** Associations and Groups  
**City awarding entity:** Liège, Belgium  
**Conferral date:** 03/09/2017
- 2** **Description:** Best Poster Presentation. 19th International Sol-Gel Conference  
**Awarding entity:** Sol-Gel Society (ISGS) **Type of entity:** Associations and Groups  
**City awarding entity:** Liège, Belgium  
**Conferral date:** 03/09/2017
- 3** **Description:** JECS Trust Award  
**Awarding entity:** European Ceramic Society (ECerS) **Type of entity:** Associations and Groups  
**City awarding entity:** Mons, Belgium  
**Conferral date:** 11/08/2017
- 4** **Description:** Best Poster Award. 1st International conference on innovation in art research and technology.  
**Awarding entity:** Hercules laboratory and University **Type of entity:** University Research Institute of Evora  
**City awarding entity:** Évora, Portugal  
**Conferral date:** 10/07/2013