

Curriculum vitae

Name Luz Stella

Surname Gomez-Villalba

Geologist specialized in petrology and mineralogy. (Colombian National University-1988, Spanish Education Ministry 2005). PH. D. Materials Science and Engineering, (Synthesis of nanomaterials and multifunctional applications) Carlos III University of Spain 2008 Specialist in Nano prevention (Cantabria University (2019)

Email luzgomez@geo.ucm.es, gomeluz@gmail.com

Web page http://www.ucm.es/info/petrolog/personal/gomez_luz.html

www.igeo.ucm-csic.es

ORCID : 0000-0002-8755-8191

Professional experience:

Institute of Geosciences (Spanish Council for Scientific Research (CSIC) - Complutense University of Madrid (UCM)).2009-present

Universidad Carlos III de Madrid: Materials Science and Engineering Department (2005-2008):Synthesis of nanomaterials. Physics Department:-Transmission Electron Microscopy laboratory. Solid state group May 2001- December 2004

INGEOMINAS (Institute of Geosciences, Mining and Chemistry-Colombia) October 1998- April 2001

Petrology and Mineralogy Department

Main Characterization Tools

Characterization of materials and nanoscience:

High resolution and analytical transmission electron microscopy (CTEM-HRTEM-STEM-EELS-EDS-Image calculation), electron diffraction (CBED, SAED), X-ray diffraction (Rietveld adjustment, Scherrer method, high temperature diffraction and low temperature, phase quantification techniques by XRD, quantification of amorphous and crystalline content), luminescence (, photoluminescence, cathodoluminescence, thermoluminescence, radio-luminescence) , Defect characterization at the micro and atomic scale. Phase transformation processes.

Characterization techniques for petrological and mineralogical studies: Polarized Light Optical Microscopy (MOP)-image analysis, refractive index, fluorescence and cathodoluminescence microscopy. X-ray diffraction, High vacuum and environmental scanning electron microscopy (SEM-ESEM-FESEM). Energy dispersive X-ray analysis. Characterization of stone materials (stone, aggregates for concrete, mortars, adobes, bricks, mud walls) mineral alteration processes, conservation treatments.

Nanomaterial synthesis techniques:

Synthesis of nanomaterials with multifunctional properties (catalytic, consolidant, hydrophobic, biocides, flame retardant electrochemical), by different bottom up and break down techniques.

Evaluation of the possible risk of toxicity of nanomaterials and alternatives for environmental and sanitary control

Petrophysical techniques for materials deterioration assessment

Research Programs and / or Projects

Technologies in Heritage Sciences (TOP HERITAGE) Institute of Geosciences (IGEO-CSIC-UCM)1-11 2019-present

Improvement in the design of construction mortars combining Roman technology and nanotechnology. Implication of climate change CLIMORTEC 01 /01/2015 31/12/2018

Durability and conservation of the Geo-materials of the built heritage, IV Regional Plan for Scientific Research and Technological Innovation (IV PRICIT) (GEOMATERIALS 2) Institute of Geosciences (IGEO-CSIC-UCM) 01/01/2015 - 31/12/2018

Technologies and conservation of heritage geomaterials (GEOMATERIALS 1) Institute of Geosciences (IGEO-CSIC-UCM)01/01/2010 - 31/12/2013

Durability and Conservation of Traditional Natural Heritage Materials (MATERNAS) Institute of Geosciences (IGEO-CSIC-UCM)1/1/2009-31/12/2009

Advanced structural materials Carlos III University 01/01/2006 - 31/12/2009

New structural and functional materials based on nanostructured compounds and / or reinforced with nanoparticles Carlos III University of Madrid 01/01/2007 - 31/12/2007

Development of advanced materials using powder technology Carlos III University of Madrid 01/01/2006 -31/12/2006

Characterization by high resolution and analytical electron microscopy of precipitation processes and reinforcing particle matrix boundaries in Ti matrix composites prepared by in situ technique Carlos III University of Madrid 01/01/2002- 31/12/2002

Development of materials for metallic and metal-ceramic filters. Carlos III University of Madrid
13/11/2006- 13/04/2004

New powder metallurgical materials for the land transport industry Carlos III University of Madrid
01/01/2006 - 31/12/2009

Advanced materials for safe lithium-ion batteries using alternative synthesis techniques Carlos III
University of Madrid 01/01/2008 - 31/12/2008

Low-emission secondary coatings to avoid multiple impact effect on high-power RF instruments in
space Carlos III University of Madrid 01/10/2002-30/09/2005

Assembly of the Microscopy Center of INGEOMINAS- Sub directorate of tests and technological
services Institute of Geosciences, Mining and Chemistry INGEOMINAS 10/10/2000-1/05/2001

Characterization of Geological and Geomorphological Units of Colombia Institute of Geosciences,
Mining and Chemistry INGEOMINAS 01/01/1998-30/11/2000

Petrological and mineralogical characterization of Massifs and Shields and Geological Map of
Colombia- Institute of Geosciences, Mining and Chemistry INGEOMINAS 19/09/1988- 31-12-1997

Scientific production

Jorge Feijoo; Rafael Fort; Luz S. Gomez-Villalba; María E. Rabanal;
Lisbeth M. Ottosen Electroprecipitation of Magnesium and Calcium Compounds for
Weathering Protection of Ornamental Rocks *Cryst. Growth Des.* 2020

Ergenç, D., Sierra-Fernandez, A., del Mar Barbero-Barrera, M., Gomez-Villalba, L. S., & Fort, R.
(2020). Assessment on the performances of air lime-ceramic mortars with nano-Ca (OH) 2 and
nano-SiO₂ additions. *Construction and Building Materials*, 232, 117163.

Sierra-Fernandez, A., De la Rosa-García, S. C., Yañez-Macías, R., Guerrero-Sanchez, C., Gomez-
Villalba, L. S., Gómez-Cornelio, S., ... & Quintana, P. (2019). Sol-gel synthesis of Mg (OH) 2 and
Ca (OH) 2 nanoparticles: a comparative study of their antifungal activity in partially
quaternized p (DMAEMA) nanocomposite films. *Journal of Sol-Gel Science and Technology*,
89(1), 310-321-IF 1..986 (2018)

Gomez-Villalba, L. S., Sierra-Fernandez, A., Quintana, P., Rabanal, M. E., & Fort, R. (2018).
Correlation between microstructure and cathodoluminescence properties of Mg (OH) 2
(brucite) nanoparticles: effect of synthesis method. *CrystEngComm*, 20(37), 5632-5640.

Ergenç, D., Gómez-Villalba, L. S., & Fort, R. (2018). Crystal development during carbonation of
lime-based mortars in different environmental conditions. *Materials Characterization*, 142,
276-288 IF 3.322

Gomez-Villalba, L. S., Sierra-Fernández, A., Milosevic, O., Fort, R., & Rabanal, M. E. (2017). Atomic scale study of the dehydration/structural transformation in micro and nanostructured brucite (Mg (OH) 2) particles: Influence of the hydrothermal synthesis conditions. *Advanced Powder Technology*, 28(1), 61-72IF 2.943

Sierra-Fernandez, A., De la Rosa-García, S. C., Gomez-Villalba, L. S., Gómez-Cornelio, S., Rabanal, M. E., Fort, R., & Quintana, P. (2017). Synthesis, photocatalytic, and antifungal properties of MgO, ZnO and Zn/Mg oxide nanoparticles for the protection of calcareous stone heritage. *ACS applied materials & interfaces*, 9(29), 24873-24886. IF 8.097

Sierra-Fernandez, A., Gomez-Villalba, L. S., Rabanal, M. E., & Fort, R. (2017). New nanomaterials for applications in conservation and restoration of stony materials: a review. *Materiales de Construcción*, 67(325), 107IF 1.803

Mancic, L., Nikolic, M., Gomez, L., Rabanal, M. E., & Milosevic, O. (2017). The processing of optically active functional hierarchical nanoparticles. *Advanced Powder Technology*, 28(1), 3-22IF 2.943

Gomez-Villalba, L. S., Sierra-Fernandez, A., Rabanal, M. E., & Fort, R. (2016). TEM-HRTEM study on the dehydration process of nanostructured Mg–Ca hydroxide into Mg–Ca oxide. *Ceramics International*, 42(8), 9455-9466 IF 2.986

Sierra-Fernandez, A., Gomez-Villalba, L. S., Rabanal, M. E., Fort, R., & Csóka, L. (2016). Application of magnesium hydroxide nanocoatings on cellulose fibers with different refining degrees. *RSC Advances*, 6(57), 51583-51590

Arizzi, A., Gomez-Villalba, L. S., Lopez-Arce, P., Cultrone, G., & Fort, R. (2015). Lime mortar consolidation with nanostructured calcium hydroxide dispersions: the efficacy of different consolidating products for heritage conservation. *European Journal of Mineralogy*, 27(3), 311-323IF 1.604

Freire-Lista, D. M., Gomez-Villalba, L. S., & Fort, R. (2015). Microcracking of granite feldspar during thermal artificial processes. *Periodico di mineralogia*, 84(3A), 519-537.
Mančić, L., Dugandžić, I., Milošević, O., Jovanović, D. J., Šaponjić, Z., Rabanal, M. E., & Gómez-Villalba, L. S. (2015). Aerosol-assisted processing of hierarchically organised TiO₂ nanoparticles. *International Journal of Materials and Product Technology*, 50(3-4), 221-229.

Sierra-Fernández, A., Gomez-Villalba, L. S., Milosevic, O., Fort, R., & Rabanal, M. E. (2014). Synthesis and morpho-structural characterization of nanostructured magnesium hydroxide obtained by a hydrothermal method. *Ceramics International*, 40(8), 12285-12292IF 2.605

Rabanal, M. E., Barroso, I., Gómez-Villalba, L. S., Mancic, L., & Milosevic, O. (2014). Directed growth of nanoarchitected hybrid phosphor particles synthesized at low temperature. *Advanced Powder Technology*, 25(5), 1442-1448

Flores-Carrasco, G., Alcántara-Iniesta, S., Sierra-Fernández, A., Gomez-Villalba, L. S., Rabanal, M. E., & Milosevic, O. (2014). [Structural, optical and electrical properties of SnO₂ and SnO₂:F films deposited by ultrasonic spray pyrolysis](#) *Superficies y vacío*, 27(4), 126-132.

Gomez-Villalba, L. S., Sourty, E., Freitag, B., Milosevic, O., & Rabanal, M. E. (2013). TEM–STEM study of europium doped gadolinium oxide nanoparticles synthesized by spray pyrolysis. *Advanced Powder Technology*, 24(5), 864-870

López-Arce, P., Zornoza-Indart, A., Gomez-Villalba, L., Pérez-Monserrat, E. M., de Buergo, M. A., Vivar, G., & Fort, R. (2013). Archaeological ceramic amphorae from underwater marine environments: Influence of firing temperature on salt crystallization decay. *Journal of the European Ceramic Society*, 33(10), 2031-2042.

Gomez-Villalba, L. S., López-Arce, P., Alvarez de Buergo, M., & Fort, R. (2012). Atomic defects and their relationship to aragonite–calcite transformation in portlandite nanocrystal carbonation. *Crystal Growth & Design*, 12(10), 4844-4852. IF 4.689,

Gómez-Villalba, L. S., López-Arce, P., & Fort, R. (2012). Nucleation of CaCO₃ polymorphs from a colloidal alcoholic solution of Ca (OH) ₂ nanocrystals exposed to low humidity conditions. *Applied Physics A*, 106(1), 213-217.

Gomez-Villalba, L. S., Delgado, M. L., & Ruiz-Navas, E. M. (2012). High resolution transmission electron microscopy study on the development of nanostructured precipitates in Al–Cu obtained by mechanical alloying. *Materials Chemistry and Physics*, 132(1), 125-130,

Barroso, J., Mena, I., Gomez, L. S., Milosevic, O., & Rabanal, M. E. (2012). Evaluation of luminescent properties and detection of Eu²⁺ in nano structured particles of Gd_{2-x}Eu_xO₃ system (x= 0.05, 0.10 and 0.30). *Boletín de la Sociedad Española de Cerámica y Vidrio*, 51(5), 255-260.

López-Arce, P., Zornoza-Indart, A., Gomez-Villalba, L. S., & Fort, R. (2012). Short-and longer-term consolidation effects of portlandite (CaOH) ₂ Nanoparticles in carbonate stones. *Journal of Materials in Civil Engineering*, 25(11), 1655-

Gómez-Villalba, L. S., López-Arce, P., De Buergo, M. A., & Fort, R. (2011). Structural stability of a colloidal solution of Ca (OH) ₂ nanocrystals exposed to high relative humidity conditions. *Applied Physics A*, 104(4), 1249. IF 1.630

Gómez Villalba, L. S., López-Arce Martínez, P., Zornoza, A., Álvarez de Buergo, M., & Fort González, R. (2011). [Evaluation of a consolidation treatment in dolostones by mean of calcium hydroxide nanoparticles in high relative humidity conditions](#) 50(2), 85-92. IF 0.432

López-Arce, P., Gómez-Villalba, L. S., Martínez-Ramírez, S., De Buergo, M. Á., & Fort, R. (2011). Influence of relative humidity on the carbonation of calcium hydroxide nanoparticles and the formation of calcium carbonate polymorphs. *Powder technology*, 205(1-3), 263-269

L.S. Gomez Villalba, , M.E. Rabanal,, R. Fort, O. Milosevic Synthesis of nanoparticles by top-down and bottom-up methods, its applications in cultural heritage: a study using electron microscopy,Acta Microscopica, Vol 20, 2, 2011, 11th CIASEM sup. b ISSN 0798-4545

Gomez, L. S., Meatza, I. D., Martín, M. I., Boynao, I., Cantero, I., & Rabanal, M. E. (2010). Synthesis of nano structured particles for Li-ion cathodic and anodic materials obtained by spray pyrolysis. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 49(1), 61-66.,

López-Arce, P., Gomez-Villalba, L. S., Pinho, L., Fernández-Valle, M. E., de Buergo, M. Á., & Fort, R. (2010). Influence of porosity and relative humidity on consolidation of dolostone with calcium hydroxide nanoparticles: effectiveness assessment with non-destructive techniques. *Materials Characterization*, 61(2), 168-184

Gómez, L. S., de Meatza, I., Martín, M. I., Bengoechea, M., Cantero, I., & Rabanal, M. E. (2010). Morphological, structural and electrochemical properties of lithium iron phosphates synthesized by spray pyrolysis. *Electrochimica Acta*, 55(8), 2805-2809.

Marinkovic, K., Mancic, L., Gómez, L. S., Rabanal, M. E., Dramicanin, M., & Milosevic, O. (2010). Photoluminescent properties of nanostructured Y2O3: Eu3+ powders obtained through aerosol synthesis. *Optical materials*, 32(12), 1606-1611.

Martin, M. I., Gómez, L. S., Milosevic, O., & Rabanal, M. E. (2010). Nanostructured alumina particles synthesized by the Spray Pyrolysis method: microstructural and morphological analyses. *Ceramics International*, 36(2), 767-772

Gómez, L. S., Marinković, K., Martín, M. I., Mena, I., Milošević, O., & Rabanal, M. E. (2009). Synthesis and characterization of rare earth oxide nanostructured particles doped with Eu for luminescent applications obtained by aerosol method. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 48(1), 33-38.

Martin, M. I., Rabanal, M. E., Gómez, L. S., Torralba, J. M., & Milosevic, O. (2008). Microstructural and morphological analysis of nanostructured alumina particles synthesized at low temperature via aerosol route. *Journal of the European Ceramic Society*, 28(13), 2487-2494

Gomez, L. S., Marinković, K., Rabanal, M. E., & Milošević, O. (2009). Nanostructured Y2O3 Particles Doped with Europium Synthesized by Aerosol Route. *International Journal of Modern Manufacturing Technologies*, 1(1), 43-48

Milosevic, O. B., Mancic, L., Rabanal, M. E., Gomez, L. S., & Marinkovic, K. (2009). Aerosol route in processing of nanostructured functional materials. *KONA Powder and particle Journal*, 27, 84-106

Rabanal, M. E., Gómez, L. S., Khalifa, A., Torralba, J. M., Mancic, L., & Milosevic, O. (2007). Structural properties of europia-doped-gadolinia synthesized through aerosol. *Journal of the European Ceramic Society*, 27(13-15), 4325-4328

Wang, Y., Milosevic, O., Gomez, L., Rabanal, M. E., Torralba, J. M., Yang, B., & Townsend, P. D. (2006). Thermoluminescence responses from europium doped gadolinium oxide. *Journal of Physics: Condensed Matter*, 18(40), 9257

Book editor

Gomez-Villalba L.S. Advances in Nanostructured Materials for Multifunctional Applications: Synthesis, Characterization and Properties- Solid State Phenomena

<https://doi.org/10.4028/www.scientific.net/SSP.286> Scientific.net special issue.

https://www.scientific.net/SSP.286/book_2019 ISBN 978-30357-1320-6

Publications in book chapters

Sierra-Fernandez, A., Gomez-Villalba, L. S., De la Rosa-García, S. C., Gomez-Cornelio, S., Quintana, P., Rabanal, M. E., & Fort, R. (2018). Inorganic Nanomaterials for the Consolidation and Antifungal Protection of Stone Heritage. In *Advanced Materials for the Conservation of Stone* (pp. 125-149). Springer

Sierra-Fernandez, A., Gómez Villalba, L. S., Muñoz, L., Flores, G., Fort González, R., & Rabanal, M. E. (2014). Effect of temperature and reaction time of the synthesis of nanocrystalline brucite. *international Journal of Modern Manufacturing Technologies* ISSN 2067–3604 6 ,

Sierra-Fernández, A., Gómez-Villalba, L. S., Rabanal, M. E., & Fort, R. (2014). New consolidant product based on nanoparticles to preserve the dolomitic stone heritage. *Science. Technology and Cultural Heritage, Taylor & Francis Group, London*, 139-144

Gomez-Villalba, L. S., López-Arce, P., de Buergo, M. A., Zornoza-Indart, A., & Fort, R. (2013). Mineralogical and textural considerations in the assessment of aesthetic changes in dolostones by effect of treatments with Ca (OH) 2 nanoparticles. *Science and Technology for the Conservation of Cultural Heritage*, 235, 329.

Fort, R., Álvarez de Buergo, M., Vázquez-Calvo, C., & Gómez-Villalba, L. S. (2013). Análisis de la microrugosidad mediante técnicas portátiles: aplicaciones y casos de estudio en patrimonio (. Micro roughness analysis using portable techniques: heritage applications and case studies) *Ciencia y Arte IV. Ministerio de Educación y Cultura, Madrid*, 198-216.

Gómez Villalba, L. S. Nanopartículas para la conservación del patrimonio. En: La conservación de los geomateriales utilizados en el patrimonio. (Nanoparticles for heritage conservation. In: The conservation of geomaterials used in heritage) Madrid : Programa Geomateriales, 2012. p. 171-180. ISBN: 978-84-615-7660-9

Gomez-Villalba, LS; López-Arce, P;Zornoza-Indart, A.;Alvarez de Buergo M.; Fort R. (2012) Colloidal synthesis of portlandite nanocrystals: carbonation Research Advances for the Conservation of Cultural Heritage, pg 128 ISBN 978-84-9887-930-8

Gómez Villalba, L. S., López-Arce, P., Fort González, R., Álvarez de Buergo, M., & Zornoza-Indart, A. (2011). Aplicación de nanopartículas a la consolidación del patrimonio pétreo. Application of nanoparticles in the consolidation of the stone heritage. [La Ciencia y el Arte III. Ciencias experimentales y conservación del patrimonio](#), 2011, págs. 39-58,

Gómez Villalba, L. S., López-Arce, P., Fort González, R., & Álvarez de Buergo, M. (2010) La aportación de la nanociencia a la conservación de bienes del patrimonio cultural. *Patrimonio cultural de Spain*, no 4, p. p. 42-55.

Marinkovic, Katarina R.; Mancic, Lidija T.; Rabanal, Maria Eugenia; et al. Nanostructured $(Y(1-x)Gd(x)_2O_3):Eu(3+)$ powders obtained through aerosol synthesis Characterization and Control of Interfaces For High Quality Advanced Materials Iii Volume: 219 Pages: 83-90: 2010

Milosevic, O. B., Mancic, L., Rabanal, M. E., Gomez, L. S., & Marinkovic, K. (2009). Aerosol route in processing of nanostructured functional materials. *KONA Powder and particle Journal*, 27, 84-106.

Gomez, L.S.; Marinkovic, K.; Torralba, J.M.; et al. Nanostructured Y O particles doped with europium synthesized by aerosol route International Journal of Modern Manufacturing Technologies Volume: 1 Issue: 1 Pages: 43-8 Published: 2009

Marinković, K. R., Veselinović, L. M., Gomez, L. S., Rabanal, M. E., Mančić, L. T., & Milošević, O. B. (2007). Aerosol synthesis and characterization of nanostructured particles of $Y_3Al_5O_{12}:Ce^{3+}$ and $Y_2O_3:Eu^{3+}$. *Hemijska industrija*, 61(3), 101-108.

Rabanal M.E.; Gómez L.; Khalifa A.; et al. $Gd_2O_3:Eu$ System: Structural Study of the Influence of Luminescence Center Concentration DOI: 10.4028/www.scientific.net/MSF.534-536.1393

Milosevic, Olivera B.; Mancic, Lidija T.; Eugenia Rabanal, Maria; et al. Nanoscale particle processing through aerosol routes Characterization and Control of Interfaces For High Quality Advanced Materials Ii Volume: 198 Pages: 347-352 Published: 2007

Rabanal, ME; Gomez, L; Khalifa, a; et al. $Gd_2O_3 : Eu$ system: Structural study of the influence of luminescence center concentration Conference: Power Metallurgy World Congress and Exhibition 2006 Volume: 534-536 Pages: 1393-1396 2007. In Materials science forum (Vol. 534, pp. 1393-1396). Trans Tech Publications

Gomez, L. S.; Rabanal, M. E.; Torralba, J. M.; et al. Structural and morphological study of nanoceramics prepared by spray pyrolysis Characterization and Control of Interfaces For High Quality Advanced Materials Ii Volume: 198 Pages: 193-197 Published: 2007 .

Publications in Peer-Reviewed Journals

Gómez-Heras, M., Gómez-Villalba, L.S., Fort, R.
Crystalline changes in calcareous lithoarenites with temperature: implications for deterioration caused by fire (Cambios cristalinos en litoarenitas calcáreas con la temperatura: implicaciones en el deterioro causado por incendios) Macla 13: 101-102, 2010

Gómez-Villalba, L.S., López-Arce, P., Álvarez De Buergo, M., Fort, R.
Crystalline behavior of Portlandite Nanoparticles (Ca (OH) 2) under conditions of high relative humidity (Comportamiento cristalino de Nanopartículas de Portlandita (Ca(OH)₂) en condiciones de alta humedad relativa). Macla 13: 103-104 , 2010 ,

Gómez-Villalba, L.S., López-Arce, P., Zornoza-Indart, A., Álvarez De Buergo, M., Fort, R.
Carbonation in portlandite nanocrystals obtained by colloidal synthesis: Experiences on their stability in carbonate rocks (Carbonatación en nanocristales de portlandita obtenidos mediante síntesis coloidal: Experiencias sobre su estabilidad en rocas carbonáticas). Macla 16: 62-63, 2012,

Gomez-Villalba, L. S., López-Arce, P., Zornoza-Indart, A., Alvarez de Buergo, M., & Fort, R. (2012, April). Modern restoration products based on nanoparticles: The case of the Nano-Lime, interaction and compatibility with limestone and dolostones surfaces, advantages and limitations. In *EGU General Assembly Conference Abstracts* (Vol. 14, p. 2418),.

K. Marinkovic, L.S.Gomez, M.E.Rabanal, L.Mancic, O.Milosevic "Aerosol route in processing of nanostructured phosphor materials" Processing and Application of Ceramics 4 [3] Páginas: 135-145 2010 ISSN: 1820-6131

O. Milosevic, L. Mancic, M.E. Rabanal, L. Gomez, J.M. Torralba Aerosol route of rare-earth nanophased functional materials Ceramic Transaction Editor American Ceramic Society 2010 ISSN 1042-1122 ISBN 1-57498-170-6

O. Milosevic, L. Mancic, M.E. Rabanal, L. Gomez, J.M. Torralba Nanoscale particle processing through aerosol routes Ceramic Transaction 198,347-352 Editor: American Ceramic Soc, ISSN 1042-1122 ISBN 1-57498-170-6. 2007

L.S. Gómez, M.E. Rabanal, J.M. Torralba, L. Mancic, O. Milosevic Structural and morphological study of nanoceramics prepared by spray pyrolysis, Ceramic Transaction 198, 193-198 Editor: American Ceramic Society 2007 ISSN 1042-1122, ISBN 1-57498-170-6

Gómez L.S, López-Arce P., Álvarez de Buergo M., Fort R. Calcium Hydroxide Nanoparticles Crystallization On Carbonate Stones: Dynamic Experiments With Heating/Cooling And Peltier Stage Esem, Acta Microscopica, Vol. 18, Supp. C, 2009, 105-106".

Gomez Villalba Luz Stella. Gehlenite-Akermanite Series -(Melilite Group) In Slags of High Kiln. Acta microscopica. 5/B, pp. 144 -145. 25/09/1996.

Gómez L.S.; Galvis J. Iron Banded in Colombia.(Hierro Bandeado en Colombia). Revista de La Academia Colombiana De Ciencias Exactas, Físicas Y Naturales Volume XXII Número: 85,. pp. 485 -496. 1998.

Participation in Congresses

J. Feijoo; R. Fort; L.M. Ottosen; M.E. Rabanal; L.S. Gomez-Villalba Effectiveness of electrokinetic consolidation of different inorganic compounds for protection of stony materials: 3rd International Conference Green Conservation of Cultural Heritage (Portugal), October 2019

M. Barbero-Barrera, A. Sierra-Fernandez, D. Ergenc, L.S. Gomez-Villalba Evaluation of SiO₂ Nanoparticles as additive for lime mortars: Changes in microstructure and mechanical properties. 5th historical Mortars Conference. Pamplona-Spain 2019

L.S. Gomez-Villalba, A. Sierra-Fernandez , R. Fort, M.E. Rabanal Multifunctional nanomaterials base on inorganic hydroxides: a look from the atomic scale .The Seventh Serbian Ceramic Society Conference “ Advanced Ceramics and Application” Belgrade (Serbia), September 17- 19 2018
Invited Speaker

Luz Stella Gómez Villalba, Aránzazu Sierra Fernández, Duygu Ergenç, Rafael Fort Las nanocales: un gran avance en conservación y restauración del patrimonio pétreo: Comunicación oral Foro Ibérico de la cal: VI Jornadas FICAL Pamplona, 27-30 May 2018: Oral Publicacion ISBN 978-84-09-02249-6

Duygu Ergenç, Rafael Fort, Aránzazu Sierra Fernández, M^a Mar Barbero-Barrera, Luz Stella Gómez Villalba. Diseño de morteros de cal con aditivos de nanocal y nanosílica: sus pros y sus contras: Foro Ibérico de la cal: VI Jornadas FICAL Pamplona, Spain 27-30 May 2018: Oral

Aránzazu Sierra Fernández, Duygu Ergenç, María del Mar Barbero-Barrera, Luz Stella Gómez Villalba, Rafael Fort Empleo de nanopartículas de Ca(OH)₂ y SiO₂ como aditivos para morteros de cal: Evaluación de su trabajabilidad: Foro Ibérico de la cal: VI Jornadas FICAL Pamplona, May 27-30, 2018 Poster

Aranzazu Sierra-Fernández ,Luz Gómez-Villalba, Susana del Carmen de la Rosa-García ,M^a Eugenia Rabanal ,Patricia Quintana ,Rafael Fort Aplicación de nanomateriales para la consolidación y protección del patrimonio pétreo X Jornadas de Conservación y Restauración de Bienes Culturales. “Restauradores Satélite”. Avilés, 10 y 11 March 2016 Avilés, Spain 10 y 11 de March 2016 Oral

A. Sierra-Fernandez¹, S.C. de la Rosa-García, S. Gomez-Cornelio, L.S. Gomez-Villalba, M.E. Rabanal, R. Fort & P. Quintana Titulo del Trabajo Sol-gel synthesis, characterization and antifungal properties of MgO, ZnO, and Mg/Zn oxide nanoparticles developed for the protection of stone heritage The 19th International Sol-Gel Conference – Liege – Belgium, 3 -8 September 2017
Poster International prize Sol-Gel Society (ISGS).

LS Gomez-Villalba, R. Fort , A. Sierra-Fernandez, D.Ergenç, M. Alvarez de Buergo Strategic use of nanomaterials based on inorganic hydroxides for conservation of stony heritage Green Conservation of cultural Heritage 2017, Palermo Italy Oral presentation

A. Sierra-Fernandez; D. Ergenç; M.M. Barbero-Barrera; L.S. Gomez-Villalba; R. Fort Assessment,

design, and preparation of lime-based mortars reinforced with $\text{Ca}(\text{OH})_2$ and SiO_2 nanoparticles for cultural heritage Green Conservation of cultural Heritage 2017,Palermo Italy,Poster

Sierra-Fernandez A. ; S. de la Rosa García; S. Gómez-Cornelio; L.S. Gomez-Villalba; M.E. Rabanal; P. Quintana; R. Fort .Magnesium and calcium hydroxide nanoparticles: multifunctional nanomaterials for the stone heritage Green Conservation of cultural Heritage 2017,Palermo Italy Poster

Sierra Fernandez A.; Gomez-Villalba L.S.; Rabanal M.E.;Fort R. Multifunctional inorganic nanomaterials based on magnesium and calcium hydroxides for heritage conservation. Technoheritage 2017, Cádiz Spain May 21-24 2017,Oral

A.Sierra-Fernández, L.S. Gomez-Villalba, M.E. Rabanal, R. Fort. Neutron Radiography as a tool for monitoring the effectiveness of consolidant nanomaterials applied to the stone heritage. 5th International Conference Youth in Conservation of Cultural Heritage YOCOCU 2016. Madrid, Spain. Sep. 2016. Oral

A.Sierra-Fernández, S.C De la Rosa-García, L.S. Gomez-Villalba, M.E. Rabanal, P.Quintana, R. Fort. Antifungal properties of MgO , ZnO and Mg/Zn Oxide nanoparticles for the protection of stone heritage. 5th International Conference Youth in Conservation of Cultural Heritage YOCOCU 2016. Madrid, Spain. Sep. 2016. Poster

A.Sierra-Fernández, L. Muñoz, L.S. Gomez-Villalba, S.C De la Rosa-García, P.Quintana, R. Fort, M.E. Rabanal. Síntesis, caracterización y propiedades fotocatalíticas y antifúngicas de nanopartículas de MgO y ZnO para la protección del patrimonio pétreo. XIV Congreso Nacional de Materiales. Gijón, Spain. Jun. 2016. Poster

A.Sierra Fernández, L. S. Gomez-Villalba, M.E. Rabanal, R. Fort. Neutron radiography as a tool for monitoring the effectiveness of consolidant products applied to the stone heritage. 10th Central European Training School on Neutron Techniques (CETS). Budapest, Hungary. May 2016.

A.Sierra-Fernandez; L. Muñoz; G. Flores-Carrasco; L.S. Gomez-Villalba; L. Csóka;R.Fort; M.E. Rabanal. Making nanomaterials suitable for conservation and restoration of cultural heritage. Advanced in Materials & Processing Technologies (AMPT). Madrid, Spain. Dic. 2015. Oral

L. Muñoz; A. Sierra-Fernandez; G. Flores-Carrasco; L.S. Gomez-Villalba; O.Milosevic; M. E. Rabanal. ZnO & noble metals nanostructured for advanced photocatalytic applications. Advanced in Materials & Processing Technologies (AMPT).Madrid, Spain. December. 2015.Oral

G. Flores-Carrasco;J. Carrillo; J.A. Luna-López; Rafael Martínez-Martínez; L.S. Gómez-Villalba; L. Muñoz-Fernández; A. Sierra-Fernández; O.Milosevic; M.E Rabanal Studies on Structural, Optical and Electrical Properties of $\text{MO}_x\text{:F}$ (M: Zn, Sn) Thin Films prepared by air assisted USP Comunicación Invitada Congreso: Advanced in Materials& Processing Technologies (AMPT2015)Madrid (Spain) 14-17 December 2015

A. Sierra-Fernandez, L.S. Gomez-Villalba, L. Muñoz, M.E. Rabanal, R. Fort. Nuevos avances en el diseño de nanomateriales para la consolidación del patrimonio pétreo. Congreso Nacional. Estudio y Conservación del Patrimonio Cultural (ECPC).Málaga, Spain. Nov. 2015. Oral

L. Muñoz, A. Sierra-Fernandez, G. Flores-Carrasco, L.S. Gomez-Villalba, O. Milosevic, M.E. Rabanal. Well-Known functional materials at nanometric scale to novel and singular applications. 5th International Conference on the Characterization and Control of Interfaces for High Quality Advanced Materials and the 51st Summer Symposium on Powder Technology. Kurashiki, Japan. Jul. 2015. Invited speaker/Keynote .

A. Sierra-Fernandez, L. Csóka, L.S. Gomez-Villalba, R. Fort, M.E. Rabanal. Innovative Inorganic Nanomaterials for the conservation of Cultural Heritage. 14th International Conference of the European Ceramic Society. Toledo, Spain. Jun. 2015. Invited speaker Keynote.

L. Muñoz, A. Sierra-Fernandez, G. Flores-Carrasco, L. S. Gomez-Villalba, O. Milosevic, M.E. Rabanal. ZnO&Ag and ZnO&Pt system: synthesis and Application. Advanced Ceramics and Application IV: New Frontier in Multifunctional Materials Science and Processing. Belgrade, Serbia. 2015. Invited speaker/Keynote .

Arancha Sierra Fernandez; Lidia Muñoz; Gregorio Florez Carrasco; Luz S. Gomez Villalba; Olivera Milosevic; Rafael Fort; Maria Eugenia Rabanal Novel Consolidant Based on functional Magnesium Hydroxide Nanoparticles for the of stone heritage Hybrid Materials Sitges -Barcelona, Spain 09/03/2015-13/03/2015

A. Sierra-Fernández; R. Fort; O. Milosevic; G. Flores-Carrasco; L.S. Gómez-Villalba; M.E. Rabanal. Synthesis and Characterization of Magnesium Hydroxide nanoparticles via hydrothermal method Advanced Ceramic and Applications III: New Frontiers in Multifunctional Material Science and Processing , Invited speaker Serbia, Serbia 29/09/2014-01/10/2014

L. Muñoz; A. Sierra-Fernández; L.S. Gómez-Villalba; O. Milosevic; M.E. Rabanal. Synthesis and Characterization of Nanostructured hybrid system of Ag&ZnO obtained by solvothermal method for photocatalytic application. Advanced ceramic and Applications III: New Frontiers in Multifunctional Material Science and Processing. Oral presentation Belgrade, Serbia 29/09/2014-01/10/2014

J. Carrillo-López; G. Flores-Carrasco; R. Martínez-Martínez; S. Alcántara-Iniesta; L.S. Gomez; A. A. Sierra-Fernández; O. Milosevic; M.E. Rabanal Influence of deposit temperature on the optical and Photocatalytic properties of Nanostructured ZnO particles obtained by USP method BIT's 5th Annual Global Congress of catalysis-2014 Poster Qinqdao, China 21/09/2014-23/09/2014

G. Flores; R. Martinez; J. Carrillo; L.S. Gomez; A. Sierra; J.A. Luna; O. Milosevic; M.E. Rabanal. Structural and morphological properties of nanostructured ZnO particles grown by ultrasonic spray pyrolysis method with horizontal furnace XXIII International Materials Research Congress. Poster Cancun, Mexico 17/08/2014-21/08/2014

G. Flores; J. Carrillo; J.A. Luna; S. Alcantara; L.S. Gomez; A. Sierra; O. Milosevic; M.E. Rabanal. influence of thickness and precursor concentration on the structural, morphological, optical and electrical properties of ZNO thin films deposited at low temperature by USP XXIII International Materials Research Congress. Poster Cancun, Mexico 17/08/2014-21/08/2014

Sierra-Fernandez; L.S. Gomez-Villalba; M.E. Rabanal; R. Fort. New consolidant product based on

nanoparticles to preserve the dolomitic stone heritage: 2nd International Congress on Science and Technology for the Conservation of Cultural Heritage Oral presentation Sevilla, Spain 24/07/2014-27/07/2014 Publication Proceedings of the Second International Congress on Science and Technology for the Conservation of Cultural Heritage

Sierra-Fernandez; L. Munoz; G. Flores; R. Fort; L.S. Gomez-Villalba; M.E. Rabanal. New nanomaterial of magnesium hydroxide nanoparticles for the conservation of stone heritage Modtech International Conference Oral presentation Gilwice, Poland 13/07/2014-16/07/2014

A. Arizzi; L.S. Gomez Villalba; P. López-Arce Martinez; G. Cultrone; R. Fort. Lime mortar consolidation with nano- and micrometric calcium hydroxide dispersions Innovative methodologies for the characterisation, diagnosis and conservation of the cultural heritage Poster Catania-Syracusa, Italy 01/07/2014-04/07/2014

A. Sierra-Fernández; L.S. Gomez-Villalba; M.E. Rabanal; R. Fort. New inorganic nanomaterial for the consolidation and protection of dolostone heritage Youth in Conservation of Cultural Heritage Oral presentation Agsu, Azerbaiyán 28/05/2014;- 30/05/2014

A. Sierra-Fernandez; M.E. Rabanal; L.S. Gomez-Villalba; R. Fort. "Proceedings of LIII Congreso SECV 2013 Nuevos materiales nanoestructurados para la conservación del material pétreo dolomítico LIII Congreso SECV 2013 y XII Congreso ATC Castellon, Spain 23/10/2013- 25/10/2013 y XII Congreso ATC". Publication. ISBN 978-84-695-8729-4 pp. 75 - 75

Gomez-Villalba L.S.; Camacho Perez N.; Alvarez de Buergo M.; J. Becerra Becerra; R. Fort. Technological characteristics of compressed earth blocks for its use as a building material European Geological Union (EGU) Poster Vienna, Austria 07/04/2013-12/04/2013

Luz-Stella Gómez-Villalba, Paula López-Arce, Ainara Zornoza-Indart, Mónica Álvarez-de-Buergo, Rafael Fort Carbonation of Portlandite Nanocrystals obtained by Colloidal Synthesis: Experiences on their Stability in Carbonatic Rocks (Carbonatación de Nanocristales de Portlandita obtenidos por síntesis Coloidal: Experiencias sobre su Estabilidad en Rocas Carbonáticas) Congreso Sociedad Española de mineralogía, Sociedad Española de Arcillas (SEM-SEA) 2012 Oral Presentation Bilbao Spain 27 - 30 de Junio de 2012 Publication Macla ISBN 1885-7264

A. Zornoza-Indart; P. Lopez-Arce; LS. Gomez-Villalba; M.J. Varas-Muriel; R. Fort. 26/10/2012. Consolidation of deteriorated carbonate stones with nanoparticles of Ca(OH)₂ 12th International Conference on the deterioration and conservation of stone. Oral presentation New York, EEUU, 22/10/2012

L.S. Gomez-Villalba; López-Arce; P. Zornoza Indart Alvarez de Buergo M.; Fort Colloidal síntesis of portlandite nanocrystals: carbonation and interaction with dolostones or limestone. The international congress on science and technology for the conservation of cultural heritage Oral presentation Santiago de Compostela, Spain 02/10/2012-05/10/2012

M. Garcia; L.S. Gomez; I. Barroso; Juan J. Vilatela; O. Milosevic; M.E. Rabanal. Good things come in small packages: Nanomaterials The fourth international conference on the characterization and control of interfaces for high quality advanced materials : Kurashiki, Japan September 2-5 2012 Invited speaker Keynote (invited speaker) Kurashiki, Japan 02/09/2012 05/09/2012

Ignacio Barroso; Luz Stella Gomez; Olivera Milosevic; María Eugenia Rabanal. Optimization of microwave synthesis: Sub-Micron Particles with Functional Properties 16th International Conference Modtech 2012 Modern Technologies, Quality and Innovation- New face of TNCROral presentation Sinaia, Romania 24/05/2012 25/11/2012 Publication: ISSN 2069-6736

Gómez Villalba; L.S.; López-Arce; P.; Zornoza-Indart; A. Álvarez de Buergo; M.; Fort Modern restoration products based on nanoparticles, The case of the Nano-Lime, interaction and compatibility with limestone and dolostones surfaces, advantages and limitations European Geosciences Union General Assembly 2012, Traditional construction materials and monuments in modern society: present day threats and sustainable management Vienne, 22/04/2012-27/04/2012

E. Criado; L.S. Gómez-Villalba; R. Fort; P. Recio; D. Portela Study of Argamasas of the Wall of Talavera de la Reina, Spain .(Estudio de Argamasas de la Muralla de Talavera de la Reina- España) IV Congreso Luso- Español de Cerámica y Vidrio Keynote Invited Speaker Aveiro Portugal, 16/11/2011-18/11/2011 Aveiro, Portugal

Ainara Zornoza Indart; Paula Lopez-Arce Martinez; Monica Alvarez Del Buergo Ballester; Luz Stella Gomez Villalba; Maria Josefa Varas Muriel; Rafael Fort González; M.E. Fernández Valle. "libro de actas". 668-671 Consolidation by different application methods of Ca (OH) 2 nanoparticles in deteriorated carbonaceous rocks (Consolidación mediante diferentes métodos de aplicación de nanopartículas de Ca(OH)₂ en rocas carbonáticas deterioradas) 18th International Meeting on Heritage Conservation. Oral presentation Granada, Spain. 09/11/2011-11/11/2011

López-Arce P.; Zornoza indart A.; Gómez-Villalba L.S.; Alvarez de Buergo M.; Fort R. Vivar G. Morigi MP; Bettuzzi M. Salt weathering in desalinated and non-desalinated ceramic amphorae from underwater marine environments-SWBSS Salt weathering on Buildings and stone Sculptures Limassol Cyprus, 12/10/2011

L.S. Gomez Villalba; M.E. Rabanal; R. Fort; O. Milosevic. Synthesis of nanoparticles by top-down and bottom-up methods, its applications in cultural heritage: a study using electron microscopy 11th Interamerican Congress on microscopy Keynote (Invited speaker) Mérida Mexico, 25/09/2011-29/09/2011

Rafael Fort González; Angel de La Iglesia; M^a Angeles García del Cura; Monica Alvarez Del Buergo Ballester; Maria Josefa Varas Muriel; Miguel Gomez Heras; Paula Lopez-Arce Martinez; Luz Stella Gomez Villalba; Elena Mercedes Perez Monserrat; M^a Carmen Vázquez Calvo; David Martin Freire Lista; Ainara Zornoza Indart; Maria Inmaculada Martinez Garrido. Deterioration and conservation of geological heritage materials (Deterioro y conservación de los materiales geológicos del Patrimonio) 1^a Reunión Científica del Instituto de Geociencias: Geología, Geodesía y Geofísica (CSIC-UCM) Oral presentation Madrid, Spain 15/09/2011 Tipo de Memoria "1^a Reunión Científica del Igeo.". 1(1), 76-86, Consejo Superior de Investigaciones Científicas,

I. Barroso; I. Mena; Luz Gómez; O. Milosevic; M. E. Rabanal Spectral properties and Eu²⁺ and Eu³⁺ ions detection in Gd₂-xEu₃O₃ nanostructures prepared by aerosol route ACIN-2011 Poster Namur, 11/09/2011-14/09/2011

M. E. Rabanal; I. Barroso; L. S. Gómez; O. Milosevic. The morphology, structure and luminescent properties of Gd₂O₃:Eu synthesized by aerosol route and high energy ball milling Income-Poster Herceg Novi, Montenegro 31/08/2011

Rafael Fort González; Monica Alvarez Del Buergo Ballester; Maria Josefa Varas Muriel; Miguel Gomez Heras; M^a Carmen Vázquez Calvo; Paula Lopez-Arce Martinez; Luz Stella Gomez Villalba; Elena Mercedes Perez Monserrat; David Martin Freire Lista; Ainara Zornoza Indart; Maria Inmaculada Martinez Garrido Petrology applied to Heritage Conservation 1st Meeting of the Science and Technology Network for Heritage Conservation (Petrología aplicada a la Conservación del Patrimonio) 1^a Reunión de la Red de Ciencia y Tecnología para la Conservación del Patrimonio). Oral presentation - MADRID, Spain 28/06/2011 Ciencia y Tecnología para la Conservación Cultural. TechnoHeritage". 91-94 CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

Cristina Moral; Ignacio Barroso; Luz Stella Gomez; María Eugenia Rabanal; Vesna Lojpur; Lidija Mancic and Olivera Milosevic. 30/06/2011. Morphological and structural characterization of the yttrium aluminium oxide-based phosphor particles. XIVth International Conference on Electron Microscopy Poster Wisla, 26/06/2011

I. Barroso; L. S. Gómez; A. Sánchez; O. Milosevic; M. E. Rabanal Synthesis and Characterization of nanostructured particles of the Li₃Fe₂(PO₄)₃ system prepared by low temperature methods. (Síntesis y Caracterización de partículas nanoestructuradas del sistema Li₃Fe₂(PO₄)₃ preparadas por métodos de baja temperatura) X Reunión Nacional de Electrocerámica Poster Madrid 13/06/2011-15/06/2011

P. López-Arce; A. Zornoza Indart; L. Gómez-Villalba; R Fort. Increase of Durability of Carbonate Stones Consolidated with Nanoparticles of Ca(OH)₂ 12th International congress on durability of building materials and components Oral presentation- Porto, Portugal 12/04/2011-15/04/2011

Gomez-Villalba L.S.; López-Arce P.; Fort R.; Álvarez de Buergo M; Zornoza Nanotechnology and cultural goods III Conference. Science and Art. Theory, practice and innovation in heritage conservation (Nanotecnología y bienes culturales III Jornada. La Ciencia y el Arte. Teoría, práctica e innovación en la conservación del patrimonio). Valencia, Spain-Keynote (invited speaker) VALENCIA, Spain 17/11/2010 Publication: Aplicación de nanopartículas a la consolidación del patrimonio pétreo, La Ciencia y El Arte III Ciencias Experimentales y Conservación del Patrimonio , 39-57 : Ministerio de Cultura, secretaría General técnica"

Barroso; I. Mena; L. Gómez; O. Milosevic; ME Rabanal. Determination of luminescent properties and detection of Eu (2+) in nanostructured particles of the Gd₂O₃ system: Eu (1, 2 and 6 atomic%) (Determinación de las propiedades luminiscentes y detección de Eu(2+) en partículas nanoestructuradas del sistema Gd₂O₃:Eu (1, 2 y 6% atómico)) 50 Congreso SECV Poster Madrid, Spain, 27/10/2010-29/10/2010

L.S. Gómez-Villalba, < P. López-Arce, M. Álvarez de Buergo y R. Fort Effect of relative humidity and time on the carbonation process of Ca (OH) ₂ nanoparticles (Efecto de la humedad relativa y el tiempo en el proceso de carbonatación de nanopartículas de Ca(OH)₂) 50 CONGRESO SECV, Oral presentation Madrid, Spain 27/10/2010-29/10/2010

L.S. Gómez Villalba Nanotecnología y bienes culturales III Jornada la ciencia del arte Teoría, práctica e innovación Jornada Keynote (Invited speaker) Valencia, Spain 17/10/2010-18/10/2010

M. Gómez-Heras; L.S. Gomez-Villalba; R. Fort. 13/09/2010 Phase changes in calcareous lithoarenites with temperature: implications for deterioration caused by fire.(Cambios de fase en litoarenitas calcáreas con la temperatura: implicaciones para el deterioro causados por incendios) .XXX Reunión de la Sociedad Española de Mineralogía Poster Madrid, Spain 13/09/2010- 16/09/2010

Luz Stella Gomez Villalba; Paula Lopez-Arce Martinez; Monica Alvarez Del Buergo Ballester; Rafael Fort González. Crystalline behavior of Portlandite Nanoparticles (Ca (OH) 2) under conditions of high relative humidity (Comportamiento cristalino de Nanopartículas de Portlandita (Ca(OH)2) en condiciones de alta humedad relativa) XXX Reunión de la Sociedad Española de Mineralogía- Oral presentation Madrid, Spain 13/09/2010-16/09/2010

López-Arce; P.; Gómez-Villalba; L. Fort; R Characterization of earthen building materials from a Phoenician site, Malaga (Spain) oral Presentation 20th General Meeting of IMA (IMA2010) Poster Budapest, Hungary 21/08/2010-27/08/2010

Gomez-Heras M.; Gomez-Villalba L.S.; Fort R. Implications of phase transitions on fire-generated decay of building granites 20th General Meeting of IMA (IMA2010) Oral presentation Budapest, Hungary 21/08/2010 27/08/2010

López-Arce P.; Gómez L.S.; Álvarez De Buergo M.; Fort F.; Martínez-Ramírez S.; Bailo E. (2010). Consolidation Of Carbonate Stones With Nanoparticles. 8th International Symposium on the Conservation of Monuments in the Mediterranean Basin, (MONUBASIN) Poster Patras, Greece, 05/2010

Gomez L.; Lopez-Arce P.; Alvarez De Buergo M.; Fort R. Consolidating stone materials by means of nanoparticle Nanospain 2010, 23/03/2010-26/03/2010 Málaga Spain,

Gómez L.S Sourty E., Freitag B., Milosevic O, Rabanal M. E. Stem Characterization Of Nanostructured Oxides Synthesized by Spray Pyrolysis 10th Interamerican Congress of Electron Microscopy (CIASEM 2009) Poster Rosario (ARGENTINA), Argentina 25/10/2009 29/10/2009 CIASEM Publication: Stem Characterization Of Nanostructured Oxides Synthesized by Spray Pyrolysis Acta Microscopica, Vol. 18, Supp. C, 2009 103-104".

P. López-Arce, L.S. Gómez, L. Pinho Da Silva, M.E. Fernandez-Valle, M. Alvarez de Buergo, R. Fort, Nanolime effectiveness on consolidation of limestone favored by high relative humidity Technart 2009 Athenas Greece Book of abstracts 171

Luz Stella Gomez Villalba; Paula Lopez-Arce Martinez; Monica Alvarez Del Buergo Rafael Fort González. Calcium Hydroxide Nanoparticles Crystallization On Carbonate Stones: Dynamic Experiments With Heating/Cooling And Peltier Stage Esem 10th Interamerican Congress of Electron Microscopy (CIASEM 2009) Poster. ARGENTINA), Argentina 25/10/2009-28/10/2009

Luz Stella Gomez Villalba; Paula Lopez-Arce Martinez; Monica Alvarez del Buergo Ballester; Rafael

Fort González La consolidación de materiales pétreos mediante nanopartículas10a Red Temática de Patrimonio. Jornada Ámbito Autonómica Keynote (Invited speaker) GRANADA, Spain12/10/2009-15/10/2009

P.López-Arce; L.Gómez; Álvarez de Buergo; R. Fort; Martínez Ramirez S; Domingo Kinetics of carbonation of lime nanoparticles for consolidation of carbonate stones in cultural heritage5th International Congress on the application of Raman Spectroscopy in Art and ArchaeologyPoster Bilbao, Spain14/09/2009-18/09/2009Publication en "Book of Abstracts".

Lopez-Arce P, Zornoza Indarts A., Gomez-Villalba, Fort R. Increase of durability of carbonate stones consolidated with Nanoparticles of Ca(OH) International Conference on Durability of Building Materias and Components. XII DMBC Porto, Portugal, 12-15 Abril 2011

Katarina Marinkovic; Lidija Mancic; Luz Gómez; Maria Eugenia Rabanal; Miroslav Dramicanin; Olivera Milosevic Aerosol synthesis of rare-earth based nanophased functional materials International Conference on the Characterization and Control of Interfaces for High Quality Advanced Materials (ICCCI 2009)" Oral presentation Kurashiki, Japan 06/09/2009-09/09/2009 Publication:."Materials Science Forum". 09/09/2009.

L. Gómez; K. Marinkovic; O. Milosevic; M.E. Rabanal.Solid solutions of gadolinium oxides and yttrium oxides doped with eu obtained by aerosol methods International Conference on the Characterization and Control of Interfaces for High Quality Advanced Materials (ICCCI 2009)" Oral presentation Kurashiki,, Japan06/09/2009-09/09/2009

L.S. Gómez; M.E. Rabanal; L. Mancic; J.M. Torralba; O. Milosevic.EFTEM and TEM in Microstructural characterization of Gd₂O₃: Eu" International Conference and Exhibition: Microscience 2006, London, United Kingdom. 27/06/2006- 29/06/2006 – Publication:"Conference programme, pp: 50".

V.Lojpgur; K.Marinkovic; L. Mancic; M.E. Rabanal; L.S.Gómez; J.M.Torralba; O. Milosevic. Nanostructured luminescence particles synthesized through aerosol route at intermediate temperatura. ModTech2009, Slanic-Moldova, Romania. 20/05/2009- 22/05/2009. Publication en libro:"Proceedings and ISTP CDROM/ ISI Proceedings) of Thomson Scientific - Institute for Scientific Information (ISI)".

K. Marinkovic; L. Mancic; L.Gómez; M.E. Rabanal; J.M.Torralba; Milosevic O. Aerosol synthesis and functional characterization of rare earth based luminescent materials .Evento: Electroceramics from nanopowders processed by innovative methods. 6th Workshop Advanced functional characterization techniques of nanostructured materials, COST 539 . Oral Presentation, Madrid Spain, 24/02/2009-26/02/2009 Publication: Congress proceeding.

L.Gómez; I. Mena; J.M. Torralba; O.Milosevic; M.E. Rabanal.Morphological and functional characterization of cathodic materials in lithium batteries prepared by aerosol synthesis . Evento: Electroceramics from nanopowders processed by innovative methods. 6thWorkshop Advanced functional characterization techniques of nanostructured materials, COST 539 Madrid Spain,

24/02/2009- 26/02/2009 Publication: Congress proceeding.

L.S. Gómez; I. de Meaza; M.I. Martín; M. Bengoechea; I. Cantero; M.E. Rabanal. "Congress proceeding". Materiales nanoestructurados con propiedades electroquímicas obtenidos mediante técnicas de aerosol a bajas intermedias temperaturas, XLVIII Congreso de la Sociedad Española de Cerámica y Vidrio, 29-31 Oviedo Spain, 29/10/2008- 31/10/2008. Oral presentation

L. S. Gómez; K. Marinkovic; J.M. Torralba; O. Milosevic; ME. Rabanal. Nanostructured Y₂O₃ and (Y_{1-x}Gdx) particles doped with europium synthesized by aerosol route". Electroceramic XI Manchester, United Kingdom 31/08/2008- 04/09/2008

L. Mancic; K. Marinkovic; L. S. Gómez; ME. Rabanal; O. Milosevic YAG:Ce³⁺ nanostructured particles obtained via spray pyrolysis of polymeric precursor solution". Electroceramic XI Manchester, United Kingdom, 31/08/2008- 04/09/2008

L. S. Gómez; M.I. Martín; I. de Meaza; I. Boyado; I. Cantero; ME. Rabanal. Síntesis y caracterización de cerámicas nanoestructuradas para baterías de litio-ión". X Congreso de Materiales Ponencia invitada San Sebastian, Spain 18/06/2008- 20/06/2008

L. S. Gómez; K. Marinkovic; M.I. Martín; O. Milosevic; J.M. Torralba; ME. Rabanal. Síntesis y caracterización de óxidos de tierras raras dopados con Eu con propiedades luminiscentes obtenidos mediante Spray pirólisis". X Congreso de Materiales San Sebastian, Spain 18/06/2008- 20/06/2008

O. Milosevic; L. Mancic; K. Marinkovic; L. Gómez; I. Martín; ME. Rabanal; P.D. Townsend .The opportunities of the ultrasonic aerosol route for the síntesis of rare oxide nanoparticles for luminescent applications". Nano-2008—9th International Conference on Nanostructured Materials. Río de Janeiro, Brazil 01/06/2008- 06/06/2008 Oral presentation

L. Gómez; M.I. Martín; O. Milosevic; I. de Meaza; I. Boyado; I. Cantero; ME. Rabanal. Synthesis of nanostructured particles with electrochemical properties using aerosol techniques". XLVII Congreso Anual de la Sociedad Española de Cerámica y Vidrio, Toledo, Spain. 24/10/2007- 26/10/2007. Oral presentation

L. Gómez. K. Marinkovic; M.I. Martín; O. Milosevic; ME. Rabanal. Y oxides doped with Eu luminescent centers obtained by spray pyrolysis". XLVII Congreso Anual de la Sociedad Española de Cerámica y Vidrio Toledo, Spain 24/10/2007- 26/10/2007

L.S. Gómez; M.E. Rabanal; Erwan Sourty; Bert Freitag; O. Milosevic HRSTEM and nanotomography in rare earth oxides nanoparticles for luminescent applications". IX Interamerican Conference on Electron Microscopy.-CIASEM07 Ponencia invitada. Cusco, Perú 23/09/2007- 27/09/2007 Inter-American Committee of Electron Microscopy Societies. "Abstract extended".

K. Marinkovic; ME. Rabanal; L.S. Gómez; M.I. Martín; L. Mancic; O. Milosevic Structural

properties of Europium-doped Yttria obtained via aerosol synthesis, 9th Yugoslav Materials Research Society Conference YUCOMAT 2007” Herceg-Novi, Montenegro. 10/09/2007-14/09/2007

.M.E. Rabanal; M.I. Martín; L. Gómez; JM. Torralba; O. Milosevic.Low temperatura aerosol síntesis (LTAS) of nanostructured alumina particles Internacional Conference and Exhibition of the European Ceramic-Society-ECERS2007 Berlín, Alemania. 18/06/2007- 21/06/2007

M.E. Rabanal; L. Gómez; K. Marinkovic; M.I. Martín; O. Milosevic Rare Earth based phosphor particles synthesized from aerosol: Structural and morphological properties International Conference and Exhibition of the European Ceramic Society-ECERS2007, Berlin, Germany 18/06/2007- 21/06/2007

M.E. Rabanal; O. Milosevic; L. Gómez; M.I. Martín; J.M. Torralba.LiFe₂PO₄ spherical particles prepared by spray pyrolysis for lithium secondary battery. Materials Science Congress 2007. Oporto, Portugal. /04/2007- 04/04/2007

O. Milosevic; L. Gómez; M.E. Rabanal; M.I. Martín; J.M. Torralba.The opportunities of the ultrasonic aerosol route for nanoscaled materials processing Materials Science Congress 2007, Oporto, Portugal. 01/04/2007- 04/04/2007. Oral presentation

M.E.Rabanal; L.Gómez; L.Mancic; O.Milosevic; J.M.Torralba.Structural and morphological characterization of ceramics nanoparticles obtained by aerosol method,COST 539 Action-ELENA Workshop. Brussels, Belgium 15/11/2006- 16/11/2006"Book of abstracts p.34".

O.Milosevic; L.Mancic; L.Gómez; M.E.Rabanal.Structural refinement in europium-doped gadolinia nanocrystalline powder COST 539 Action-ELENA Workshop Brussusels, Belgium. 15/11/2006- 16/11/2006 "Book of abstracts p.46".Oral presentation

M.E.Rabanal; A. Khalifa; Gómez L; L.Mancic O.Milosevic; J.M.Torralba.Gd₂O₃:Eu System: Study of the Influence of Luminescence Center Concentration” 2006 Powder Metallurgy World Congress & Exhibition (PM2006) Busan, Korea, 24/09/2006 -28/09/2006. Poster

Olivera B.Milosevic; Lidija T.Mancic; Maria Eugenia Rabanal; Luz Gómez; J.M.Torralba. Nanoscale particle processing through aerosol routes Second International Conference on the Characterization and control of Interfaces (ICCCI). Kurashiki, Japan, 06/09/2006- 09/09/2006 Publication:"Ceramic Transactions". The American Ceramic Society, Oral presentation

L.S. Gómez; M.E. Rabanal; J.M. Torralba; L. Mancic; O. Milosevic.Structural and Morphological Study Of Nanoceramics Prepared By Spray Pyrolysis, Second International Conference on the Characterization and control of Interfaces (ICCCI). Kurashiki, Japan 06/09/2006-09/09/2006 Pubication: "Ceramic Transactions, The American Ceramic Society".

Gómez V. L.S.; Delgado Tienda M.L.; Ruiz-Navas E.M.; Torralba J.M. Study of obtaining a solid solution of Al-Cu by transmission electron microscopy (Estudio de la obtención de solución sólida de Al-Cu mediante microscopía electrónica de transmisión).IX Congreso nacional de Materiales.Vigo Spain, 20/06/2006-22/06/2006 Poster

M.E. Rabanal; L.S Gómez; A. Khalifa; J.M. Torralba; L. Mancic; O. Milosevic. "COST 539". Structural Properties of Gadolinium doped Europium Synthesized Through Aerosol Electroceramics 2006 Toledo, Spain, 18/06/2006-22/06/2006. Oral presentation

Gómez Villalba L.S.; Varez Alejandro; Sanjuán Maria Luisa; Peña Jose I; De La Fuente Xerman; Sanz Jesus Microstructural characterization of La₂/3-xLi₃xTiO₃ fast ionic conductor fibers grown by laser zonal fusion method.(Caracterización Microestructural de fibras del conductor iónico rápido La₂/3-xLi₃xTiO₃crecidas por el método de fusión zonal laser) XLV Congreso SECV(Sociedad Española De Cerámica Y Vidrio) Sevilla, 02/11/2005- 05/11/2005. Publication: "Congress memories 2005".

Gómez Villalba L.S.; Varez Alejandro; Sanjuán Maria Luisa; Peña Jose I.; De La Fuente Xerman; Sanz Jesus Tem And Sem Characterization Of The Fast Ionic Conductor La₂/3-XLi₃XTiO₃ Fibers Grown By The Laser Floating Zone (L fz) Method.VIII international Congress of the Interamerican Committee of Societies for Electron Microscopy CIASEM- Habana, Cuba, 27/09/2005- 02/10/2005. Publication:."Acta Microscópica".

Gómez Villalba; L.S.; Rabanal; Maria Eugenia; Khalifa Amal; Torralba; José Manuel; Mancic; Olivera Milosevic Transmission Electron Microscopy Applied To The Characterization Of Gd₂O₃ : Eu³⁺ Nanoparticles Obtained By Spray Pyrolysis-Microscopy Conference 2005. Poster. Davos, Suiza, 28/08/2005- 02/09/2005. Publication libro: "MC 2005 Editor: Paul Scherrer Institut (PSI)". ISSN 1019-6447

LS Gómez Villalba; A. Muñoz; MA Monge; C. Kanyinda-Malu; JM Riveiro; C Ballesteros.Electron Microscopy And Magnetic Microscopy Congress, 13TH European Electron Microscopy Congress, 2004, Answerp, Belgium 22/08/2004- 27/08/2004 Poster

Gómez Villalba; L.S The Quetame Massif Colloquium on the Precambrian in Colombia (El macizo de Quetame Coloquio sobre el Precámbrico en Colombia) Keynote, Bogotá, Colombia, 01/08/2000

Gómez Villalba LS Environmental Electron Microscopy: A Useful Tool in Hydrocarbon Prospecting (La Microscopía Electrónica Ambiental: Una Herramienta útil en Prospección de Hidrocarburos),Primera Convención Técnica de La ACGGP Geología y Petróleo En Colombia .Bogotá, Colombia24/05/2000.26/05/2000. Oral presentation. Publication: "Memorias Convención Técnica de la AGGP, Geología y Petróleo en Colombia".

Useche; Luz Angela; Gomez Villalba; L.S.; Rodriguez Luis A ,An Ancient Historic Masonry

Characterized By Scanning Electron Microscopy,V Interamerican Electron Microscopy Congress. . Isla Margarita, Venezuela, 24/10/1999-28/10/1999."Acta Microscópica-Proceedings of the V Interamerican Electron Microscopy Congress.". Poster

Romero F.; Gomez Villalba; L.S..Hall Calcite From The Muzo Emerald Mine Colombia Interamerican Electron Microscopy Congress. Isla Margarita, Venezuela. 24/10/1999- 28/10/1999 Publication:"Acta Microscópica-Proceedings of the V Interamerican Electron Microscopy Congress.". Poster

F. Romero; Gomez Villalba; L.S Morphological Aspects In Halite Crystals Associated To Hydrothermal Processes V Interamerican Electron Microscopy Congress. Isla Margarita, Venezuela. 24/10/1999- 28/10/1999 Publication: Acta Microscópica-Proceedings of the V Interamerican Electron Microscopy Congress". Poster

Gómez Villalba; L.S.. Relationship Between Serpentine Mineral Series-Hydrous Aluminum And Magnesium Silicates V Interamerican Electron Microscopy Congress. . Isla Margarita, Venezuela. 24/10/1999-28/10/1999. Publication:Acta Microscópica-Proceedings of the V Interamerican Electron Microscopy Congress." Poster

.Gómez Villalba; L.S Contribución al conocimiento del metamorfismo de la cordillera oriental colombiana.X Congreso Latinoamericano de Geología y VI Congreso Nacional De Geología Económica. Buenos aires, Argentina, 08/10/1998-13/10/ 1998 Publication:."Actas del X Congreso Latinoamericano de Geología.". Poster

Gómez Villalba; L.S.; Rodríguez Gómez; Luis Alberto Pyroclastic Material Researches By Scanning Electron Microscopy. 14th Conference of the International Committee for Electron Microscopy (ICEM 14), Cancún Mexico, 31/08/1998- 04/09/1998Publication:."Proceedings of ICEM 14. 1998. v. IV, p. 99-99.". Poster

Gómez Villalba; L.S Scanning Electron Microscopy Applied To Metamorphic Petrology In Ancients Sequences14th Conference of the International Committee for Electron Microscopy (ICEM 14) Cancún, Mexico, 31/08/1998- 04/09/1998..Publication:."Proceedings of ICEM 14. 1998. v. IV, p. 99-99.". Poster

Romero Ordoñez; F.; Gómez Villalba; LS Scanning Electron Microscopy On Solid Inclusions From Some Colombian Emerald Deposits.14th Conference of the International Committee for Electron Microscopy (ICEM 14)Cancún, Mexico, 31/08/1998- 04/09/1998 Publication: . "Proceedings of ICEM 14. 1998. v. II". Oral presentation

Gómez Villalba; LS Characterization Of Mineralogical Associations In Gold- Silver Deposits By Scanning Electron Microscopy 4th Interamerican Electron Microscopy Congress I, and 1 Meeting Of The Equatorian Society For Electron Microscopy Related To Biomedical And Material Sciences Guayaquil, Equator. 23/09/1997- 26/09/1997 Publication: Acta Microscópica. 1997. v. 6, p. 136.

Gómez Villalba LS; Galvis J. Electron Microscopy Researches, The Clue Of a possible Biological

Origin Of Precambrian Iron Deposits.4th Interamerican Electron Microscopy Congress, II Meeting Of The Equatorian Society For Electron Microscopy Related To Biomedical And Material Sciences, Oral presentation Guayaquil, Equator. 23/09/1997- 26/09/1997. Publication: "Acta microscópica. 1997. v. 6, p. 124-124".

L.S. Gomez.Gehlenite-Akermanite Series -(Melilite Group) In Slags of High Kiln MICROMAT 96, 5TH Brazilian Conference On Microscopy Of Materials. Rio de Janeiro Brazil. 13/10/1996- 16/10/1996. Publication: "Acta Microscópica. 1996. v. 5, p.144-145.". Poster

Gómez Villalba; L.S Estudio Mineralógico y textural de escorias industriales y su utilidad en la reconstrucción de procesos geológicos naturales.3rd Interamerican Conference on Electron Microscopy Xv Meeting Of The Brazilian Society For Electron Microscopy Caxambu Brazil. 02/09/1995- 06/09/1995 . Publication:."Acta Microscópica, Proceedings of the 3rd Interamerican Conference on electron Microscopy. 1995. v. 4.". Poster

Gómez Villalba; LS Applications of scanning electron microscopy in the study of artificial Minerals First Colombian Seminar on Applications of Electron Microscopy in Research and Diagnosis, 1995 INGEOMINAS- Sociedad Colombiana de Microscopía Electrónica Inaugural Plenary Presentation Bogotá, Colombia 17/07/1995

Presentations as a guest at scientific dissemination events

Nanotechnology applied to heritage conservation: Conference FECYTMAT Campus of International Excellence UCM-UPM Madrid Spain, April 29, 2015

Nanomaterials: different properties, innovative applications: Course on Consolidants and Protective Treatments of the latest technology for the conservation and restoration of inorganic supports. Najera School of Historical Heritage, Spain, July 2-4, 2014

Applications of nanotechnology in the conservation of assets of cultural interest and built heritage: Tunja Colombia Corporación Santa Clara la Real August 10, 2011- Tunja Colombia

Nanotechnology in the conservation of cultural heritage: August 26, 2011 Faculty of Architecture, Master in Conservation of Property of Cultural Heritage, Bogotá Colombia

Nanotechnology and cultural goods III Conference on the science of art Theory, practice and innovation: Valencia (Spain), November 17-18, 2010

"Synthesis and characterization of nanostructured materials obtained by spray pyrolysis" Seminars on the frontiers of materials science - Department of Materials Science. Polytechnic University of Madrid ETSI Caminos, Canales y Puertos, Madrid June 8, 2009 (2223 visits on the website until February 3, 2013)

Department of Geology University of Toronto, "Emeralds and its associations"Toronto Canada October 19, 2000

University teaching

Supervisor of doctoral and Master thesis

- Direction of doctoral thesis: Design and optimization of new nanomaterials for the conservation of cultural heritage., International Mention . Carlos III University of Madrid Spain 2017
- Synthesis and Characterization of nanostructured ceramics of Titanium oxides using the pyrolysis spray method Carlos III University of Madrid, Spain 2007 Master thesis Student Victor Bello

Teaching in master and doctorate programs

University Master Teacher of Research in Materials Science and Engineering Carlos III University of Madrid: Leganés, Spain Academic year 2016-2017, 2017-2018 Topic: Nanotechnology applied to heritage conservation

- Undergraduate professor at the University of America, Bogotá Colombia Faculty of Petroleum Engineering Academic year 1988 : Subject: Electrical sensors in petroleum exploration

Teaching in Specialization courses

- XIV Conference on Nanomaterials Techniques applied to the conservation and restoration of cultural assets. Higher School of Conservation and restoration of cultural assets of Aragon Huesca, Spain May 10-11, 2018 Challenges of nanotechnology in heritage conservation: Successes and errors in consolidating treatments
- Course on Consolidants and Protective Treatments of the latest technology for the conservation and restoration of inorganic substrates. Najera School of Historical Heritage, Spain, July 2-4, 2014 Nanomaterials: different properties, innovative applications:
- The conservation of geomaterials used in Heritage
http://www.geomateriales.es/index.php?option=com_content&view=article&id=132&Itemid=57&lang=es Madrid Spain- Complutense University of Madrid: Nanoparticles for the conservation of cultural heritage. Topic: the state of the art in nanomaterial conservation, includes practical cases of their use on different surfaces and the correct application. It is divided into several sections, starting with a historical summary of nanotechnology in heritage assets, current status and real cases of applications with an analysis of its effectiveness.

http://www.geomateriales.es/index.php?option=com_content&view=article&id=132&Itemid=57&lang=es Venue: Madrid Spain- Complutense University of Madrid 2011, 2012 and 2013:

- International Microscopy Course: Manizales Colombia August 16-19, 2011 Organized by: Colombian Association of Microscopy, International Center of Physics, University of Caldas:

Topics: New Advances in Optical Microscopy and Electron Microscopy: Raman-Confocal Spectroscopy, STEM-HRSTEM Microscopy- Tomography Precession Electron Beam Diffraction: Interaction between Materials Science and Life Sciences

High Resolution TEM-STEM Techniques: Knowing the atoms the properties of the materials are known

Carbonation processes in nanoparticles, morphological and structural evolution (TEM / HRTEM, SEM)

New advances in optical microscopy and electron microscopy; Knowing the atoms the properties of the materials are known;

Carbonation processes in nanoparticles, morphological and structural evolution (TEM / HRTEM, SEM)

Latest advances in Raman-Confocal Spectroscopy, STEM-HRSTEM Microscopy- Tomography Precession electron beam diffraction: Interaction between materials science and biological sciences; TEM-STEM High Resolution Techniques. Applications of TEM and HRTEM, SEM in Heritage Conservation, case study: Carbonation processes in nanoparticles, morphological and structural evolution

CSIC highly specialized course Models of intervention on cultural heritage: research, protection, conservation and enhancement.

<http://www.proyectos.cchs.csic.es/csd-tcp/es/content/training/modelos-de-intervenci%C3%B3n-sobre-el-patrimonio-cultural-investigaci%C3%B3n-protecci%C3%B3n-conse>

Topic: Linking nanotechnology in conservation of cultural heritage, latest trends Madrid-Institute of History Topic: Urban built heritage: Nanomaterials applied to the conservation of stone heritage .: February 2012,

Scanning electron microscopy of environmental operation and its different detectors- INGEOMINAS Bogotá Colombia
April 5-6, 2001

Electron Microscopy Workshop
National University of Colombia, Bogotá, Colombia
September 22, 23 and 24, 1998

Attendance at short course:

DINAMIZA 2020 acceleration program Organizers: CSIC and Fundación Parque Científico de Madrid

On-line course 68 hours

April 15 to July 15, 2020

Use of the fluorescence (petrographic) microscope Organized by OLYMPUS Petrophysic laboratory, Institute of Geosciences (CSIC-UCM) 4 hours 09-10-2020

Tritar titrator user. Organized by Metrohm

Petrophysics Laboratory. Institute of Geosciences (CSIC-UCM)

2 hours 12-1-2019 Petrophysics Laboratory. Institute of Geosciences (CSIC-UCM)

Training in occupational risk prevention in field activities at the CSIC Occupational risk prevention service and health surveillance unit at the CSIC 4 hours 11-28-2019

Advances in the management of the FTIR ALPHA II unit software

Petrophysics Laboratory. Institute of Geosciences (CSIC-UCM)

4 hours 07/292018

Handling the FTIR Alpha II equipment: Bruker "

Institute of Geosciences (CSIC-UCM)

April 13, 2018 4 hours

Introduction to Using the Dino-Lite Edge Microscope Loupe

Institute of Geosciences (CSIC-UCM) March 12, 2018

4 hours

Spectral Cathodoluminescence.

Stratigraphy Department, Complutense University of Madrid. 8 hours 17-18 May 2012

EELS Microscopy and Electronic Crystallography Course

Serveis Científicotècnics- University of Barcelona - Barcelona Spain 24 hours 10-11-12

November 2010

Nanoporous Materials Characterization Seminar

Venue: Rey Juan Carlos University 8 hours

Dec. 9, 2010

Application of synchrotron based infrared and x-ray techniques and laser based Raman spectroscopy in Earth Science.

Venue: Faculty of Geological Sciences (UCM), organizes Institute for Synchrotron Radiation, Karlsruhe, Germany,
10 hours May. 26-28, 2009

Introduction to Confocal Raman and Scanning Probe Microscopy
Madrid, Organized by Wytec
8 hours May 5, 2009

Quality control Committees

- Occupational risk management course in workers exposed to Nanomaterials. Complutense University of Madrid, Fremap, May 17, 2018
Institute of Geosciences:
- Quality training session: Results of the internal and external audits of the year 2017 and current state of the laboratory: Petrophysics Laboratory. February 15, 2018
University Carlos III of Madrid:
- Certificate of Awareness and knowledge of the UNE-EN-ISO 9001: 2000 standard 22 Dec 05
- Advanced quality certificate: Internal audits 1 Feb 2006-
- Advanced quality certificate: Calibration: 22 Feb 06
- Member of Quality Groups:
- Quality member Laboratory for Scientific and Technical Assistance to Companies (LACTE) Universidad Carlos III de Madrid Duration, 2005-2008 Leganés, Madrid Spain
- Quality member Laboratory of Petrophysics Institute of Geosciences (CSIC-UCM) • 2009 present Madrid Spain
- Quality member Colombian Institution of technical standards Colombia. ICONTEC Emeralds committee 1997-2001

SOCIAL MEDIA POST AND DISSEMINATION

- Social media
- Instagram A recent study reveals new properties of magnesium hydroxide, a mineral known as brucite: https://www.instagram.com/p/BowacxGApP_/
October 10, 2018.
- Press notes
- CSIC: A CSIC study determines how aragonite transforms into calcite
11/05/2012
http://www.csic.es/noticias?p_p_id=contentviewerservice_WAR_alfresco_packportlet&p_p_lifecycle=1&p_p_state=maximized&p_p_mode=view&p_p_col_id=column-1&p_p_col_pos=1&p_p_col_count=2&_co
- Madridmasd: A CSIC study determines how aragonite transforms into calcite

11/05/2011 <http://www.madrimasd.org/informacionidi/noticias/noticia.asp?id=54771>

- 05/11/2011 Europapress: Components of Calcium Carbonate The CSIC solves the secret of the transformation of aragonite into calcite

<http://www.europapress.es/ciencia/noticia-csic-resuelve-secreto-transformacion-aragonito-calcita-20121105124500.html>

- Radio Synthesis Your Science and Technology radio: Synthesis of nanostructured materials and their applications. interview:

<http://www.radiosintesis.com/entrevista.php?id=42>- Publication: August 7, 2009

Organization of R + D + i activities

Management Agreement of Collaboration Institute of Geosciences (CSIC-UCM) –University of LÁquila (Italy) 2018

Member of the Inter-American Committee of Societies of Electron Microscopy CIASEM- Organizing Committee CIASEM Congress 1995 Brazil), Ecuador (1997) (Venezuela (1999), Peru (2007)

Member of the Organizing Committee of the ISEM Congress 14 International federation of societies for electron microscopy IFSEM, Cancún 1998 (Mexico, Cancun)

Congress Organizer of the Colombian Society of Electron Microscopy 1995, 1997- 1999

Founding President, Colombian Society of Electron Microscopy: 1995-1999

General Secretary Colombian Commission of Geological Nomenclature 1997-1999 (Colombia)