



Comisión Interministerial de Ciencia y
Tecnología

Curriculum vitae

Name: José M^a GONZÁLEZ CALBET

Date: November, 2016

Family name: GONZALEZ CALBET
ID/Passport no: 646746D Date of birth : 02/10/52

Forename: José M^a
Gender: M

Actual position

Organism: UNIVERSIDAD COMPLUTENSE DE MADRID
Faculty School or Institute: FACULTY OF CHEMISTRY
Dept./Sect./Unit: INORGANIC CHEMISTRY DPT. I
Postal address: 28040 MADRID
Telephone (include prefix, number and extension): +34 91394 43 42; +34 91 394 43 58 Fax: +34 91-394 43 52
E.mail: jgcalbet@ucm.es

Specialty (UNESCO codes): 2303.99 (QUIMICA DEL ESTADO SOLIDO)

Professional Category: FULL PROFESSOR Starting date: 19/04/90

Administrative situation:

Staff Fix Term Contract Temp Stipendiary grant holder
 Other (specify):

Dedication Full time
Partial

Research interests

Please give a brief description, using keywords, of your specialization and current research interests.

- Order-disorder studies in perovskite- related materials
- Non stoichiometry in mixed oxides
- Reactivity of solids
- Electron microscopy of inorganic materials
- Electron diffraction
- Cubic and hexagonal perovskites
- Colossal magnetoresistance in manganese oxides
- Dielectric materials
- Structural characterization of inorganic materials.
- Low dimensionality and electrical properties in cation deficient perovskites.

Academic Training

Bachelor's degree	Center	Date
CHEMISTRY	CHEMISTRY FACULTY - COMPLUTENSE UNIVERSITY	JUNE 1974

PhD	Center	Date
CHEMISTRY	CHEMISTRY FACULTY - COMPLUTENSE UNIVERSITY	2-11-1979

Previous professional scientific activities

Position	Institution	Dates
Assistant Professor	Complutense University	1-10-74/30-11-82
Collaborator Professor	Complutense University	1-121-82/17-1-85
Associate Professor	Complutense University	18-1-85/18-4-90

LANGUAGES (R = ordinary, B = good, C = excellent)

Language	Spoken	Read	Written
ENGLISH	B	B	B
FRENCH	B	B	R

**PARTICIPATION IN R&D GRANTS FUNDED THROUGH OPEN PUBLIC COMPETITION
(National and/or international)**

TITLE: Synthesis and structural, electrical and magnetic characterization of high temperature superconductors.
FUNDING AGENCY: CICYT
DURATION FROM: 1988 TO: 1990
PRINCIPAL INVESTIGATOR: María VALLET REGI

TITLE: Fundamental physics on single crystals of high T_c superconductors.
FUNDING AGENCY: CEE-SCIENCE project
DURATION FROM: 1988 TO: 1990
PRINCIPAL INVESTIGATOR: M. CYROT

TITLE: Flux pinning in high temperature superconductors.
FUNDING AGENCY: Proyecto CEE-SCIENCE
DURATION FROM: 1989 TO: 1991
PRINCIPAL INVESTIGATOR: Peter KES

TITLE: A systematic search for high T_c superconductors.
FUNDING AGENCY: EIT Research Programme
DURATION FROM: 1989 TO: 1992
PRINCIPAL INVESTIGATOR: Miguel A. ALARIO FRANCO

TITLE: Synthesis of high temperature superconducting monocrystals.
FUNDING AGENCY: MIDAS Programme
DURATION FROM: 1989 TO: 1991
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Installation of the pirosole technique for the manufacture of thin films.
FUNDING AGENCY: MIDAS Programme
DURATION FROM: 1990 TO: 1992
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Powder X-ray diffractometer.
FUNDING AGENCY: CICYT (Infrastructure) IN89-0413
TOTAL COST: 99.166,99 €
DURATION FROM: 1990 TO:
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Critical currents and dynamics of fluxons in high temperature superconductors. Basic aspects.
FUNDING AGENCY: CICYT
DURATION FROM: 1990 TO: 1992
PRINCIPAL INVESTIGATOR: María VALLET REGI

TITLE: Superconducting and non-superconducting perovskite related oxides.
FUNDING AGENCY: CICYT
DURATION FROM: 1991 TO: 1993
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Magnetism and superconductivity in electron superconductors: Influence of oxygenstoichiometry and microstructure.

FUNDING AGENCY: CEE (DG HSMU) ALAMED- CII*-CT 92-0087

DURATION FROM: 1993 TO: 1995

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Phase equilibrium, thermodynamic properties and their relation to the microstructure of perovskite superconducting oxides.

FUNDING AGENCY: MEC (Scientific Cooperation Program with Latin America): PRO36/93-4401

TOTAL COST: 4.808,90 €

DURATION FROM: 1993 TO: 1994

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Synthesis of materials by the pirosol technique in the form of ultrafine and / or thin film.

FUNDING AGENCY: CICYT, MAT93-0207

TOTAL COST: 149.171,20 €

DURATION FROM: 1993 TO: 1995

PRINCIPAL INVESTIGATOR: María VALLET REGI

TITLE: High Tc superconducting tapes by MOCVD with unusual sources for high current applications.

FUNDING AGENCY: CEE, BRITE-EURAM project

TOTAL COST: 120.202,42 €

DURATION FROM: 01/01/1994 TO: 31/12/1996

INVESTIGADOR PRINCIPAL: **José M. GONZÁLEZ CALBET**

TITLE: Improvement of the MOCVD method for obtaining high Tc superconducting films.

FUNDING AGENCY: CICYT, MAT95-1143CE Project

TOTAL COST: 14.616,61 €

DURATION FROM: 1995 TO: 1996

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Microstructure, magnetic and superconducting properties in perovskite related oxides: polycrystals and thin film.

FUNDING AGENCY: CICYT, MAT95-0642 Project

TOTAL COST: 104.576,10 €

DURATION FROM: 01/01/1995 TO: 31/12/1997

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Setting up of an X-ray diffractometer

FUNDING AGENCY: CICYT, MAT96-2404-E Project

DURATION FROM: 1996 TO: 1997

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: High voltage generator

FUNDING AGENCY: CM180/96-7344

DURATION FROM: 1996 TO: 1996

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: "VII european conference on solid state chemistry" Organization

FUNDING AGENCY: Acción Especial CICYT MAT98-1536-E.

TOTAL COST: 7.813,15 €

DURATION FROM: 1997 TO: 1997
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Synthesis and thermodynamic and structural study of non-stoichiometric compounds: block structures
FUNDING AGENCY: MEC, Acción Integrada HB1996-0176
DURATION FROM: 1997 TO: 1998
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Innovative scaleable approaches to fabrication of long lengths of second generation high performance superconducting tapes.
FUNDING AGENCY: CEE, BRITE-EURAM Project
DURATION FROM: 1997 TO: 2000
PRINCIPAL INVESTIGATOR: M. Vallet-Regí

TITLE: X-ray fluorescence spectrometer.
FUNDING AGENCY: CICYT, IN97-0375
TOTAL COST: 139.735,31 €
DURATION FROM: 1998 TO: 1999
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: X-ray fluorescence spectrometer.
FUNDING AGENCY: CAM
TOTAL COST: 46.548,76 €
DURATION FROM: 1998 TO: 1999
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Trends in Nanotechnology Conference (TNT 2000).
FUNDING AGENCY: MICYT, PGC2000-2539-E
TOTAL COST: 3.000 €
DURATION FROM: 2000 TO: 2000
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Giant magnetoresistance, electrical and superconducting properties in perovskite related oxides.
FUNDING AGENCY: CICYT, MAT98-0648
TOTAL COST: 222.975,49 €
DURATION FROM: 1/10/1998 TO: 30/09/2001
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Synthesis of low-dimensional structures by FIB: nanostructural study by transmission electron microscopy and relation with the electronic properties.
FUNDING AGENCY: MCYT, MAT2000-0033-P4-03
TOTAL COST: 180.303,63 €
DURATION FROM: 11/2001 TO: 11/2004
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Composition-structure-magneto-electronic properties relationship in mixed oxides and sulphides.
FUNDING AGENCY: MCYT, MAT2001-1440
TOTAL COST: 213.359,18 €
DURATION FROM: 12/2001 TO: 12/2004
PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Influence of dimensionality and compositional variations on the magnetic and transport properties of perovskites related oxides.

FUNDING AGENCY: MEC, MAT2004-01248.

TOTAL COST: 390.000 €

DURATION FROM: 12/2004 TO: 12/2007

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: X-ray fluorescence spectrometer.

FUNDING AGENCY: MEC, MAT2004-22103-E.

TOTAL COST: 60.000 €

DURATION FROM: 09/2005 TO: 09/2006

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: X-ray diffractometer and low temperature chamber.

FUNDING AGENCY: MEC, MAT2005-23910-E.

TOTAL COST: 200.000 €

DURATION FROM: 2005 TO: 2006

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Advanced materials based on functional oxides: particle size, structure and properties relationship.

FUNDING AGENCY: CAM, S-0505/PPQ/0316.

TOTAL COST: 226.600 € (5 groups)

DURATION FROM: 01/01/2006 TO: 31/12/2009

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: **Project type C** “Advanced functional oxides: perovskites, nanooxides and low dimensional materials”.

FUNDING AGENCY: MAT2007-61954.

TOTAL COST: 1.000.000 €

DURATION FROM: 1/10/2007 TO: 30/09/2012

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Monochromator-detector system.

FUNDING AGENCY: MICINN – Special action – AE1/09-16911

DURATION FROM: 21/05/ 2009 TO: 31/12/2009

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: **CONSOLIDER PROJECT** “*Imagine*” Materials with sub-Ångstrom resolution.

FUNDING AGENCY: MINECO (CSD2009-00013)

TOTAL COST: 3.600.000 € (7 groups)

DURATION FROM: 17/12/ 2009 TO: 15/06/2016

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Dimensionality and particle size in functional oxides. Nano-oxides and nanostructured oxides.

FUNDING AGENCY: MICINN, MAT2011-23068.

TOTAL COST: 454.545 €

DURATION FROM: 11/2011 TO: 10/2014

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: Oxygen controlled engineering: applications derived from ionic mobility in oxides and nanooxides of transition metals.

FUNDING AGENCY: MINECO, MAT2014-54372R.

TOTAL COST: 500.000 €

DURATION FROM: 10/2015 TO: 09/2018

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

CONTRACTS DERIVED FROM ART. 83 (OLU)

TITLE: *Obtaining nanocomposites based on rosin derivatives.*

FUNDING AGENCY: LURESA, La Unión Resinera Española

TOTAL COST: 40.000 €

DURATION FROM: 1/12/2007 TO: 30/11/2008

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: *Application of the precession method to the structural characterization of mixed nanooxides.*

FUNDING AGENCY: NANOMEGAS

TOTAL COST: 20.000 €

DURATION FROM: 23/01/2008 TO: 22/01/2009

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: *Setting up of a Singular Scientific and Technological Infrastructures (ICTS) for sub-Angstrom microscopy.*

FUNDING AGENCY: IZASA

TOTAL COST: 15.000 €

DURATION FROM: 11/11/2010 TO: 10/11/2011

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: *Characterization of functional oxides by EELS.*

FUNDING AGENCY: IZASA

TOTAL COST: 22.500 €

DURATION FROM: 19/05/2011 TO: 18/05/2012

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

TITLE: *Development of an image orientation system and crystallographic precession in high resolution electron microscopes.*

FUNDING AGENCY: NANOMEGAS

TOTAL COST: 30.000 €

DURATION FROM: 21/07/2014 TO: 31/12/2015

PRINCIPAL INVESTIGATOR: **José M. GONZÁLEZ CALBET**

PUBLICATIONS OR SCIENTIFICAL/TECHNICAL DOCUMENTS

KEY: L = book, CL = book chapter, A = article, R = "review", E = editor, S = restricted technical scientific document

-463-

H.L. Thi N'Goc, D.M. Notemgnou, C. Etrillard, A. Torres-Pardo, J.F. Dayen, S. Rano, G. Rousse, C. Laberty-Robert, **J.M. González Calbet**, M. Drillon, C. Sánchez, B. Doudin, D. Portehault
Surface-driven magnetotransport in perovskite nanocrystals
Advanced Materials. **2016**. In press KEY: A

-462-

L. Serrador, M. Hernando, J. L. Martínez, **J.M. González-Calbet**, A. Varela, F.J. García-García, M. Parras
Chlorine Insertion Promoting Iron Reduction in Ba-Fe Hexagonal Perovskites: Effect on the Structural and Magnetic Properties
Inorganic Chemistry. **2016**. 55 (12), 6261-6270 KEY: A

-461-

P. Aseev, Ž. Gačević, A. Torres-Pardo, **J. M. González-Calbet**, E. Calleja
Improving optical performance of GaN nanowires grown by selective area growth homoepitaxy: Influence of substrate and nanowire dimensions
Applied Physical Letters. **2016**. 108, 253109 KEY: A

-460-

L.G. Vivas, J. Rubin, A.I. Figueroa, F. Bartolomé, L.M. García, C. Deranlot, F. Petroff, L. Ruiz, **J.M. González-Calbet**, S. Pascarelli, N.B. Brookes, F. Wilhelm, M. Chorro, A. Rogalev, J. Bartolomé
Perpendicular magnetic anisotropy in granular multilayers of CoPd alloyed nanoparticles
Physical Review B. **2016**. 93, 174410 KEY: A

-459-

I.N. González-Jiménez, E. Climent, A. Torres-Pardo, M. Hernando, A.E. Sánchez-Peláez, F. Fernández-Martínez, M.T. Fernández Díaz, **J.M. González-Calbet**, A. de Andrés, Á. Varela, M. Parras
SrMnO₃ Thermochromic Behavior Governed by Size-Dependent Structural Distortions
Inorganic Chemistry. **2016**. 55(8), 3980-3991 KEY: A

-458-

Ž. Gačević, N. Vukmirović, N. García-Lepetit, A. Torres-Pardo, M. Müller, S. Metzner, S. Albert, A. Bengoechea-Encabo, F. Bertram, P. Veit, J. Christen, **J.M. González-Calbet**, E. Calleja
Influence of composition, strain, and electric field anisotropy on different emission colors and recombination dynamics from InGa_N nanodisks in pencil-like GaN nanowires
Physical Review B. **2016**. 93(12), 125436 KEY: A

-457-

M. Martínez-Carmona, M. Colilla, M.L. Ruiz-González, **J.M. González-Calbet**, M. Vallet-Regí
High resolution transmission electron microscopy: A key tool to understand drug release from mesoporous matrices
Microporous and Mesoporous Materials. **2016**. 225, 399-410 KEY: A

-456-

L.G. Vivas, A.I. Figueroa, F. Bartolomé, J. Rubín, L.M. García, C. Deranlot, F. Petroff, L. Ruiz, **J.M. González-Calbet**, N.B. Brookes, F. Wilhelm, A. Rogalev, J. Bartolomé
Structural and magnetic properties of granular CoPd multilayers
Journal of Magnetism and Magnetic Materials. **2016**. 400, 248-252 KEY: A

-455-

R. Cortés-Gil, M.L. Ruiz-González, D. González-Merchante, J.M. Alonso, A. Hernando, S. Trasobares, M. Vallet Regí, J. Rojo, **J.M. González-Calbet**
Experimental Evidence of the Origin of Nanophase Separation in Low Hole-Doped Colossal Magnetoresistant Manganites
Nano Letters. **2016**. 16, 760-765 KEY: A

-454-

B. Chico, J. Alcántara, E. Pino, I. Díaz, J. Simancas, A. Torres-Pardo, D. de la Fuente, J.A. Jiménez, J.F. Marco, **J.M. González-Calbet**, M. Morcillo
Rust exfoliation on carbon steels in chloride-rich atmospheres
Corrosion Reviews. **2015**. 33(5), 263-282 KEY: A

-453-

L. Ruiz-González, D. González-Merchante, R. Cortés-Gil, J.M. Alonso, J. L. Martínez, A. Hernando, **J.M. González-Calbet**
Outstanding Atomic Order in Ruddlesden–Popper Oxide Microcrystals
Chemistry of Materials. **2015**. 27, 1397-1404 KEY: A

-452-

E. Chernysheva, Ž. Gačević, N. García-Lepetit, H.P. van der Meulen, M. Müller, F. Bertram, P. Veit, A. Torres-Pardo, **J.M. González-Calbet**, J. Christen, E. Calleja, J.M. Calleja and S. Lazić
Blue-to-green single photons from InGaN/GaN dot-in-a-nanowire ordered arrays
Europhysics Letters. **2015**. 111, 24001 KEY: A

-451-

N. Biškup, S. Das, **J.M. González-Calbet**, C. Bernhard, M. Varela
Atomic-resolution studies of epitaxial strain release mechanisms in $\text{La}_{1.85}\text{Sr}_{0.15}\text{CuO}_4/\text{La}_{0.67}\text{Ca}_{0.33}\text{MnO}_3$ superlattices
Physical Review B. **2015**. 91, 205132 KEY: A

-450-

M. Morcillo, **J.M. González-Calbet**, J.A. Jiménez, I. Díaz, J. Alcántara, B. Chico, A. Mazarío-Fernández, A. Gómez-Herrero, I. Llorente, D. de la Fuente
Environmental conditions for akaganeite formation in marine atmosphere mild steel corrosion products and its characterization
Corrosion. **2015**. 71(7), 872-886 KEY: A

-449-

G.C. Vásquez, M.A. Peche-Herrero, D. Maestre, A. Gianoncelli, J. Ramírez-Castellanos, A. Cremades, **J.M. González-Calbet**, J. Piqueras
Laser Induced Anatase-to-Rutile Transition in TiO_2 Nanoparticles: Promotion and Inhibition Effects by Fe and Al Doping and Achievement of Micropatterning
The Journal of Physical Chemistry C. **2015**. 119 (21), 11965-11974 KEY: A

-448-

I.N. González-Jiménez, A. Torres-Pardo, M. García-Hernández, **J.M. González-Calbet**, M. Parras, A. Varela
Understanding internal mechanisms to obtain nanomanganites by hydrothermal synthesis: the particular case of
4H-SrMnO₃

Crystal Growth & Design. **2015**. 15(5), 2192-2203

KEY: A

-447-

Ž. Gačević, A. Bengoechea-Encabo, S. Albert, A. Torres-Pardo, **J.M. González-Calbet**, E. Calleja
Crystallographically uniform arrays of ordered (In)GaN nanocolumns

Journal of Applied Physics. **2015**. 117, 035301

KEY: A

-446-

V. Velasco, P.Crespo, P.Marín, A.García-Escorial, M.Lieblich, **J.M. González-Calbet**, F. Ynduráin, A.
Hernando

Short range order fluctuations and itinerant ferromagnetism in Ni₃Al

Solid State Communications. **2015**. 201, 111-114

KEY: A

-445-

A.I. Figueroa, J. Bartolomé, L.M. García, F. Bartolomé, O. Bunâu, J. Stankiewicz, L. Ruiz, **J.M. González-
Calbet**, F. Petroff, C. Deranlot, S. Pascarelli, P. Bencok, N.B. Brookes, F. Wilhelm, A. Smekhova, A. Rogalev
Structural and magnetic properties of granular Co-Pt multilayers with perpendicular magnetic anisotropy

Physical Review B. **2014**. 90, 174421

KEY: A

-444-

G.C. Vásquez, M.A. Peche-Herrero, D. Maestre, B. Alemán, J. Ramírez-Castellanos, A. Cremades, **J.M.
González-Calbet**, J. Piqueras

Influence of Fe and Al doping on the stabilization of the anatase phase in TiO₂ nanoparticles

Journal of Materials Chemistry C. **2014**. 2, 10377-10385

KEY: A

-443-

A. Bengoechea Encabo, S. Albert, D. López-Romero, P. Lefebvre, F. Barbagini, A. Torres-Pardo, **J.M.
González-Calbet**, M. Sánchez-García, E. Calleja

Light-Emitting-Diodes based on ordered InGaN nanocolumns emitting in the blue, green and yellow spectral
range

Nanotechnology. **2014**. 25, 435203 (7pp)

KEY: A

-442-

G. Iniyama, P. de la Presa, J.M. Alonso, M. Multigner, B.I. Ita, R. Cortés-Gil, M. L. Ruiz-González, A.
Hernando, **J.M. González-Calbet**

Unexpected ferromagnetic ordering enhancement with crystallite size growth observed in La_{0.5}Ca_{0.5}MnO₃
nanoparticles

Journal of Applied Physics. **2014**. 116, 113901

KEY: A

-441-

M. Colilla, M. Martínez-Carmona, S. Sánchez-Salcedo, M.L. Ruiz-González, **J.M. González-Calbet**, M.
Vallet-Regí

A novel zwitterionic bioceramic with dual antibacterial capability

-440-

A. Baeza, E. Guisasola, A. Torres-Pardo, J.M. González-Calbet, G.J. Melen, M. Ramirez, M. Vallet-Regí
Hybrid Enzyme-Polymeric Capsules/Mesoporous Silica Nanodevice for In Situ Cytotoxic Agent Generation
Advanced Functional Materials. **2014**. 24(29), 4625-4633

KEY: A

-439-

I.N. González-Jiménez, A. Torres-Pardo, A.E. Sánchez-Peláez, Á. Gutiérrez, M. García-Hernández, **J.M. González-Calbet**, M. Parras, A. Varela
Synthesis of 4H-SrMnO_{3,0} Nanoparticles from a Molecular Precursor and Their Topotactic Reduction Pathway Identified at Atomic Scale
Chemistry of Materials. **2014**. 26, 2256-2265

KEY: A

-438-

M. A. Peche-Herrero, D. Maestre, J. Ramírez-Castellanos, A. Cremades, J. Piqueras, **J. M. González-Calbet**
Controlled transition-metal doping of SnO₂ nanoparticles with tunable luminescence
Crystal Engineering Communications. **2014**. 16(14), 2969-2976

KEY: A

-437-

K. Loza, J. Diendorf, C. Sengstock, L. Ruiz-Gonzalez, **J.M. González-Calbet**, M. Vallet-Regí, M. Köllerb, M. Epple
The dissolution and biological effects of silver nanoparticles in biological media
Journal of Materials Chemistry B. **2014**. 2, 1634-1643

KEY: A

-436-

M.L. Ruiz-González, R. Cortés-Gil, A. Torres-Pardo, D. González-Merchante, J.M. Alonso, **J.M. González-Calbet**
Chemical Analysis at Atomic Resolution of Isolated Extended Defects in an Oxygen-Deficient, Complex Manganese Perovskite
Chemistry - A European Journal. **2014**. 20, 1237-1241

KEY: A

-435-

O. Prymak, S. Ristig, W. Meyer-Zaika, A. Rostek, L. Ruiz, **J.M. González-Calbet**, M. Vallet-Regí, M. Epple
X-ray powder diffraction as a tool to investigate the ultrastructure of nanoparticles
Russian Physics Journal. **2014**. 56(10), 1111-1115

KEY: A

-434-

C. Guglieri, A. Espinosa, N. Carmona, M. A. Laguna-Marco, E. Céspedes, M. L. Ruíz-González, **J.M. González-Calbet**, M. García-Hernández, M. A. García, J. Chaboy
Relationship between the Magnetic Properties and the Formation of a ZnS/ZnO Interface in S-Capped ZnO Nanoparticles and ZnS-ZnO Thin Films
The Journal of Physical Chemistry C. **2013**. 117, 12199-12209

KEY: A

-433-

P. Crespo, P. de la Presa, P. Marín, M. Multigner, J.M. Alonso, G. Rivero, F. Yndurain, **J.M. González-Calbet**, A. Hernando
Magnetism in nanoparticles: tuning properties with coatings
Journal of Physics: Condensed Matter. **2013**. 25, 484006-4840027

KEY: A

-432-

R. Cortés-Gil, M.L. Ruiz-González, J.M. Alonso, J.L. Martínez, A. Hernando, M. Vallet-Regí, **J.M. González-Calbet**

Surprising resistivity decrease in manganites with constant electronic density

Journal of Physics: Condensed Matter. **2013**. 25, 484002-484008

KEY: A

-431-

Y. Li, L. Zhang, A. Torres-Pardo, **J.M. González-Calbet**, Y. Ma, P. Oleynikov, O. Terasaki, S. Asahina, M. Shima, D. Cha, L. Zhao, K. Takanahe, J. Kubota, K. Domen

Cobalt phosphate-modified barium-doped tantalum nitride nanorod photoanode with 1.5% solar energy conversion efficiency

Nature Communications. **2013**. 4, 2566

KEY: A

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M. P. Herrero Fernández, **J. M. González-Calbet**, M. A. Alario-Franco, M. Pernet, J.C. Joubert
High pressure synthesis of mixed titanium-chromium oxyhydroxides
Materials Research Bulletin. **1984**. 19, 1207-1213 KEY: A

-15-

M. Vallet-Regí, **J. M. González-Calbet**, M. A. Alario-Franco, J. C. Grenier
Structural intergrowth in the $\text{Ca}_x\text{La}_{1-x}\text{FeO}_{3-y}$ system ($0 < x < 1$): An electron microscopy study
Journal of Solid State Chemistry. **1984**. 55, 251-261 KEY: A

-14-

J. C. Grenier, M. Pouchard, P. Hagenmuller, M. J. R. Henche, M. Vallet-Regí, **J. M. González-Calbet**, M. A. Alario-Franco
Order disorder transition at high temperature and microdomain formation in oxidized ferrites
Materials Research Society. **1984**. 21, 387-391 KEY: A

-13-

J. C. Grenier, M. Pouchard, P. Hagenmuller, M. J. R. Henche, M. Vallet-Regí, **J. M. González-Calbet**, M. A. Alario-Franco
Stabilisation a haut temperature de valences mixtes du fer (+III et IV) par formation de Microdomaines dans des composés non stoechiometriques de structure perovskite
Revue de chimie minerale. **1983**. 20, 726-736 KEY: A

-12-

M. A. Alario-Franco, **J. M. González-Calbet**, M. Vallet-Regí, J. C. Grenier
Brownmillerite-type microdomains in the calcium-lanthanum ferrites: $\text{Ca}_x\text{La}_{1-x}\text{FeO}_{3-y}$. I. $2/3 < x < 1$
Journal of Solid State Chemistry. **1983**. 49, 219-231 KEY: A

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J. M. González-Calbet, M. Vallet-Regí, M. A. Alario-Franco, J. C. Grenier.
Structural intergrowths in the calcium-lanthanum ferrites: $\text{Ca}_x\text{La}_{1-x}\text{FeO}_{3-y}$. ($2/3 < x < 1$)
Materials Research Bulletin. **1983**. 18, 285-292 KEY: A

-10-

J. M. Thomas, **J. M. González-Calbet**, C. A. Fyfe, G. C. Gobbi, M. Nicol.
Identifying the coordination of silicon by magic-angle spinning NMR: stishovite and quartz
Geophysical Research Letters. **1983**. 10, 91-92 KEY: A

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M. A. Alario-Franco, M. J. R. Henche, M. Vallet-Regí, **J. M. González-Calbet**, J.C. Grenier, A. Wattiaux, P. Hagenmuller
Microdomain texture and oxygen excess in the calcium-lanthanum ferrite: $\text{Ca}_2\text{LaFe}_3\text{O}_8$
Journal of Solid State Chemistry. **1983**. 46, 23-40 KEY: A

-8-

J. M. González-Calbet, P. H. Herrero
A high pressure distortion of a rutile type solid solution
Solid State Chemistry. **1982**. 3, 721-724 KEY: A

-7-

J. M. Thomas, S. Ramdas, G. R. Millward, J. Klinowski, M. Audier, **J. M. González-Calbet**, C. A. Fyfe.
Surprises in the structural chemistry of zeolites
Journal of Solid State Chemistry. **1982**. 45, 368-380 KEY: A

-6-

J. M. González-Calbet, M. A. Alario-Franco
A thermogravimetric and electron microscopy study of the decomposition of akaganeite
Thermochimica Acta. **1982**. 58, 45-51 KEY: A

-5-

P. C. Spurdens, J. Drennan, J. R. Owen, B. C. H. Steele, **J. M. González-Calbet**, D.A. Jefferson
Thermodynamics and kinetics of lithium diffusion in V_6O_{13}
Solid State Ionics. **1981**. 5, 335-338 KEY: A

-4-

J. M. González-Calbet, D. A. Jefferson, J. Drenan, P. C. Spurdens
Electron microscope investigation of defect structures in V_6O_{13}
Materials Research Bulletin. **1981**. 16, 1107-1111 KEY: A

-3-

J. M. González-Calbet, M. A. Alario-Franco
The vacuum thermal decomposition of synthetic β -FeOOH
Thermal Analysis. **1981**. (Ed. D. Dollimore) 404-407

KEY: A

-2-

J. M. González-Calbet, M. A. Alario-Franco, M. Gayoso-Andrade
The porous structure of synthetic akaganeite
Journal of Inorganic and Nuclear Chemistry. **1981**. 43, 257-264

KEY: A

-1-

J. M. González-Calbet, M. A. Alario-Franco
Microporosidad estructural de la akaganeita sintética
Anales de Química. **1981**. **77B**, 19-25

KEY: A

PATENTS AND UTILITY MODELS

TITLE: Device for the measurement of continuous magnetic fields based on perovskite related manganese oxides.

INVENTORS: J.M. Alonso, A. Arroyo, R. Cortés, M. Vallet-Regí, A. Hernando, M.A. García, J. Calvo, J. M. González y J.M. González-Calbet

APPLICATION NUMBER: PCT/ES2006/000598.

TITLE: Control of the electrical properties of perovskite-like oxides derived from sodium niobate by introducing cationic vacancies.

INVENTORS: A. Torres Pardo, E. García González, R. Jiménez Riobóo, J.M. González Calbet

APPLICATION NUMBER: P200802216

PRIORITY DATE: 8 July 2008

TITLE: Al or F –doped TiO₂ nanoparticles with quantitative control of anatase and/or rutile phases.

INVENTORS: M.A. Peche Herrero, J. Ramírez Castellanos, G.C. Vasquez Villanueva, D. Maestre Varea, A.I. Cremades Rodríguez, F.J. Piqueras de Noriega, J.M. González Calbet

APPLICATION NUMBER: P20 1400722

PCT/ES2105/000122

PRIORITY COUNTRY: Spain

PRIORITY DATE: 10 September 2015

EXTENDED COUNTRIES: Internacional

EXPLOITING COMPANIES: UCM

TITLE: Nanocrystalline titanium dioxide with mixture of anatase and rutile phases in proportion and/or spatial distribution controlled by laser irradiation.

INVENTORS: G.C. Vasquez Villanueva, D. Maestre Varea, A.I. Cremades Rodríguez, M.A. Peche Herrero, J. Ramírez Castellanos, J.M. González Calbet, F.J. Piqueras de Noriega

APPLICATION NUMBER: P201400759

PCT/ES2015/000129

PRIORITY COUNTRY: Spain

PRIORITY DATE: 26 September 2015

EXTENDED COUNTRIES: Internacional

EXPLOITING COMPANIES: UCM

TITLE: Organic-inorganic hybrid material and method for silicon surface passivation.

INVENTORS: E. Stensrud Marstein, A. Cremades Rodríguez, C. Chuan You, D. Maestre Varea, G.C. Vásquez Villanueva, H. Haug, J. Piqueras de Noriega, J.M. González Calbet, J. Ramírez Castellanos, M. Taeno González, M. García Tejedor, S. Karazhanov.

APPLICATION NUMBER: 20161150

PRIORITY COUNTRY: Norway

PRIORITY DATE: 11 July 2016

EXPLOITING COMPANIES: Institut for Energiteknikk (Kjeller, Noruega) / UCM (Madrid, Spain)

TITLE: Material híbrido orgánico-inorgánico y método para pasivación de superficie de silicio.

INVENTORS: M.A. García Tecedor, G.C. Vásquez Villanueva, M. Taeño, D. Maestre Varea, A.I. Cremades Rodríguez, J. Ramírez Castellanos, F.J. Piqueras de Noriega, J.M. González Calbet, S. Karazov, H. Halvard.

APPLICATION NUMBER: P20161150

PRIORITY COUNTRY: Spain

PRIORITY DATE: 11 July 2016

EXPLOITING COMPANIES: UCM (Madrid, Spain)

STAYS IN FOREIGN CENTERS
(continued stays of more than one month)

KEY: D = doctoral, P = postdoctoral, I = invited, C = contracted, O = other (specify)

CENTER: Physical Chemistry Department
 LOCATION: Cambridge COUNTRY: United Kingdom YEAR: 1980-1982 DURATION: 15 months
 SUBJECT: High resolution electron microscopy in materials . KEY: P

CENTER: Laboratoire de Cristallographie, CNRS
 LOCATION: Grenoble COUNTRY: France YEAR: 1981 DURATION: 2 months
 SUBJECT: Synthesis of mixed oxides at high pressures. KEY: P

CENTER: Laboratoire de Cristallographie, CNRS
 LOCATION: Grenoble COUNTRY: France YEAR: 1982 DURATION: 2 months
 SUBJECT: Synthesis at high pressures of mixed oxides and oxyhydroxides. KEY: P

CENTER: Ecole Nationale Supérieure d'Ingenieurs Electriciens (INPG)
 LOCATION: Grenoble COUNTRY: France YEAR: 1983 DURATION: 2 months
 TEMA: Microstructural characterization of rutile related oxides. KEY: C

CENTER: Laboratoire de Chimie du Solide
 LOCATION: Bordeaux COUNTRY: France YEAR: 1983 DURATION: 1 month
 SUBJECT: Microstructural characterization of perovskite related oxides. KEY: I

CENTER: Laboratoire de Cristallographie, CNRS
 LOCATION: Grenoble COUNTRY: France YEAR: 1985 DURATION: 4 months
 SUBJECT: Electron and neutron diffraction in mixed oxides KEY: C

CENTER: Laboratoire de Chimie du Solide
 LOCATION: Bordeaux COUNTRY: France YEAR: 1985 DURATION: 1 month
 SUBJECT: Electron microscopy of inorganic materials KEY: I

CENTER: Laboratoire de Cristallographie, CNRS
 LOCATION: Grenoble COUNTRY: France YEAR: 1986 DURATION: 2 months
 SUBJECT: Electron diffraction and microscopy KEY: C

CENTER: Ecole Nationale Supérieure d'Ingenieurs Electriciens (INPG)
 LOCATION: Grenoble COUNTRY: France YEAR: 1987 DURATION: 2 months
 SUBJECT: Microstructural characterization of ferrites KEY: C

CENTER: National Institute for Research in Inorganic Materials (NIRIM)
 LOCATION: Tsukuba COUNTRY: Japan YEAR: 1987 DURATION: 1 month
 SUBJECT: Ultra high resolution electron microscopy in perovskites KEY: I

CENTER: Structural Chemistry Department
 LOCATION: Stockholm COUNTRY: Sweden YEAR: 1989 DURATION: 1 month
 SUBJECT: Determination of crystal structures by image processing obtained by HREM KEY: C

CENTER: National Institute for Research in Inorganic Materials (NIRIM)

LOCATION: Tsukuba

PAIS: Japan

YEAR: 2001

DURATION: 1 month

SUBJECT: Colossal magnetoresistance in manganese perovskites

KEY: I

Nota: Si necesita más casos, añádalos utilizando las funciones de copiar y pegar con el 2º caso.

CONTRIBUTIONS TO SCIENTIFIC MEETINGS
(only invited conferences and organization)

TYPE OF PARTICIPATION: President of the session "The Chemistry of New Electronic, magnetic and superconducting materials".

CONGRESS: 32nd IUPAC Congress

LOCATION: Stockholm (Sweden)

YEAR: 1989

TYPE OF PARTICIPATION: Invited Conference: "Microstructure Determination of Inorganic Materials by HREM and CIP".

CONGRESS: First Italian-Portuguese-Spanish Meeting

LOCATION: Gandía (Spain)

YEAR: 1990

TYPE OF PARTICIPATION: Invited Conference "Microdomains in BaFeO_{3-y}".

CONGRESS: XII International Congress for Electron Microscopy

LOCATION: Seattle (USA)

YEAR: 1990

TYPE OF PARTICIPATION: Invited Conference "HREM Study of M, Y and W Hexagonal Type Ferrites".

CONGRESS: XII International Congress for Electron Microscopy

LOCATION: Seattle (USA)

YEAR: 1990

TYPE OF PARTICIPATION: Invited Conference "Oxygen Content and Microstructure in Superconductors and Related Oxides".

CONGRESS: Second Italian-Portuguese-Spanish Meeting

LOCATION: Algarve (Portugal)

YEAR: 1992

TYPE OF PARTICIPATION: Invited Conference "Complex Perovskite-related Superstructures Studied by HREM".

CONGRESS: Second Italian-Portuguese-Spanish Meeting

LOCATION: Algarve (Portugal)

YEAR: 1992

TYPE OF PARTICIPATION: Invited Conference: "Interstitial oxygen and order in RE₂NiO_{4+δ} (RE=La, Nd)".

CONGRESS: MRS Spring Meeting

LOCATION: San Francisco (USA)

1992

YEAR:

TYPE OF PARTICIPATION: Invited Conference "Microstructural Study of the REBa₂Fe₃O_{8+y} Perovskite-related System".

CONGRESS: MRS Spring Meeting

LOCATION: San Francisco (USA)

1992

YEAR:

TYPE OF PARTICIPATION: Member of the Scientific Committee and President of the session "Superconducting Materials".

CONGRESS: 10th European Congress on Electron Microscopy

LOCATION: Granada (Spain)

YEAR: 1992

TYPE OF PARTICIPATION: Member of the Scientific Committee.
CONGRESS: 12th International Symposium on the Reactivity of Solids
LOCATION: Madrid (Spain) YEAR: 1992

TYPE OF PARTICIPATION: Member of the Scientific Committee and president of the session "Surface Chemistry and Catalysis"
CONGRESS: Third Greek-Italian-Portuguese-Spanish Meeting in Inorganic Chemistry
LOCATION: Senigallia (Italy) YEAR: 1995

TYPE OF PARTICIPATION: Member of the International Scientific Committee and president of the session "Anionic Conductors".
CONGRESS: Vth European Conference on Solid State Chemistry
LUGAR DE CELEBRACION: Montpellier (France) YEAR: 1995

TYPE OF PARTICIPATION: Invited Conference "Microscopia electrónica de alta resolución de nanopartículas"
CONGRESS: Reunión Nacional de Nanopartículas
LOCATION: Seville (Spain) YEAR: 1996

TYPE OF PARTICIPATION: Invited Conference "Electron crystallography of zeolites"
CONGRESS: XIII International Symposium on Reactivity of Solids
LOCATION: Hamburg (Germany) YEAR: 1996

TYPE OF PARTICIPATION: Member of the International Scientific Committee
CONGRESS: VIth European Conference on Solid State Chemistry
LOCATION: Zurich (Switzerland) YEAR: 1997

TYPE OF PARTICIPATION: Member of the Scientific Committee
CONGRESS: Fourth French-Greek-Italian-Portuguese-Spanish Meeting in Inorganic Chemistry
LOCATION: Corfu (Greece) YEAR: 1997

TYPE OF PARTICIPATION: Plenary Conference "Structural information from image processing HREM images: the effect of filtering applied to zeolites".
CONGRESS: XIV International Congress on Electron Microscopy
LOCATION: Cancun (México) YEAR: 1998

TYPE OF PARTICIPATION: Plenary Conference "Microscopia electrónica de alta resolución aplicada a la Caracterización de materiales"
CONGRESS: VI Reunión Nacional de Materiales
LOCATION: San Sebastián (Spain) YEAR: 1999

TYPE OF PARTICIPATION: *Chairman* of the Congress
CONGRESS: VIIth European Conference on Solid State Chemistry
LOCATION: Madrid (Spain) YEAR: 1999

TYPE OF PARTICIPATION: Member of the Scientific Committee
CONGRESS: Fifth French-Greek-Italian-Portuguese-Spanish Meeting in Inorganic Chemistry
LOCATION: Toulouse (France) YEAR: 1999

TYPE OF PARTICIPATION: Member of the Scientific Committee
CONGRESS: Trends in Nanotechnology TNT2000
LOCATION: Toledo (Spain) YEAR: 2000

TYPE OF PARTICIPATION: *Chairman* of the International Scientific Committee
CONGRESS: VIIIth European Conference on Solid State Chemistry
LOCATION: Oslo (Norway) YEAR: 2001

TYPE OF PARTICIPATION: Member of the International Scientific Committee
CONGRESS: VIth FIGIPS in Inorganic Chemistry
LOCATION: Barcelona (Spain) YEAR: 2001

TYPE OF PARTICIPATION: Member of the International Scientific Committee.
CONGRESS: Microscopy, Barcelona 2001
LOCATION: Barcelona (Spain) YEAR: 2001

TYPE OF PARTICIPATION: Invited Conference "Complex Superstructures and Magnetic Properties in Perovskite-Related Materials".
CONGRESS: SFC Eurochem 2002
LOCATION: Toulouse (France) YEAR: 2002

TYPE OF PARTICIPATION: Member of the International Scientific Committee and president of session.
CONGRESS: IXth European Conference on Solid State Chemistry
LUGAR DE CELEBRACION: Stuttgart (Germany) YEAR: 2003

TYPE OF PARTICIPATION: Member of the International Scientific Committee and president of session.
CONGRESS: Xth European Conference on Solid State Chemistry
LOCATION: Sheffield (United Kingdom) YEAR: 2005

TYPE OF PARTICIPATION: Invited Conference "Perovskites: from structural control to properties"
CONGRESO: Biennial of the Royal Society of Chemistry
LOCATION: Lugo (Spain) YEAR: 2005

TYPE OF PARTICIPATION: Invited Conference "Manganese related perovskites: A walk through order and disorder".
CONGRESS: Internacional Symposium on Recent Developments in Metal Oxides and Related Materials
LOCATION: Bangalore (India) YEAR: 2006

TYPE OF PARTICIPATION: Invited Conference "New 2H-perovskite related polytypes in the Ba-Mn-M-O system (M:Fe, Co)".
CONGRESS: XVI Internacional Microscopy Congress (IMC16)
LOCATION: Sapporo (Japan) YEAR: 2006

TYPE OF PARTICIPATION: Invited Conference “Advanced materials based on functional oxides: from particle size to properties”.

CONGRESS: Biennial of the Royal Society of Chemistry

LOCATION: Toledo (Spain)

YEAR: 2007

TYPE OF PARTICIPATION: Member of the International Scientific Committee.

CONGRESS: XIth European Conference on Solid State Chemistry

LOCATION: Caen (France)

YEAR: 2007

TYPE OF PARTICIPATION: Invited Conference “Magnetic and electric behavior vs compositional variations of manganese related perovskites”.

CONGRESS: V Reencontré Franco-Espagnol sur la Chimie et la Physique de L’etat Solide

LOCATION: Clermont Ferrand (France)

YEAR: 2008

TYPE OF PARTICIPATION: Invited Conference “Design of advanced oxides: from structural control to transport properties”.

CONGRESS: XIII Plenary Meeting of Inorganic Chemistry

LOCATION: Almuñecar, Granada (Spain)

YEAR: 2008

TYPE OF PARTICIPATION: Member of the International Scientific Committee.

CONGRESS: XIIth European Conference on Solid State Chemistry

LOCATION: Munster (Germany)

YEAR: 2009

TYPE OF PARTICIPATION: Conferencia Plenaria: Compositional Variations and Complex Superstructures in Functional Advanced Oxides.

CONGRESS: Recent Trends in Materials Science and Technology

LOCATION: Trivandrum (India)

YEAR: 2010

TYPE OF PARTICIPATION: Member of the International Advisory Committee.

CONGRESS: 17th International Microscopy Congress - IMC17

LOCATION: Río de Janeiro (Brazil)

YEAR: 2010

TYPE OF PARTICIPATION: Member of the International Scientific Committee.

CONGRESS: XIIIth European Conference on Solid State Chemistry

LOCATION: Lund (Sweden)

YEAR: 2011

TYPE OF PARTICIPATION: Invited Conference “Functional Advanced oxides under the microscope”.

CONGRESS: Microscopy at the Frontiers of Science

LOCATION: Aveiro (Portugal)

YEAR: 2011

TYPE OF PARTICIPATION: Member of the International Scientific Committee.

CONGRESS: 14th European Conference on Solid State Chemistry (ECSSC 14)

LOCATION: Bordeaux (France)

YEAR: 2013

TYPE OF PARTICIPATION: Invited Conference “Singular infrastructure of electron microscopy: seeing atoms”.

CONGRESS: XXXIV Biennial Meeting of the Royal Spanish Society of Chemistry

LOCATION: Santander (Spain)

YEAR: 2013

TYPE OF PARTICIPATION: Invited Conference “Structural and compositional analysis with atomic resolution of anion-deficient complex oxides”.

CONGRESS: GE3C XXIV Symposium (Specialized Group of Crystallography and Crystalline Growth)

LOCATION: Bilbao (Spain)

YEAR: 2014

TYPE OF PARTICIPATION: Member of the Scientific Committee

CONGRESS: ANQUE

LOCATION: Madrid (Spain)

YEAR: 2014

TYPE OF PARTICIPATION: Member of the International Scientific Committee

CONGRESS: International Microscopy Congress (IMC) 2014

LOCATION: Prague (Czech Republic)

YEAR: 2014

TYPE OF PARTICIPATION: Member of the International Scientific Committee

CONGRESS: 15th European Conference on Solid State Chemistry (ECSSC 15)

LOCATION: Vienna (Austria)

YEAR: 2015

CONFERENCES

(Only including the most relevant)

Influence of the oxygen content in high T_c superconductors.

EVENT: Workshop on High T_c superconductors

LOCATION: Cambridge (United Kingdom)

YEAR: 1992

HREM of complex perovskite-related superstructures.

EVENT: Tribute to the Professor C.N.R. Rao: "Current Topics in Solid State Chemistry"

LOCATION: Indian Institute of Bangalore (India)

YEAR: 1993

Oxygen content and microstructure in high temperature superconductors and related materials.

EVENT: Symposium in tribute to the Professor Manuel Cardona

LOCATION: Institute of Materials Science of Barcelona (Spain)

YEAR: 1994

Materials in Spain in the framework of the National Research Plan.

EVENT: Conference Cycle "Challenges for the design of new materials: composition, properties and applications of nanostructured solids"

LOCATION: Institute of Materials Science of Seville (Spain)

YEAR: 1994

Electron crystallography of zeolites: structure information from HREM images and electron diffraction patterns.

EVENT: XIII ISRS

LOCATION: Hamburg University (Germany)

YEAR: 1996

Characterization of nanoparticles by high resolution electron microscopy.

EVENT: Conference Cycle "Preparation and characterization of nanoparticles of oxides and nanocatalysts".

LOCATION: Institute of Materials Science of Seville (Spain)

YEAR: 1996

High resolution electronic microscopy of inorganic materials.

EVENT: Conference cycle

LOCATION: Basque Country University

YEAR: 1998

Electron microscopy as a tool for paper characterization.

EVENT: Conference on paper characterization

LOCATION: Stockholm Polytechnic University (Sweden)

YEAR: 1999

High resolution electron microscopy of monodimensional oxides.

EVENT: Invited Conference

LOCATION: NIRIM, Tsukuba (Japan)

YEAR: 2000

Solid State Chemistry, a fundamental pillar of the Science and Technology of Materials of the Third Millennium.

EVENT: Science and Technology of Portugal and Spain before the third millennium

LOCATION: Lisbon (Portugal) YEAR: 2001

Nanotechnologies and new materials.
EVENT: Summer Courses of the Complutense University: Chemical Engineering a fundamental tool
LOCATION: El Escorial, Madrid (Spain) YEAR: 2002

Perovskite design: from the structural control to the transport properties.
EVENT: Invited Conference
LOCATION: IFW, Dresden (Germany) YEAR: 2002

Structure-property relationship in materials of the perovskite structural type.
EVENT: Invited Conference
LOCATION: Solid State Physics Dpt. Faculty of Physics, UCM, Madrid (Spain) YEAR: 2002

Transmission electron microscopy of nanostructures.
EVENT: Summer Courses of the Complutense University: Nanoscience and local phenomena of materials
LOCATION: El Escorial, Madrid (Spain) YEAR: 2003

Microstructure of bioceramics.
EVENT: Summer Courses of the Complutense University: Bioceramics for health
LOCATION: El Escorial, Madrid (Spain) YEAR: 2003

Nanotechnologies and new materials.
EVENT: Science week
LOCATION: University Complutense of Madrid (Spain) YEAR: 2003

Materials faced up to the nanotechnologies challenges.
EVENT: Invited Conference
LOCATION: National Institute of Coal, Asturias (España) YEAR: 2004

Nanotechnology vs nanoscience.
EVENT: Invited Conference
LOCATION: University of Barcelona (Spain) YEAR 2004

Electron microscopy and crystallography: from the mesopore to the nanoparticle.
EVENT: Invited Conference
LOCATION: International Seminary Complutense, Faculty of Pharmacy, UCM . Madrid (Spain)
YEAR: 2005

Characterization of materials by high resolution electron microscopy.
EVENT: Conference cycle
LOCATION: Basque Country University, Lejona Campus (Spain) YEAR: 2005

State of the art of nanotechnology and biotechnology.

EVENT: Summer Courses of the Complutense University: Health Engineering
LOCATION: El Escorial, Madrid (Spain) YEAR: 2005

High resolution electron microscopy.
EVENT: Conference cycle
LOCATION: University of Vigo (Spain) YEAR: 2005

Applications of electron microscopy to new materials.
EVENT: University-Company Conferences
LOCATION: University of Zaragoza (Spain) YEAR: 2006

High Resolution Electron Microscopy: A way of understanding the behavior of materials.
EVENT: Invited Conference
LOCATION: National Institute of Coal, Asturias (España) YEAR: 2006

Complex manganese related perovskites: An overview.
EVENT: XVI Internacional Microscopy Congress (IMC16)
LOCATION: Sapporo (Japan) YEAR 2006

Research: an essential tool for quality of life.
EVENT: Science week
LOCATION: Ramón y Cajal Institute, Madrid (Spain) YEAR 2006

Manganites: from the structural control to the properties.
EVENT: Invited Conference
LOCATION: Jaime I University, Castellón (Spain) YEAR 2007

High-resolution electron microscopy: a way of understanding the behavior of materials.
EVENT: Invited Conference
LOCATION: University of Cádiz (Spain) YEAR 2007

Electron diffraction. High Resolution Electron Microscopy.
EVENT: Invited Conference
LOCATION: National Institute of Coal, Asturias (España) YEAR 2007

Advanced Materials Design: Functional Oxides.
EVENT: Summer Courses of the Complutense University: Chemistry in the XXI century
LOCATION: El Escorial, Madrid (Spain) YEAR: 2007

Crystalchemistry of Hexagonal Perovskites.
EVENT: Invited Conference
LOCATION: University of Aveiro (Portugal) YEAR 2008

Chemistry for Advanced Materials.

EVENT: Invited Conference
LOCATION: Autónoma University of Madrid (Spain) YEAR 2008

A random walk between order and disorder.
EVENT: Invited Conference
LOCATION: University of Barcelona (Spain) YEAR 2009

Characterization of materials by electron microscopy.
EVENT: Invited Conference
LOCATION: Basque Country University (Spain) YEAR 2009

Chemistry and nanotechnology.
EVENT: Invited Conference
LOCATION: University of Cádiz (Spain) YEAR 2009

Functional oxides: structural control and transport properties.
EVENT: Invited Conference
LOCATION: Complutense University of Madrid (Spain) YEAR 2009

Chemistry for Advanced Materials
EVENT: Invited Conference
LOCATION: Stockholm University (Sweden) YEAR 2010

Designing materials, controlling properties.
EVENT: Invited Conference
LOCATION: University of Barcelona (Spain) YEAR 2011

New trends in transmission electron microscopy.
EVENT: Invited Conference
LOCATION: El Escorial, Madrid (Spain) YEAR 2011

Advanced Electron Microscopy of Functional Materials.
EVENT: Invited Conference. 12th TEM-UCA European Summer Workshop.
LOCATION: Puerto Real, Cádiz (Spain) YEAR 2012

Seeing atoms, understanding materials.
EVENT: "Seminarios Internacionales Fronteras de la Ciencia de Materiales" Frontiers of Materials Science International Seminars.
LOCATION: Polytechnic University of Madrid YEAR 2012

Correcting aberrations, seeing atoms.
EVENT: Summer Courses of the Complutense University
LOCATION: El Escorial, Madrid (Spain) YEAR 2013

Advanced Electron Microscopy of Functional Materials.
EVENT: Summer Courses of the Cádiz University
LOCATION: Cádiz (Spain) YEAR 2013

New techniques of atomic resolution for studying materials.
EVENT: Conference Series of the Faculty of Geology of UCM, Madrid (Spain)
LOCATION: Geology Faculty of UCM, Madrid (Spain) YEAR 2013

High resolution electron microscopy: seeing atoms.
EVENT: REPSOL Conferences
LOCATION: REPSOL, Madrid (Spain) YEAR 2013

Structural and magnetic study of new oxygen deficient Ruddlesden-Popper phases
EVENT: ANQUE
LOCATION: University Complutense of Madrid (Spain) YEAR 2014

Increasing the resolution to improve the knowledge.
EVENT: Summer Courses of the Complutense University
LOCATION: El Escorial, Madrid (Spain) YEAR 2016

Functionalised oxides for novel technologies.
EVENT: European Summer Workshop on Transmission electron Microscopy of Nanomaterials
LOCATION: University of Cádiz (Spain) YEAR 2016

Electron microscopy with corrected aberration: seeing atoms.
EVENT: Invited Conference
LOCATION: University of la Laguna, Tenerife (Spain) YEAR 2016

DOCTORAL THESIS SUPERVISED

1. Control of the oxygen content and its influence on the microstructure of the La-Sr-Ni-O system.

STUDENT: M^a Jesús Sayagués de Vega

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1992

GRADE: With highest honor

2. Order-disorder in the TR-Ba-Cu-Fe-O (TR = Y, Ln) system.

STUDENT: Ester García González

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1992

GRADE: With highest honor

3. Barium hexafferrite: from the permanent magnet to the magnetic recording.

STUDENT: M^a Victoria Cabañas Criado

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1992

GRADE: With highest honor

–

4. Structural variations and crystal growth in K₂NiF₄ related materials.

STUDENT: José M^a Alonso Rodríguez

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1993

GRADE: With highest honor

–

5. n type superconductors: Stability and microstructure of the T, T' and T* phases in the Pr_{2-x}A_xCuO_{4-δ} (A=Ce y/o Sr) system.

STUDENT: M^a Aurea Varela Losada

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1994

GRADE: With highest honor

–

6. Bi-Sr-Ca-Cu-O System: Reactivity, stability and reproducibility of superconducting phases.

STUDENT: Julio Ramírez Castellanos

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1994

GRADE: With highest honor

–

7. Structural characterization of new 2H related cobalt oxides

STUDENT: Khalid Boulahya

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 1999

GRADE: With highest honor

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8. Structural characterization by high resolution electron microscopy of new A₂B₂O_{5+δ} perovskite related oxides.

STUDENT: M^a Luisa Ruiz González

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2002

GRADE: With highest honor

9. Influence of the alkaline earth cation on the magnetic and electrical properties of perovskites related magnetoresistant systems.

STUDENT: Ester Herrero Núñez

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2002

GRADE: With highest honor

10. Study and characterization of the quasicrystalline phases of the Al-Co-Cr-Fe system and its possible application as thermal insulators.

STUDENT: M^a del Pilar Valles González

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2002

GRADE: With highest honor

11. New onedimensional 2H related oxides in the AT-A'-B-O (A'=Co, Rh, Ni, Zn; B=Co, Rh, Mn) system. Structure-property relationship.

STUDENT: María Hernando González

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2004

GRADE: With highest honor

12. Anionic and cationic vacancies in Mn perovskites: from the structural order to the magnetic behavior.

STUDENT: Raquel Cortés Gil

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2007

GRADE: With highest honor

13. Topotaxy in the (Ca/Sr)-Mn-O system: A compromise between the cationic order and the anionic sublattice.

STUDENT: Susana de Dios Sinovas

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2008

GRADE: With highest honor

14. Mn Perovskites: Hole attractor model for the development of magnetoresistant sensors.

STUDENT: Alfredo Arroyo Puente

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2008

GRADE: With highest honor

15. New materials in classical ferroelectrics: Modulation of structural and electrical behavior in niobates.

STUDENT: Almudena Torres Pardo

UNIVERSITY: Complutense of Madrid

FACULTY/SCHOOL: Chemistry

YEAR: 2009

GRADE: With highest honor

16. Hexagonal perovskites: a fascinating source of functional oxides.

STUDENT: Laura Miranda Pérez

UNIVERSITY: Complutense of Madrid FACULTY/SCHOOL: Chemistry
YEAR: 2010 GRADE: With highest honor

17. New Strategies for Synthesis of Functional Nanostructured Inorganic Materials.

STUDENT: Ana Querejeta Fernández
UNIVERSITY: Complutense of Madrid FACULTY/SCHOOL: Chemistry
YEAR: 2011 GRADE: With highest honor

18. Influence of compositional variations on the microstructure of luminescent oxides.

STUDENT: Margarita Andrea Peche Herrero
UNIVERSITY: Complutense of Madrid FACULTY/SCHOOL: Chemistry
YEAR: 2015 GRADE: With highest honor

19. Iron hexagonal perovskites: the role of the anionic sublattice in the catalytic oxidation of CO.

STUDENT: Achraf El Hadri
UNIVERSITY: Complutense of Madrid FACULTY/SCHOOL: Chemistry
YEAR: 2016 GRADE: With highest honor

20. Direct image of the anionic and cationic sublattices of Mn functional perovskites by corrected aberration electron microscopy.

STUDENT: Daniel Gabriel González Merchante
UNIVERSITY: Complutense of Madrid FACULTY/SCHOOL: Chemistry
YEAR: 2016 GRADE: With highest honor

GREAT INFRASTRUCTURES YOU USE OR HAVE USED

KEY: R = responsible, UA = frequent user, UO = occasional user

EQUIPMENT: High Resolution Electronic Microscope	DATE: 1982-1988	KEY: UA
EQUIPMENT: High Resolution Electronic Microscope	DATE: From 1988	KEY: R
EQUIPMENT: X-ray diffractometer	DATE: 1975-89	KEY: UA
EQUIPMENT: X-ray diffractometer	DATE: From 1989	KEY: R
EQUIPMENT: Thermal Analysis	DATE: 1975-1988	KEY: UA
EQUIPMENT: Thermal Analysis	DATE: From 1989	KEY: R
EQUIPMENT: High pressure	DATE: From 1980	KEY: UA
EQUIPMENT: Neutron Diffraction	DATE: From 1985	KEY: UO

OTHER MERITS

Research periods (every 6 years) evaluated and obtained: 6

Teaching periods (every 5 years) evaluated and obtained: 6

Undergraduate degree works supervised

1. Accommodation of anion vacancies model in the $\text{SrTi}_{1-x}\text{Fe}_x\text{O}_{3-y}$ ($0.50 < x < 0.70$) system.
GRADUATE: Teresa Blasco Lanzuela
FACULTY: Chemistry. Complutense University. Year 1983
GRADE: With highest honor
2. Study of new materials in the $\text{CaFe}_x\text{Mn}_{1-x}\text{O}_{3-y}$ ($0.45 < x < 0.90$) system.
GRADUATE: José M^a Alonso Rodríguez
FACULTY: Chemistry. Complutense University. Year 1985
GRADE: Very good
3. Electron diffraction study of new phases in the $\text{La}_n\text{Ni}_n\text{O}_{3n-1}$ series.
GRADUATE: M^a Jesús Sayagués de Vega
FACULTY: Chemistry. Complutense University. Year 1986
GRADE: Very good
4. Twin characterization in the GdFeO_3 structural type.
GRADUATE: Julio Ramírez Castellanos
FACULTY: Chemistry. Complutense University. Year 1986
GRADE: Very good
5. Ordering in the cationic sublattice in Ca-La and Co-Mn perovskites.
GRADUATE: Ester García González
FACULTY: Chemistry. Complutense University. Year 1986
GRADE: With highest honor
6. Influence of the preparation conditions on the formation of maclas in high temperature superconductors.
GRADUATE: M^a Victoria Cabañas Criado
FACULTY: Chemistry. Complutense University. Year 1987
GRADE: With highest honor
7. Study of n-type superconductors.
GRADUATE: Aurea Varela Losada
FACULTY: Chemistry. Complutense University. Year 1990
GRADE: With highest honor
8. Variation of composition in systems sistemas $\text{Ln}_1/3\text{Sr}_2/3\text{FeO}_y$ ($\text{Ln}=\text{Nd, Sm, Gd y Er}$) and $\text{Ln}_x\text{Ba}_{1-x}\text{FeO}_y$ ($\text{Ln}=\text{Nd y Sm}$) ($1/5 < x < 4/5$).
GRADUATE: Carlos Prieto Martin
FACULTY: Chemistry. Complutense University. Year 1993
GRADE: With highest honor
9. Influence of the synthesis conditions on the properties of the $\gamma\text{-Fe}_2\text{O}_3$.
GRADUATE: M^a Ester Herrero Núñez
FACULTY: Chemistry. Complutense University. Year 1994
GRADE: With highest honor
10. Structural characterization of derived phases of the 2H-BaMnO_3 type in the Ba-Sr-Mn-O system.
GRADUATE: M^a Ester Rodríguez Mancebo
FACULTY: Chemistry. Complutense University. Year 1998

GRADE: With highest honor

11. The structural type $K2NiF4$: Influence of the variations of composition in the $Ln_{2-x}A_xNiO_y$ ($Ln=La, Nd$; $A=Ca, Sr$) system.

GRADUATE: Marcos Esteve Andrés

FACULTY: Chemistry. Complutense University. Year 1998

GRADE: With highest honor

12. Structural characterization of the material $LaBaCuGaO5$ obtained at ambient pressure and high pressure.

GRADUATE: M^a Luisa Ruiz González

FACULTY: Chemistry. Complutense University. Year 1999

GRADE: With highest honor

Other Publications:

1. Undergraduate thesis: Development of a new procedure for the measurement of solids densities and study of Cr_2O_3 sintering (1975)
2. Doctoral thesis: Porous texture of synthetic akaganeite
3. Scientific disclosure works: Superconductors, on the road to super-profits. M. Vallet Regí y **J. M. González Calbet**, España Económica, **3703**, December. 1988, 112-117

Research activity (Programs and Positions)

- At Complutense University of Madrid: (Assistant, Collaborator, Associate Professor and Full Professor).
 - Textural and structural characterization of iron oxyhydroxides (III)
 - Order-disorder studies in perovskite related materials.
 - Non-stoichiometry in mixed oxides.
 - Reactivity of inorganic materials.
 - Electron microscopy of inorganic materials.
 - Electron diffraction.
 - Crystal growth.
 - Synthesis and structural characterization of superconducting oxides.
 - Preparation and characterization of thin films.
 - Onedimensional oxides: structure-properties relationship.
 - Electron crystallography in zeolites.
 - Structural characterization of hydroxyapatites.
 - Colossal magnetoresistance in manganese perovskites.
 - Low dimensionality and dielectric properties in cation deficient perovskites.
- At Cambridge University (United Kingdom), in the "Department of Physical Chemistry": (**Post-Doctoral Fellow in the British Council**).
 - Microstructural characterization of vanadium oxides
 - Defects in silicates
 - Electron microscopy of zeolites
- At "Laboratoire de Cristallographie" of the C.N.R.S. in Grenoble (France): (**Post-Doctoral Fellow and Chercheur Associé 1ere classe**).
 - Synthesis at high pressures of mixed oxides and oxyhydroxides
 - Electron diffraction and electron microscopy of brownmillerite related oxides.

- Neutron diffraction studies of mixed oxides.
- At "Ecole Nationale Supérieure d'Ingénieurs Electriciens de Grenoble" (France): (**Maitre de Conférences y Professeur Associé a l'Université J. Fourier**).
- Microstructural characterization of rutile related oxides
- Microstructural characterization of β -ferrites and hexaferrites
- At "National Institute for Research in Inorganic Materials" (NIRIM), Tsukuba Science City (Japan): (**Invited Professor**).
- Ultra high resolution electron microscopy on perovskites related oxides.
- At "Structural Chemistry Department" in the Stockholm University (Sweden): (**Invited professor**).
- Determination of crystal structures by processing of images obtained by high resolution electron microscopy
- At Applied Magnetism Institute "Salvador Velayos", RENFE-UCM: (**member since its foundation in 1988 and Deputy Director since 1992**):
- Superconducting materials.
- Colossal magnetoresistance in perovskites

Other research works

Integrated cooperation actions as Responsible Investigator

“SYNTHESIS AND THERMODYNAMIC AND STRUCTURAL STUDY IN NON-STOICHIOMETRIC COMPOUNDS: BLOCK” . Between UCM (Inorganic Chemistry Department, Chemistry Faculty) and Oxford University (United Kingdom), (1997-98).

Other Integrated Cooperation Actions as participant:

1. “PREPARATION AND CHARACTERIZATION OF OXIDES FOR THE USE OF SOLAR ENERGY”. Between UCM (Inorganic Chemistry Department, Chemistry Faculty) and Polytechnic Institute of Grenoble (Section of Genie Physique) (1981-1982).
2. “NON STOICHIOMETRY IN OXIDES”. Between UCM (Inorganic Chemistry Department, Chemistry Faculty) and the Chimie du Solide Laboratory of Bordeaux University (1983-1984).
3. “NON STOICHIOMETRY AND ELECTRONIC PROPERTIES OF OXIDES WITH PEROVSKITE STRUCTURE”. Between UCM (Inorganic Chemistry Department, Chemistry Faculty) and the Chimie du Solide Laboratory of Bordeaux University (1987).
4. “MICROSTRUCTURE, PHYSICO-CHEMICAL AND ELECTROCATALYTIC PROPERTIES OF $\text{La}_{1-x}\text{A}_x\text{FeO}_{3-y}$ (A=Sr, Ba) FERRITES”. Between UCM (Inorganic Chemistry Department, Chemistry Faculty) and the Chimie du Solide Laboratory of Bordeaux University (1983-1984).
5. “ELABORATION AND MAGNETIC CHARACTERIZATION OF HEXAGONAL FERRITES AND SPINELS FOR MAGNETIC RECORDING”. Between UCM (Inorganic Chemistry Department, Chemistry Faculty) and the Cristallographie Laboratory of CNRS and Fundamental Physics Department of Barcelona University (1987-1988).
6. “PREPARATION AND CHARACTERIZATION OF OF HIGH T_c SUPERCONDUCTING THIN FILMS, SEMICONDUCTORS FOR MAGNETIC SENSORS AND PIGMENTS OF Fe OXIDES”. Between

Complutense University and the Laboratoire des Materiaux et du Genie Physique, INPG-ENSPG-URA CNRS of Grenoble (1992).

7. "SYNTHESIS AND CHARACTERIZATION OF CERAMICS AND THIN FILMS OF SEMICONDUCTOR OXIDES FOR GAS SENSORS". Between Complutense University and the Laboratoire des Materiaux et du Genie Physique, INPG-ENSPG-URA CNRS of Grenoble (1993-1994).

Scientific Cooperation Program between Spain and Argentina:

- Research Project between the Bariloche Atomic Center (Argentina), Fundamental Physics Department of Barcelona University and the Inorganic Chemistry Department of the Faculty of Chemistry of Complutense University (1989).
- Research Project between the Bariloche Atomic Center (Argentina) and the Inorganic Chemistry Department of the Faculty of Chemistry of Complutense University (1992-1993).

Doctoral courses Director and Master with Quality Mention

- **Coordinator of the Doctorate Program with Quality Mention "Inorganic Materials", Chemistry Faculty of the Complutense University from 2004 to 2010**
- **Master Coordinator of Advanced Chemistry, Chemistry Faculty of the Complutense University from 2009-2010**

Courses and seminars

Doctorate courses:

- Mineral Chemistry: Microstructural characterization of mixed oxides (from 1985 to 1990-91).
- Electron microscopy of non-molecular solids (from 1990-91 to 2003-04).
- Nanomaterials (from 2004-05).
- Electron microscopy and associated techniques (from 2004-05).

Master in Materials of Technological Interest:

- Microstructure of non-molecular solids: I. Metal oxides (from 1987-88 to 1991-92).

Training Program for University Teaching:

- Design and Management of Research Projects in the field of Experimental Sciences.

Summer Courses:

- Course Director "Seeing atoms, understanding materials" (Summer Courses of Complutense University, El Escorial, Spain, 4-8 July, 2011).
- Course Director "Atomic resolution, a revolution in electron microscopy" (Summer Courses of Complutense University, El Escorial, Spain, 1-5 July, 2013).

Lectures given in summer courses:

- Electron microscopy on silicates (International University Menéndez Pelayo, Santander, Spain, 1983)
- Microscopy and electron diffraction (Complutense University, El Escorial, Spain, 1998)
- Electron microscopy in materials (Complutense University, El Escorial, Spain, 2000)
- Nanotechnologies and new materials (Complutense University, El Escorial, Spain, 2002)
- Nanomaterials (Complutense University, El Escorial, Spain, 2003).
- Bioceramics (Complutense University, El Escorial, Spain, 2003).
- Magnetic nanoparticles (Complutense University, El Escorial, Spain, 2004).
- New trends in transmission electron microscopy (Complutense University, El Escorial, Spain, 2011).
- Correcting aberrations, seeing atoms (Complutense University, El Escorial, Spain, 2013)

Awards:

- Royal Spanish Society of Chemistry (Novel Researcher), 1985.
- Best scientific work presented to the International Congress "Fifth International Conference on Ferrites", Bombay (India) 1989.
- Prize "Franco-Espagnol 2000", awarded by the "Société Française de Chimie".
- Royal Spanish Society of Chemistry (Inorganic Chemistry), 2006.

Professors invited by our research group:

- Prof. M. Labeau, Laboratoire des Matériaux et du Génie Physique, URA CNRS 1109, INPG, St. Martin d'Hères, France (1989).
- Dr. A. Caneiro, Bariloche Atomic Center, San Carlos de Bariloche, Argentina (1990-1991).
- Dr. S. Hovmoller, Department of Structural Chemistry, University of Stockholm, Sweden (1991).
- Dr. Y. Matsui, NIRIM, Japan (1998).
- Dr. Y. Bando, NIMS, Tsukuba, Japan (2003).
- Dr. O. Terasaki, University of Stockholm, Sweden (2013)

Other merits:

- Director of the **Non-Molecular Inorganic Materials** Research Group in the UCM 910519 (since 2000)
- Silver medal of the Faculty of Chemistry, Complutense University of Madrid (1990)
- Organizer of the First Hispanic-French Meeting of Inorganic Materials, Faculty of Chemistry, Complutense University, Madrid, Spain, 4-5 July, 1986.
- Responsible for the UCM of the Project: Preliminary study of a crystallization laboratory for space station (COLUMBUS), proposed by AEROSPATIALE Agency (1986).
- Director of postdoctoral work on "High Resolution Electron Microscopy in Ferrites" carried out by D. Stavros Nicolopoulos as fellow in the "Stays of Foreign Scientists and Technologists in Spain" program (1988)
- Chairman of the National Program of Materials of CICYT (1993-1995)
- Head of the Inorganic Chemistry I Department in the Chemistry Faculty of UCM (July 1994-June 2006)
- Director of the X-ray diffraction Research Support Center of the Complutense University since 1996
- Director of the ICTS-Singular scientific and technological infrastructures since July 2010.
- Elected honorary member of the "Materials Research Society of India" since 1995
- Member of the "International Advisory Board" of the Anales de Química Journal, International Edition, edited by Springer-Verlag since 1996.
- Member of the "International Advisory Board" of the "European Journal of Inorganic Chemistry" journal since 1998.

- Member of the "International Advisory Board" of the "Solid State Sciences" journal since 2001.
- Member of the "International Advisory Board" of the "Journal of Physics: Condensed Matter" 2003-2012.
- Chairman of the International Scientific Committee of the European Solid State Chemistry Group during 1999-2001.
- Member of the International Scientific Committee of the European Solid State Chemical Group since 1995.
- Member of the International Scientific Committee of the "FIGIPS in Inorganic Chemistry" since 1997
- Vice President of the Spanish Society for Microscopy (1998-2001)
- President of the Spanish Society for Microscopy (2001-2005)
- Member of the Advisory Committee of Singular Infrastructures (CAIS, Ministry of Science and Innovation) (2006-2009)
- Member of the Advisory Committee of the National Commission Evaluating the Research Activity: Secretary of the committee n° 2 (Chemistry), 2008.
- Member of the Advisory Committee of the National Commission Evaluating the Research Activity: President of the committee n° 2 (Chemistry), 2009.
- Member of the Advisory Committee of the National Commission Evaluating the Research Activity: President of the committee n° 2 (Chemistry), 2010.
- Member of the Advisory Committee of ICREA Program Senior of Catalonia (2007-2010).
- Member of the Committee of Experimental Sciences for the evaluation and accreditation of the teaching and researcher staff of the Basque Country Universities (UNIQUAL 2008-2009).
- Member of the Advisory Committee of the Andalusian Evaluation Agency (2008-2009).
- Member of the Jury Committee of the VI Arquímedes Contest 2007 for university students.
- Member of the Jury Committee of the VII Arquímedes Contest 2008 for university students.
- Member of the Jury Committee of the VIII Arquímedes Contest 2009 for university students.
- Member of the Jury Committee of the IX Arquímedes Contest 2010 for university students.
- Member of the Jury Committee of the X Arquímedes Contest 2011 for university students.
- Member of the Jury Committee of the XI Arquímedes Contest 2012 for university students.
- Member of the Jury Committee of the XII Arquímedes Contest 2013 for university students.
- Member of the Jury Committee of the XIII Arquímedes Contest 2014 for university students.
- Representative for the Community of Madrid in IMDEA NANOCIENCIA Foundation Patronage (since 2009).
- Representative for the teaching and researcher staff in the Complutense University Government Council (since 2008).
- Member of the Standing Committee in the Complutense University Government Council (since 2008).

- Member of the UCM General Foundation Patronage (since 2008).
- Responsible for the UCM of Materials Cluster in Moncloa Campus of International Excellence (since 2010).
- Member of the International Scientific Committee of the XVII International Microscopy Congress (Rio de Janeiro, Brazil, September 2010).
- Member of the International Scientific Committee of the XVIII International Microscopy Congress (Prague, Czech Republic, September 2014).