

CURRICULUM VITAE

Luis Sánchez Muñoz

PERSONAL INFORMATION		CV date	20/09/2019
First and Family name	Luis Sánchez Muñoz		
Social Security, Passport, ID number	51657164S	Age	54
Researcher numbers	Researcher ID	I-1003-2015	
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Current position

Name of University/Institution	Consejo Superior de Investigaciones Científicas		
Department	Geology (Museo Nacional de Ciencias Naturales)		
Address and Country	José Gutierrez Abascal, 2, 28006 Madrid		
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Current position	Scientist	From	Sept. 2009
UNESCO codes	221104, 221105, 2506.11, 221118, 221116		
Keywords	Crystallography, Mineralogy, Microstructures, NMR, Raman, Feldspars, Ceramics, Luminescence		

Education

	University	Year
BSc. Geological Sciences	Universidad Complutense de Madrid	1988
PhD. Applied Mineralogy	Universidad Complutense de Madrid	1992

Background

My research in Mineralogy and Crystallography started in 1989 at the National Museum of Natural Sciences of Madrid and the Institute of Material Science of Madrid, receiving a Ph.D. from the Department of Crystallography and Mineralogy, Faculty of Geological Sciences (Universidad Complutense de Madrid, Spain) in 1992, for a study on feldspars from granitic pegmatites by nuclear magnetic resonance (NMR). Immediately after, I got an scholarship at the Geological Survey of Spain to work in their museum until the end of 1993, when I started a post-doct to combine research on feldspars at the Centre de Recherche sur la Synthèse et Chimie des Minéraux (CRSCM) in Orléans (today, Institute des Sciences de la Terre), CNRS, France, and the Center of Electron Microscopy for Materials Science (EMAT), University of Antwerp (UA), Belgium, until 1996. When I came back to Spain, I started working in the private sector, as responsible for R&D in industrial minerals at various ceramic companies, as well as project coordinator at the University Jaume I (UJI), Castellón, Spain. In 2005, I accepted a post-doct at the Center for Energy Research, Environmental Science and Technology (CIEMAT) in Madrid for research on feldspars as retrospective dosimeters of ionizing radiation by luminescence techniques, and its applications. In 2009, I get a permanent position as a scientist at the Spanish Council of Scientific Research (CSIC), with destiny in the Institute of Ceramics and Glass (ICV, CSIC). In 2019, I moved to the National Museum of Natural Sciences of Madrid (MNCN, CSIC).

Books

Sánchez-Muñoz, L.; Garrido, L.; Muñoz, F.; Sanz, J. (Eds.) (2019) Applications of NMR spectroscopy in the solid state. Biblioteca de Ciencias 47, Editorial Consejo Superior de Investigaciones Científicas, Madrid, 502 p (ISBN: 978-8400-10514-3).

Sánchez-Muñoz, L.; Carda Castelló, J.B. (2003) Raw materials and ceramic additives II, Faenza Editrice Ibérica S.L., Castellón, 351 p. (ISBN: 84-87683-24-x) (in Spanish).

Sánchez-Muñoz, L.; Carda Castelló, J.B. (2002) Raw materials and ceramic additives I, Faenza Editrice Ibérica S.L., Castellón, 453 p. (ISBN: 84-87683-22-3) (in Spanish).

Book chapters

Sánchez-Muñoz, L.; Sanz, J. ; Sobrados, I.; Gan, Z.; Santos, J. I. (2019) Medium-range order in crystal structures of minerals by NMR. In: Applications of NMR spectroscopy in the solid state, Eds: Sánchez-Muñoz, L.; Garrido, L.; Muñoz, F.; Sanz, J. Biblioteca de Ciencias 47, Editorial CSIC, Madrid, 103-132.

Carda, J.B.; **Sánchez-Muñoz, L.** (2001) Raw materials and ceramic additives in Spain (Preface in Ceramic Technology in Spain), 110-127, Faenza Editrice Ibérica S.L., Castellón, (ISBN: 88-8138-068-4) (in Spanish).

Sánchez-Muñoz, L.; García-Guinea, J. (1992) Feldspar: Mineralogy, deposits and applications. Mineral Resources of Spain, (Editorial CSIC), Madrid, p. 441-470 (ISBN 84-00-07-263-4). (in Spanish).

Sánchez-Muñoz, L. (1992) Deposits of rare elements generated by granitic magmas, Mineral Resources of Spain, (Editorial CSIC), Madrid, p. 321-358 (ISBN 84-00-07-263-4). (in Spanish).

Sánchez-Muñoz, L. (1992) Rare-elements ore deposits from pegmatites of the Iberian Hercynides. In: Minerals Resources of Spain, Ed. CSIC, Madrid, p.359-376. (ISBN 84-00-07-263-4). (in Spanish).

Papers

Muñoz, F; **Sánchez-Muñoz, L.** (2019) The glass-forming ability explained from local structural differences by NMR between glasses and crystals in alkali metaphosphates. Journal of Non-Crystalline Solids, 503-504: 94-97.

Sánchez-Muñoz, L.; Müller, A.; López Andrés, S.; Martín, R. F., Modreski, P. J.; de Moura, O. J. M. (2017) The P-Fe diagram for K-feldspars: A preliminary approach in the discrimination of pegmatites. Lithos, 268-271: 116-127.

Sánchez-Muñoz, L.; García-Guinea, J.; Townsend, P.; Juwono, T.; Cremades, A. (2016) Gaussian thermoluminescence in long-range disordered K-feldspars. American Mineralogist 101, 2118-2111.

Sánchez-Muñoz, L.; Del Campo, Adolfo, Fernández, J.F. (2016) Symmetry constraints during the development of anisotropic spinodal patterns. Scientific Reports 6, 20806.

Pajón Leyra, I.; **Sánchez-Muñoz, L.** (2015) Thye magnetic stone of Posidippus Poem nr. 17. The earliest description of magnetic polarity in Hellenistic Egypt. Zeitschrift für Papyrologie und Epigraphik, 195, 30-37.

Sánchez-Muñoz, L.; Sobrados, I.; Sanz, J.; Gan, Z.H. (2013) Medium-range order in disordered K-feldspars by multinuclear NMR. *American Mineralogist* 98, 2115-2131.

Sánchez-Muñoz, L.; García-Guinea, J.; Zagorsky V.Ye.; Juwono, T.; Modreski, P.J.; Cremades, A.; Van Tendeloo, G.; De Moura, O.J.M. (2012) The evolution of twin patterns in perthitic K-feldspar from granitic pegmatites. *The Canadian Mineralogist*, 50, 989-1024.

Sánchez-Muñoz, L.; García-Guinea, J.; Zagorsky, V.; de Moura, O.J.M.; Modreski, P.J. (2011) K-feldspar minerals defined from their twin-structure: applications to a preliminary classification of pegmatites. *Asociación Geológica Argentina*, 14, 175-178.

Sánchez-Muñoz, L.; Modreski, P.J.; Frost, B.R. (2011) Twin-structures in K-feldspars from orogenic and anorogenic pegmatites in Central North America. *Asociación Geológica Argentina*, 14, 179-183.

Modreski, P.J., **Sánchez-Muñoz, L.** (2011) Twenty-three pegmatites in five days, a Colorado field trip saga. *New Mexico Geology*, 33, 133.

García-Guinea, J.; Correcher, V.; **Sánchez-Muñoz, L.**; Cardenes, V.; Benavente, D. (2011) Oxidation of pyrite {001} inferred from XRD and thermoluminescence. *Macla*, 7, 90.

Sánchez-Muñoz L. (2011) Evolution to photovoltaic ceramics. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 50, 15-22.

Sánchez-Muñoz, L.; Marinova, I.T.; de la Fuente, G.F.; Núñez, I.; Rodríguez, M.A.; Sanz, J.; Carda, J.B. (2010) R&D+i for ceramic tiles in the 21st century: Competition, diversity and functionality. *XI World Congress on Ceramic Tile Quality*, 1-14.

Sánchez-Muñoz, L.; Bustillo, M.A.; Garcia-Guinea, J.; Crespo-Feo, E.; Tormo, L. (2009) Mineral Characterization of Silicified Coral from Western Sumatra (Indonesia). *Micro-Raman Spectroscopy and Luminescence studies in the Earth and Planetary Sciences*, American Institute of Physics AIP Conference Proceedings, 1163, 115-120.

García-Guinea, J.; Furio, M.; Fernandez-Hernan, M.; Bustillo, M.A.; Crespo-Feo, E.; **Sánchez-Muñoz, L.**; Matesanz, E. (2009) The Quartzo-feldspathic Fulgurite of Bustaviejo (Madrid): Cathodoluminescence and Raman Emission. *Micro-Raman Spectroscopy and Luminescence studies in the Earth and Planetary Sciences*, American Institute of Physics AIP Conference Proceedings, 1163, 128-134.

Sánchez-Muñoz, L.; García-Guinea, J.; Crespo, E.; Rubio, J. (2009) Twinning in K-feldspars from the interplay between the ionic and electronic lattices. *Estudios Geológicos*, 19, 234-239.

Sánchez-Muñoz, L.; Crespo, E.; García-Guinea, J.; de Moura, O.J.M.; Zagorsky, V.Ye. (2009) What is a twin-structure? An answer from microcline minerals from pegmatites. *Estudios Geológicos*, 19, 240-245.

García-Guinea, J.; **Sánchez-Muñoz, L.**; Tormo, J.; Crespo-Feo, E.; Ruiz-Perez, J.; Martín-Herrero, A.I.; Cremades, A. (2009) The Villalbeto de la Peña Meteorite: Raman Spectroscopy and Cathodoluminescence of Feldspar. *Micro-Raman Spectroscopy and Luminescence studies in the Earth and Planetary Sciences*, American Institute of Physics AIP Conference Proceedings, 1163, 141-147.

García-Guinea, J.; Townsend, P.D.; Can, N.; Correcher, V.; **Sánchez-Muñoz, L.**; Finch, A.A.; Hole, D.; Avella, M.; Jiménez, J. (2008) On the spectra luminescence properties of charoite silicate. *Journal of Luminescence*, 128, 403-412.

Correcher, V.; Gómez-Ros, J.M.; García-Guinea, J.; Lis, M.; **Sánchez-Muñoz, L.** (2008) Calculation of the activation energy in a continuous trap distribution system of a charoite silicate using Initial Rise and TL Glow curve fitting methods. *Radiation Measurement*, 43, 269-272.

Sánchez-Muñoz, L.; García-Guinea, J.; Beny, J.M.; Rouer, O.; Campos, R.; Sanz, J.; De Moura, O.J.M. (2008) Mineral self-organization during the orthoclase-microcline transformation in a granite pegmatite. *European Journal of Mineralogy*, 20, 439-446.

Correcher, V.; García-Guinea, J.; Robredo, L.M.; **Sánchez-Muñoz, L.** (2008) Phosphor plasters of CaSO₄:Dy on the courtyard wall of Djehuty's tomb (Luxor, Egypt). *Radiation Measurement*, 43, 849-853.

García-Guinea, J.; Correcher, V.; **Sánchez-Muñoz, L.**; López-Arce, P.; Townsend, P.D.; Hole, D.E. (2008) Radiation damage of variscite in historic crafts: solarization, discoloration, structural changes and spectra from ionoluminescence. *Radiation Physics and Chemistry*, 77, 18-22.

Sánchez-Muñoz, L.; García-Guinea, J.; Correcher, V. (2007). Thermally-stimulated power law relaxation of radiation-induced defects in K-feldspars. *Journal of Physics: Condensed Matter*, 19, 1-11.

García-Guinea, J.; Correcher, V.; **Sánchez-Muñoz, L.**; Finch, A.A.; Hole, D.E.; Townsend, P.D. (2007) On the luminescence emission band at 340 nm of stressed tectosilicate lattices. *Nuclear Instruments and Methods in Physics Research A*, 580, 648-651.

Sánchez-Muñoz, L.; García-Guinea, J.; Correcher, V.; Delgado, A. (2007) Radiation-induced self-structuring of radiative defects complexes in a K-feldspar crystal: a study by thermoluminescence. *Radiation Measurement*, 42, 775-779.

Correcher, V.; **Sánchez-Muñoz, L.**; García-Guinea, J.; Delgado, A. (2007) Comparison of UV-IR, radioluminescence and cathodoluminescence spectra of a potassium feldspar. *Radiation Measurement*, 42, 780-783.

Sánchez-Muñoz, L.; García-Guinea, J.; Correcher, V.; Delgado, A. (2007) Luminescence at 400 and 440 nm in sanidine feldspar from original and X-ray induced structural defects. *Nuclear Instruments and Methods in Physics Research A*, 580, 679-682.

Gómez-Ros, J.M.; Correcher, V.; **Sánchez-Muñoz, L.**; García-Guinea, J.; Delgado, A. (2007) Thermo-luminescence dosimetric properties of LiAlSiO₄ and LiAlSi₁₀O₂₂ synthesized by sol-gel method. *Physica Status Solidi (a) - Applications and Materials Science*, 204, 861-866.

Valle-Fuentes, F.J.; García-Guinea, J.; Cremades, A.; Correcher, V.; Sánchez-Moral, S.; Gonzalez-Martin, R.; **Sánchez-Muñoz, L.**; Lopez-Arce, P. (2007) Low-magnesium uranium-calcite with high degree of crystallinity and gigantic luminescence emission. *Applied Radiation and Isotopes*, 65, 147-154.

Correcher, V.; **Sánchez-Muñoz, L.**; García-Guinea, J.; Delgado, A. (2007) Natural blue thermo-luminescence emission of the recently fallen meteorite in Villalbeto de la Peña (Spain). *Nuclear Instruments and Methods in Physics Research A*, 580, 637-640.

Correcher, V.; García-Guinea, J.; Sánchez-Muñoz, L.; Rivera, T. (2007) Luminescence characterization of a sodium rich feldspar. *Radiation Effects and Defects in Solids*, 162, 1-6.

Sánchez-Muñoz, L.; García-Guinea, J.; Sanz, J.; Correcher, V.; Delgado, A. (2006) Ultraviolet luminescence from defect complexes in the twin boundaries of K-feldspar. *Chemistry of Materials*, 18-14, 3336-3342.

Sánchez-Muñoz, L.; Garcia-Guinea, J.;Correcher, V.; Sanz, J. (2006) Static and dynamic regimes in the structural evolution of perthitic microclines. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 45, 289-299.

García-Guinea, J.; Correcher, V.; **Sánchez-Muñoz, L.;** Cárdenas, V. (2006) Stone mosaics of the tile type: history, techniques, designs, analysis and evaluation. *Seminarios de la Sociedad Española de Mineralogía*, 2, 217-246.

García-Guinea, J.; Martín Escorza, C.; Fernández Hernán, M.; **Sánchez-Muñoz, L.;** Correcher, V.; Sánchez Chillón, B.; Tormo L. (2006) Spanish meteorites in the National Museum of Natural Sciences. *Estudios Geológicos*, 62, 11-30.

Sánchez-Muñoz, L.; Rouer, O.; Sanz, J.; García-Guinea, J. (2006) Mechanism of construction-destruction of macrostructural patterns in perthitic microclines as complex systems. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 45, 321-329.

Correcher, V.; **Sánchez-Muñoz, L.;** García-Guinea, J.; Gomez-Ros, J.M.; Delgado, A. (2006) On the blue thermoluminescence emission of synthetic Li-rich aluminosilicates. *Nuclear Instruments and Methods in Physics Research, A*. 562, 456-460.

Sánchez-Muñoz, L.; García-Guinea, J.; Sanz, J.; Correcher, V.; Delgado, A. (2006) Ultraviolet luminescence from defect complexes in the twin boundaries of K-feldspar. *Chemistry of Materials*, 18-14, 3336-3342.

Sánchez-Muñoz, L.; Correcher, V.; Turrero, M.J.; Cremades, A.; García-Guinea, J. (2006) Visualization of elastic strain fields by the spatial distribution of the blue luminescence in a twinned microcline crystal. *Physics and Chemistry of Minerals*, 33, 639-650.

Correcher, V.; García Guinea, J.; Castillejo, M.; Oujja, M.; Rebollar, E.; **Sánchez-Muñoz, L.;** (2005) Study of spectral emission of ulexite by thermoluminescence and laser induced fluorescence. *The Canadian Journal of Analytical Sciences and Spectroscopy*, 50, 240-245.

Correcher, V.; **Sánchez-Muñoz, L.;** García-Guinea, J.; Delgado, A. (2005) Study of the thermoluminescent properties of lithium aluminosilicates. Potential use as radiation dosimeters. *Radioprotección*, 45, 294-296.

García Guinea, J.; Pitalua, F.; Correcher, V.; **Sánchez-Muñoz, L.;** Valle-Fuentes, F.J.; López Arce, P. (2004) Thermoluminescent properties of albite from Minas Gerais (Brazil). *Boletín de la Sociedad Española de Cerámica y Vidrio*, 43, 115-118.

Correcher, V.; García Guinea, J.; **Sánchez-Muñoz, L.;** Delgado, A. (2003) Effect of dopants in the luminescent properties of synthetic quartz for dosimetric purposes. *Journal of Materials Processing Technologies*, 6968, 1-4.

García Guinea, J.; Correcher, V.; Delgado, A.; **Sánchez-Muñoz, L.;** (2003) Cluster linkages between luminescence emission spectra and continuous trap distribution in a volcanic sanidine. *Radiation Measurement*, 37, 473-477.

Sánchez-Muñoz, L.; Cerisuelo, E.; Tuduri, F.; Plaza, S.; Carda, J.B. (2002) Elaboration of porcelain stoneware tiles at 1170 °C by addition of wollastonite. *Key Engineering Materials*, 206, 2205-2208.

Sánchez-Muñoz, L.; Cabrera, M.J.; Foo, A.; Beltrán, H.; Carda, J.B. (2002) Transparent glazes for porcelain stoneware: glassy and glass-ceramic glazes with crystallization of cristobalite. VII World Congress on Ceramic Tile Quality, 239-254.

Sánchez-Muñoz, L.; Cava, S. Da S.; Paskocimas, C.A.; Cerisuelo, E.; Longo, E.; Carda, J.B. (2002) Influence of the composition of the raw materials in the process of vitrification of ceramic floor tiles. *Cerámica (Journal of the Brazilian Association of Ceramic)*, 48, 137-145.

Sánchez-Muñoz, L.; Cava, S. Da S.; Paskocimas, C.A.; Cerisuelo, E.; Longo, E.; Carda, J.B. (2002) Modelling of the vitrification process of ceramic floor tiles. *Cerámica (Journal of the Brazilian Association of Ceramic)*, 48, 217-222.

Sánchez-Muñoz, L.; Cava, S. Da S.; Paskocimas, C.A.; Cerisuelo, E.; Longo, E.; Carda, J.B. (2002) Selection of raw materials in the development of ceramic body formulations in pottery. *Cerámica (Journal of the Brazilian Association of Ceramic)*, 48, 108-113.

Sánchez-Muñoz, L.; Nebot-Díaz, I.; Carda, J.B.; Tuduri, F.; García, A.; Cerisuelo, E. (2001) Obtaining ceramic bodies with low porosity from domestic raw materials. *Cerámica Información*, 272,48-54.

Tichell, M.T.; Bakali, J.; Sánchez, J.; Portolés, J.; Soler, C.; Nebot-Díaz, I.; **Sánchez-Muñoz, L.**; Carda, J.B. (2001) Glass-ceramic glazes with aluminate and aluminosilicate crystallizations adapted to porcelain tile bodies. *International Ceramic Journal*, 63-66.

Voltolini, G.; Nebot-Díaz, I.; **Sánchez-Muñoz, L.**; Carda, J.B. (2001) Introduction to the technology of porcelain stoneware. *Ediceram*, 1, 2-16.

Tichell, M.T.; Bakali, J.; Pascual, A.; Nebot-Díaz, I.; **Sánchez-Muñoz, L.**; Carda J.B. (2000) Special enamels for porcelain stoneware substrates. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 39, 31-38.

Irún, M.; Nebot-Díaz, I.; **Sánchez-Muñoz, L.**; Carda, J.B. (2000) Monocottura kilns in the industrial manufacture of floor and wall tiles. *Cerámica Información*, 267, 63-84.

Tichell, M.T.; Bakali, J.; Sánchez, J.; Pórtolés, J.; Soler, C.; Nebot-Díaz, I.; **Sánchez-Muñoz, L.**; Carda, J.B. (2000) Glass-ceramic glazes with aluminate and aluminosilicate crystallizations adapted to porcelain tile bodies. VI World Congress on Ceramic Tile Quality, 465-473.

Jovani, M.A.; Carceller, J.V.; Soler, A.; Nebot, A.; Núñez, I.; **Sánchez-Muñoz, L.**; Guaita, J.; Cordoncillo, E.; Carda, J.B. (2000) Development of hybrid glazes and frits from gels adapted to single-firing cycles of stoneware and porcelain. VI World Congress on Ceramic Tile Quality, 199-211.

Sánchez-Muñoz, L.; Correcher, V.; Garcia-Guinea, J.; Delgado, A. (1999) Thermoluminescence of a lithium aluminium rich-beta quartz for dosimetry purposes. *Radiation Protection Dosimetry*, 84, 543-547.

Correcher, V.; Garcia-Guinea, J.; Delgado, A.; **Sanchez-Munoz, L.** (1999) Spectra thermoluminescence emissions and continuous trap distribution of a cross-hatch twinned low microcline. *Radiation Protection Dosimetry*, 84, 503-507.

Garcia-Guinea, J.; Townsend, P.D.; **Sanchez-Munoz, L.**; Rojo, J.M. (1999) Ultraviolet-blue ionic luminescence of alkali feldspars from bulk and interfaces. *Physics and Chemistry of Minerals*, 26, 658-668.

Sanchez-Munoz, L.; Nistor, L.; Van Tendeloo, G. (1998) Modulated structures in K-feldspars: a study by electron microscopy and ²⁹Si MASS-NMR spectroscopy. *Journal of Electron Microscopy*, 47, 17-28.

Clarke, M.L.; Rendell, H.M.; **Sanchez-Munoz, L.**; Garcia-Guinea, J. (1997) A comparison of luminescence spectra and structural composition of perthitic feldspars. *Radiation Measurements*, 27, 137-144.

Garcia-Guinea, J.; Rendell, H.M.; **Sanchez-Munoz, L.** (1997) Luminescence spectra of alkali feldspars: some relationships between structural features and luminescence emission. *Radiation Protection Dosimetry*, 66, 395-398.

Sánchez-Muñoz, L. (1994) Influence of the Na/K exsolution on the structural and microtextural characteristics of pegmatitic feldspars. *Boletín de la Sociedad Española de Mineralogía*, 17, 283-284.

Sánchez-Muñoz, L.; García-Guinea, J.; López-Andrés, S. (1991) Simple structural characterization of alkali feldspars: methodology. *Boletín de la Sociedad Española de Cerámica y Vidrio*, 30, 69-79.

Sánchez-Muñoz, L.; López Andrés, S.; Fernández Hernán, M.; García-Guinea, J. (1990) Feldspars from pegmatites of class II and IV in Colmenar Viejo - Manzanares el Real (Madrid). *Boletín Sociedad Española de Mineralogía*, 13, 155-168.

Sánchez-Muñoz, L.; López Andrés, S.; García-Guinea, J. (1988) Using strain-composition-structure-ordering diagrams from mathematical parameters after the characterization of alkali feldspar from zoned granitic pegmatites: Los Rancajales pegmatite (Colmenar Viejo, Madrid, Spain). *Geociências*, 3, 141-152.

García-Guinea, J.; Sánchez Pérez, B.; Gutiérrez Blanco, E.; **Sánchez-Muñoz, L.** (1985) The Mineral Exhibition at the National Museum of Natural Sciences. *Boletín Sociedad Española de Mineralogía*, 407-419.

Invited conferences

2020, Feb 21th, "Meteorites: rocks and minerals from outer space". Priyadarshini Planetarium, Breakthrough Science Society, Trivandrum, Kerala, (India).

2020, Feb 21th, "Crystal structures in minerals by solid state NMR spectroscopy". Dpmt. Geology of the University of Kerala, Trivandrum, Kerala, (India).

2020, Feb 20th, "Twinning microstructures and perthitic microtextures in alkali feldspars". Dpmt. Geology of the University of Kerala, Trivandrum, Kerala, (India).

2020, Feb 20th, "Spanish meteorites in the National Museum of Natural Sciences of Madrid, Spain". Dpmt. Geology of the University of Kerala, Trivandrum, Kerala, (India).

2019, May 27th, "Crystal structures in minerals by NMR". Dpmt. Geology of the University of Kerala, Trivandrum, Kerala, (India).

2018, May 22th, "Crystal structures in minerals by NMR", CEMHTI, CNRS, Orléans, (France).

2017, Oct. 23th, "Estructuras cristalinas". III Curso de Resonancia Magnética Nuclear de Estado Sólido, Institute of Ceramics and Glasses (CSIC), Madrid (Spain).

2016: 27-29 June, "What is a crystal from the NMR perspective? Molecular-like medium-range order in the long-range order-disorder feldspar structures". 8th GERMN-5th Iberian NMR Meeting, Valencia (Spain).

2016: July 15-19, "Raman and Rayleigh Scattering Microscopy: Applications in Alkali Feldspars for the Characterization of Pegmatites", Second Eugene E. Foord Pegmatite Symposium, Colorado School of Mines campus, Golden, Colorado (USA).

2015: April 16th, "Feldspars in Ceramic Material: mineralogy, deposits, applications and markets", Geological Survey of Norway, Trondheim, Goldschmidt forelesningssøknad, (Norway).

2015: Oct. 26th, "Industrial ceramic pigments", II International NMR Training Course, Institute of Ceramics and Glasses (CSIC), Madrid (Spain).

2015: June 21th, "Molecular-like medium range order and mineral species in K-feldspars by multinuclear NMR", ECERS 2015, Toledo (Spain).

2014: Oct. 27th, "Nuclear magnetic resonance in solid state: Inorganic crystals (minerals)". I School on solid state nuclear magnetic resonance and applications. Institute of Ceramics and Glasses (CSIC), Madrid (Spain).

2012: July 30th, "Twin-patterns in K-feldspars from granite pegmatites for geotectonic setting recognition". Geological Survey of South Australia, Adelaide, South Australia, (Australia).

2012: March 27th, "Raw Materials for the Ceramic Industry". 3rd Thematic Intensive School on Conservation Science, European Union. Alcora, Castellón (Spain).

2011: August 8th, "The evolution of twin-structures and their geological significance Laramie". University of Wyoming (USA).

2011: July 11th, "The evolution of twin-structures and their geological significance". Geological Survey of Western Australia, Perth (Australia).

2010: August 18th, "Twin-structures in K-feldspars from pegmatites: applications as geotectonic sensors". USGS, Federal Center, Denver, Colorado (USA).

2009: November 27th, "Ceramic tiles for the XXI Century". Institute for Ceramics and Glasses, CSIC, Madrid (Spain).

2009: May 4th, "A perspective of the crystalline solid state from the K-feldspar minerals". National High magnetic Field Laboratory (NHMFL) Tallahassee, Florida (USA).

2008: "Feldspars in the Ceramic Industry". Universidad Autónoma de Madrid, Madrid (Spain)

2004: "Feldspars in the ceramic industry". First Course on Ceramic Raw Materials, Institute of Ceramic Technologies, UJI, Castellón (Spain).

2003: "Raw materials for the formulation of ceramic glazes and enamels". Education Course on Environmental Awareness, Castellón (Spain)

1995: "Exsolution et distribution du sodium dans les feldspaths potassiques pegmatitiques". Centre de Recherche sur la Synthèse et Chimie des Minéraux (CRSCM) CNRS, Orléans (France).

1993: "Si/Al order and exsolution processes in natural alkali feldspars". Centre de Recherche sur la Synthèse et Chimie des Minéraux (CRSCM) CNRS, Orléans (France).

1989: "Pegmatitic feldspars from La Pedriza (Clase IV) and Los Remedios (Clase II), Colmenar Viejo - Manzanares el Real (Madrid)". Mineralogisch-Petrographisches Institut der Universität Heidelberg (Germany).

Communications in International Congresses

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Participation in recent research projects, contracts and grants (selected)

2018-2020: MAT2017-86450-C4-1-R. Design of cold sintering products for new nanostructured materials. Contract Institute of Ceramics and Glasses (CSIC). Ministry of Economy and Competitiveness of Spain.

2017-2019: MAT2016-78362-C4-2-R. Título del proyecto: Materials for lithium, post-lithium and fuel batteries: from the laboratory to the prototype. Contract in Institute of Material Science of Madrid (CSIC). Autonomous Community of Madrid, Spain.

2014-2018: CM-S2013/MIT-2753. Materials for energy: electrical, magnetic and superconductors. Contract in Institute of Material Science of Madrid (CSIC). Autonomous Community of Madrid, Spain.

2014-2016: MAT2013-46452-C4-2-R. Electrodes and electrolytes for efficient energy storage and production: batteries and fuel cells. Contract in Institute of Material Science of Madrid (CSIC). Ministry of Economy and Competitiveness of Spain.

2014-2016: MAT2013-48009-C4-1-P. Safe design of integrated nanostructures in functional ceramics. Contract Institute of Ceramics and Glasses (CSIC). Ministry of Economy and Competitiveness of Spain.

2011-2013: MAT2010-17753. New bioactive ceramic materials in equilibrium and non-equilibrium systems. Contract Institute of Ceramics and Glasses (CSIC). Ministry of Economy and Competitiveness of Spain.

2011-2013: MAT2010-17753. Role of crystalline defects in the electrical-magnetic-optical properties tailored in mono and multiferroic ceramics. Contract Institute of Ceramics and Glasses (CSIC). Ministry of Economy and Competitiveness of Spain.

2010-2013: Obtaining functional coatings on tiles. Contract Institute of Ceramics and Glasses (CSIC) - Esmalglass SAU.

2006-2009: "Durability and conservation of traditional natural materials of architectural heritage". Comunidad Autónoma de Madrid (CAM) S-0505/MAT/0094 in CIEMAT, Researcher.

2007-2009: "Emergency dosimetry if malicious use of radioactive sources". Ministry of Education and Science REF: FIS2007-61823/ and CIEMAT, Researcher.

2006-2007: "Evaluation of potential exposition to ionizing radiation in imported food". Ministry of Health and Consumer and CIEMAT, Researcher.

2002-2003: "Research and development of magnetic separation technologies in kaolin and clays, and synthetic fluxes for white porcelain stoneware". CDTI nº 2003/314 and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Coordinator.

2000: "Obtaining special optical effects in ceramic glazes". CERÁMICAS DIAGO S.A. (Castellón) and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Coordinator.

2000: "Development of properties of interest in ceramic glazes". VIDRES S.A. (Castellón) and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain). Coordinator.

2000: "Study and characterization of raw materials and ceramic bodies for monocottura kilns, with optimal environmental response". AI-IPEG (Castellón) and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Researcher.

2000-2001: "Development of red pigments with CeO₂ structure and rare-earth dopants; ceramic and sol-gel routes". Fundación BANCAJA-Universidad Jaume I de Castellón in Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Researcher.

2001: "Encyclopedia of Ceramics". FAENZA EDITRICE IBÉRICA S.A. (Castellón) and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Coordinator.

2000-2001: "Study of raw materials for the ceramic industry". TIERRA ATOMIZADA S.A. (Castellón) and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Coordinator.

2000-2001: "Study of materials with interesting optical properties: development of a phosphorescent ceramic glaze for ceramic tiles adapted to industrial firing". FEDER-C.I.C.Y.T., Código: 1FD97-1198-C02-01 (MAT), in Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Coordinator.

2000-2001: "Using the AR-25 ball clays and Wollclas wollastonite raw materials for the manufacture of porcelain stoneware tiles". Arcillas Blancas S.A. (Salamanca), Compañía Minera Ilustración (Salamanca), Tierra Atomizada, S.A. (Castellón), and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain), Coordinator.

1999-2000: "Development of hybrid glazes for glass-ceramic bodies". COLOROBIA ESPAÑA S.L. (Castellón) and Dept. Inorganic and Organic Chemistry (DIOC-UJI), Coordinator.

1999: "High Speed Decal Printing System, Reducing Toxic Emissions & Improving Surface Decoration & Marked Response of European Ceramics". BRITE EURAM-III in Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain). Cooperative Research Proposal. (Industrial and Materials Technologies). Contrato nº: BRST-CT96-0261., (1999). Contract.

1998: "Development of glass-ceramic and glass-crystalline materials for improving the technical characteristics of ceramic glazes" (Castellón). VIDRES S.A. and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain). Coordinator.

1997-1999: "Study of ceramic glazes with optical and mechanical properties" ESMALTES S.A. and Dpmt. Química Orgánica e Inorgánica, Universidad Jaume I, Castellón, (Spain). Coordinator.

Research Management

Director of the I, II, III and IV International School on Solid State Nuclear Magnetic Resonance and Applications (2014-2019) in the Institute of Ceramics and Glass (CSIC).

Director of the I Curso de Lítica in the National Museum of Natural Sciences of Madrid in 2019 (in Spanish).

Secretary of the Scientific Cloister of the Institute of Ceramics and Glass (CSIC) from 2009 to 2018.

Commission of Experimental Techniques of the Institute of Ceramics and Glass (CSIC) from 2016 to 2017.

Project evaluator of Articulation Actions of the Valencian System of Science - Technology - Industry (SVCTE) for the year 2004, DOGV no. 4733. Ministry of Industry, Commerce and Tourism. August and September 2004.

Scientific Referee in: Ore Geology Reviews, Boletín de la Sociedad Española de Cerámica y Vidrio, American Mineralogist, The Canadian Mineralogist, Applied Clay Science, Mineralogical Magazine, Minerals, Nature Communications, Journal of Geochemical Exploration, Physics and Chemistry of Minerals, Journal of Material Processing Technology, and Nuclear Inst. and Methods in Physics Research, B.

Member of the tribunal of the doctoral thesis of M^a Teresa Tichell Alegre, entitled: "Study and development of optical and mechanical properties in ceramic enamels". Jaume I University of Castellón (Spain), 1999.

Member of the tribunal of the doctoral thesis of Paul Klar, entitled: "The aperiodic nature of mullite". University of the País Vasco, Bilbao (Spain), 2018.