



Ignasi Fina Martinez

Generated from: Editor CVN de FECYT

Date of document: 27/01/2022

v 1.4.3

903707f2177107bc95d80647e6c2e4d0

This electronic file (PDF) has embedded CVN technology (CVN-XML). The CVN technology of this file allows you to export and import curricular data from and to any compatible data base. List of adapted databases available at: <http://cvn.fecyt.es/>



Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

During my career, I have focused on the study of **ferroelectric oxides** within the framework of different research areas: **multiferroics, photovoltaic, neuromorphic computing and silicon integrated materials**. Ferroelectric materials have memory effects, requiring small amounts of energy. This makes them interesting for all the mentioned research areas with the ultimate goal of developing **energetically efficient electronic devices**. I did my Ph.D. under the supervision of Prof. J. Fontcuberta and Dr. L. Fábrega at ICMAB-CSIC (Spain) mainly focusing on ferroelectric and magnetoelectric characterization of composite and single-phase multiferroics. After I joined the group of Prof. M. Alexe at MPI-Halle (Germany) and at University of Warwick (UK), where I mainly worked on spintronic functionalities of multiferroic systems and antiferromagnets. Coming back to Spain I joined the group from Prof. G. Catalan at ICN2, where I worked on projects related to technology transfer of ferroelectric materials. Since 2016 I am working at ICMAB-CSIC on different projects always focused on ferroelectric materials. Currently I am mainly focus on the study of functional properties of epitaxial ferroelectric hafnium oxide films and the interaction of light and ferroelectric order for **energy efficient memory applications**.

General quality indicators of scientific research

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

Proyectos:

- IP único de un Proyecto nacional (PID2019-107727RB-I00) financiado con 60.500€ por el gobierno de España vía MINECO, IP único de un proyecto Leonardo financiado con 38.500€ por la Fundación BBVA, Co-IP de un Proyecto regional de Transferencia de Tecnología (2019 LLAV-00050) financiado con 20.000€ por la Generalitat de Catalunya vía AGAUR, y Co-IP en un proyecto bilateral internacional competitivo con el Massachusetts Institute of Technology (20.000€) financiado por la Caixa.
- He sido responsable (IP único) de un Proyecto nacional (#ESRAM, MAT2015-73839-JIN) financiado con 169.500€ por el gobierno de España vía MINECO.
- He sido Co-IP en un proyecto interno competitivo del Instituto de Ciencia de Materiales de Barcelona (60.000€) financiado en el marco del programa Severo Ochoa.
- Se me concedió un proyecto Comfuturo II (150.000€) co-financiado por el CSIC y varias empresas.
- He recibido la financiación adicional de Ramón y Cajal (40.000€) y Juan de la Cierva (6.000€).

Becas/contratos competitivos obtenidos:

- Juan de la Cierva, Beatriu de Pinós A, Beatriu de Pinós B, A. Von Humboldt, Ramón y Cajal

Premios y menciones:

- Primer premio categoría investigadores postdoctorales de la XXXVI Reunión Bienal de la Real Sociedad Española de Física (excelencia en la trayectoria investigadora).
- Destacado como Emerging Investigator de la revista Materials Horizons (FI: 14.356).

Publicaciones:

- 78 artículos publicados desde 2009.
- Índice H de 21 (ISI, Web of Science) y de 23 (Google).



- >1600 citas (255 citas/año, en los últimos 5 años).
- Primer o segundo autor en artículos publicados en: Nature Materials, Nature Communications, Advanced Materials, Materials Horizons, Physical Review Letters, ...
- Soy primer autor (17), segundo autor (30), y/o autor de contacto (33) en el 69% de ellas,

Actividad en conferencias científicas internacionales:

- He impartido personalmente 40 charlas en conferencias internacionales, incluyendo 1 ponencia plenaria y 10 charlas invitadas.
- Organizador científico: 2 (1 de ellos en preparación)

Actividad como supervisor:

- 6 tesis doctorales (2 completadas, 4 en curso).
- 2 tesis de máster, 10 tesinas de grado (completadas).

Diseño y desarrollo de instalaciones científicas:

- Responsable del diseño y desarrollo del Laboratorio de caracterización ferroeléctrica y dieléctrica en el ICMAB-CSIC.

Actividades de transferencia de tecnología:

- Responsable de dos proyectos de transferencia de tecnología con la industria.
- Patente europea solicitada (2019).
- Miembro de la comisión de transferencia de tecnología del el Instituto de Ciencia de Materiales de Barcelona (ICMAB-CSIC).

Actividades de divulgación de la ciencia:

- Participación en varios programas de divulgación: MATHEROES, Bojos per la Física,...
- Participación en el diseño y desarrollo de un kit de disseminación para estudiantes.
- Miembro activo de la división de materia condensada de física (GEFES-RSEF).



Ignasi Fina Martinez

Surname(s): **Fina Martinez**
Name: **Ignasi**
ORCID: **0000-0003-4182-6194**
ScopusID: **26431302800**
ResearcherID: **G-2210-2011**
Date of birth: **16/06/1982**
Gender: **Male**
Nationality: **Spain**
Country of birth: **Spain**
Aut. region/reg. of birth: **Catalonia**
Contact province: **Barcelona**
City of birth: **Barcelona**
Contact address: **1.36, Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)**
Rest of contact address: **Campus Universitat Autònoma de Barcelona**
Postcode: **08193**
Contact country: **Spain**
Contact aut. region/reg.: **Catalonia**
Contact city: **Bellaterra**
Email: **ignasifinamartinez@gmail.com**
Personal web page: **<https://sites.google.com/view/ifinawebsite>**

Current professional situation

Employing entity: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) **Type of entity:** Public Research Body
Professional category: Tenured Scientist
City employing entity: Barcelona, Spain
Start date: 01/12/2021
Type of contract: Civil servant **Dedication regime:** Full time

Previous positions and activities

| | Employing entity | Professional category | Start date |
|---|--|---|------------|
| 1 | Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) | Ramon y Cajal research fellow | 01/09/2020 |
| 2 | Universitat de Barcelona | Associate Professor | 01/09/2017 |
| 3 | Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) | Contratado con cargo a proyecto (IP) | 16/02/2017 |
| 4 | Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) | Postdoctoral Research Fellow (Juan de la Cierva) | 16/03/2016 |
| 5 | Institut Català de Nanociència i Nanotecnologia (ICN2 – Catalan Institute of Nanoscience and Nanotechnology) | Postdoctoral Research Fellow (Beatriu de Pinós B) | 05/03/2015 |

| | Employing entity | Professional category | Start date |
|---|--|---|------------|
| 6 | University of Warwick | Postdoctoral Research Fellow (Beatriu de Pinós A) | 04/03/2014 |
| 7 | Max Planck Institute of Microstructure Physics | Postdoctoral Research Fellow (Beatriu de Pinós A) | 04/03/2013 |
| 8 | Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) | Postdoctoral Researcher | 11/05/2012 |
| 9 | Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) | PhD candidate | 01/11/2007 |

- 1** **Employing entity:** Institut de Ciència de Materials **Type of entity:** Public Research Body de Barcelona (ICMAB-CSIC)
Professional category: Ramon y Cajal research fellow
Start-End date: 01/09/2020 - 30/11/2021
- 2** **Employing entity:** Universitat de Barcelona **Type of entity:** University
Professional category: Associate Professor
Start-End date: 01/09/2017 - 31/01/2021
- 3** **Employing entity:** Institut de Ciència de Materials **Type of entity:** Public Research Body de Barcelona (ICMAB-CSIC)
Department: Laboratory of Multifunctional Oxides and Complex Structures
City employing entity: Barcelona, Spain
Professional category: Contratado con cargo a **Educational Management (Yes/No):** Yes proyecto (IP)
Start-End date: 16/02/2017 - 31/10/2020
Type of contract: Temporary employment contract
Performed tasks: I developed PI tasks during the ESRAM project, a national project funded by the Spanish government.
- 4** **Employing entity:** Institut de Ciència de Materials **Type of entity:** Public Research Body de Barcelona (ICMAB-CSIC)
Department: Laboratory of Multifunctional Oxides and Complex Structures
City employing entity: Barcelona, Spain
Professional category: Postdoctoral Research Fellow (Juan de la Cierva)
Start-End date: 16/03/2016 - 01/02/2017
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: During my Juan de la Cierva Fellow, I mainly focus my research on photovoltaic and resistive switching effects in ferroelectric materials.
- 5** **Employing entity:** Institut Català de Nanociència **Type of entity:** Public Research Body i Nanotecnologia (ICN2 – Catalan Institute of Nanoscience and Nanotechnology)
Department: Oxide Nanoelectronics
City employing entity: Barcelona, Spain
Professional category: Postdoctoral Research Fellow (Beatriu de Pinós B)
Start-End date: 05/03/2015 - 05/03/2016
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: During my position at ICN2, I developed a precompetitive device based on ferroelectric materials for car weight sensing. A demonstration set of this device is now installed, and working: <http://www.igsresearch.com/devel/piezo/>.



- 6** **Employing entity:** University of Warwick **Type of entity:** University
Department: Department of Physics
City employing entity: Warwick, United Kingdom
Professional category: Postdoctoral Research Fellow (Beatriu de Pinós A)
Start-End date: 04/03/2014 - 04/03/2015
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: During my stage in UK, I focused on spintronic functionalities in multiferroic systems.
- 7** **Employing entity:** Max Planck Institute of Microstructure Physics **Type of entity:** Public Research Body
Department: Experimental Department II
City employing entity: Halle (Saale), Germany
Professional category: Postdoctoral Research Fellow (Beatriu de Pinós A)
Start-End date: 04/03/2013 - 04/03/2015
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: During my postDoc positions at Max Planck Institute of Microstructure Physics(Germany), under the supervision of Prof. Marin Alexe and el Prof. Dietrich Hesse, I mainly worked on the characterisation of antiferromagnetic materials for being used in spintronic based devices.
- 8** **Employing entity:** Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) **Type of entity:** Public Research Body
Department: Institut de Ciència de Materials de Barcelona
City employing entity: Barcelona, Spain
Professional category: Postdoctoral Researcher
Start-End date: 11/05/2012 - 03/03/2013
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: I developed my first postDoc with Prof. Fontcuberta exploring the dynamics of a particular class of multiferroic materials: cycloidal antiferromagnets. Also I started my interest on the characterisation of multiferroic and ferroelectric films on silicon.
- 9** **Employing entity:** Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) **Type of entity:** Public Research Body
Department: Institut de Ciència de Materials de Barcelona
City employing entity: Barcelona, Spain
Professional category: PhD candidate
Start-End date: 01/11/2007 - 10/05/2012
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Performed tasks: Under the supervision of Dra. Lourdes Fábrega and el Prof. Josep Fontcuberta, I acquired my background on ferroelectric characterization of multiferroic materials in thin film form.



Education

University education

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

- 1 University degree:** Higher degree
Name of qualification: Master in Physics engineering
City degree awarding entity: Barcelona, Spain
Degree awarding entity: Universitat de Barcelona **Type of entity:** University
Date of qualification: 01/11/2007
Average mark: Excellent
- 2 University degree:** Higher degree
Name of qualification: Physics Degree
City degree awarding entity: Barcelona, Spain
Degree awarding entity: Universitat de Barcelona **Type of entity:** University
Date of qualification: 01/06/2006
Average mark: Good

Doctorates

Doctorate programme: PhD in Physics
Degree awarding entity: Universitat de Barcelona **Type of entity:** University
Date of degree: 10/05/2012
Thesis title: Ferroelectricity and magnetoelectric coupling in magnetic ferroelectrics and artificial multiferroic heterostructures
Thesis director: Lourdes Fábrega
Thesis co-director: Josep Fontcuberta
Obtained qualification: Cum Laude

Other postgraduate university studies

- 1 Postgraduate qualification:** Magnetic and Electric Characterization at Low Temperatures
Degree awarding entity: Institut de Ciència de Materials de Barcelona
Date of qualification: 11/2013
- 2 Postgraduate qualification:** Theoretical approaches in material science
Degree awarding entity: Institut de Ciència de Materials de Barcelona
Date of qualification: 11/2011
- 3 Postgraduate qualification:** Transmission Electron Microscopy: Advanced applications for material science and technology
Degree awarding entity: Institut de Ciència de Materials de Barcelona
Date of qualification: 10/2010



- 4 Postgraduate qualification:** Scanning Probe Microscopy: Fundamental tools for Nanotechnology
Degree awarding entity: Institut de Ciència de Materials de Barcelona
Date of qualification: 04/2007

Language skills

| Language | Listening skills | Reading skills | Spoken interaction | Speaking skills | Writing skills |
|------------|------------------|----------------|--------------------|-----------------|----------------|
| Portuguese | A1 | A1 | A1 | A1 | A1 |
| English | C1 | C1 | C1 | C1 | C1 |
| Catalan | C2 | C2 | C2 | C2 | C2 |
| Spanish | C2 | C2 | C2 | C2 | C2 |

Teaching experience

General teaching experience

- 1 Name of the course:** Fundamental Physics Laboratory course (72 hours)
University degree: Physics
Start date: 01/01/2018 **End date:** 01/06/2018
Entity: Universitat de Barcelona **Type of entity:** University
- 2 Name of the course:** Materials Characterization course (24 hours)
University degree: Physics
Start date: 01/01/2018 **End date:** 01/06/2018
Entity: Universitat de Barcelona **Type of entity:** University
- 3 Name of the course:** Electromagnetism Laboratory course (24 hours)
University degree: Physics
Start date: 01/09/2017 **End date:** 01/01/2018
Entity: Universitat de Barcelona **Type of entity:** University
- 4 Name of the course:** New trends on ferroelectric and ferromagnetic materials (1 hour)
University degree: Physics
Start date: 20/04/2017 **Type of entity:** University
Entity: Universitat de Barcelona
- 5 Name of the course:** Multiferroic materials (1 hour)
University degree: Nanoscience and nanotechnology
Start date: 17/03/2016 **Type of entity:** University
Entity: Universitat Autònoma de Barcelona
- 6 Name of the course:** Science and industry (1 hour)
University degree: Physics
Start date: 15/05/2014 **Type of entity:** University
Entity: Universitat de Barcelona



- 7 Name of the course:** Dielectric, ferroelectric and magnetoelectric characterization at low temperature (2 hours)
University degree: Workshop: Complex Materials: Magnetic and Electric Characterization at Low Temperatures
Entity: Institut de Ciència de Materials de Barcelona (CSIC)

Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Ferroelectric properties of epitaxial La-doped HfO₂ grown on different substrates
Type of project: Master thesis
Co-director of thesis: F. Sánchez; I. Fina
Entity: Universidad de Rennes I
Student: A.C. Robert
Obtained qualification: 7.25
Date of reading: 01/06/2021
- 2 Project title:** Propietats magnètiques de capes primes de FeRh flexibles”
Co-director of thesis: I. Fina
Entity: Universitat Autònoma de Barcelona
Student: Carlos Zarco
Obtained qualification: 8.3
Date of reading: 01/2021
- 3 Project title:** The influence of the top-contact metal on the ferroelectric properties of epitaxial ferroelectric Hf_{0.5}Zr_{0.5}O₂ thin films
Co-director of thesis: I. Fina
Entity: Universidad de Barcelona y KU Leuven (ERASMUS MUNDUS).
Student: T. Zakusylo
Obtained qualification: 9
Date of reading: 01/10/2020
- 4 Project title:** Memristive behaviour in BaTiO₃ and LuMnO₃ structures
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Roger Silvestre
Obtained qualification: 7.3
Date of reading: 06/2020
- 5 Project title:** “Stability of ferroelectric loops against thermal cycling”
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Hector Fernández
Obtained qualification: 7
Date of reading: 01/2020
- 6 Project title:** Development of a ferroelectric characterization set-up with temperature control
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Lluís San José i Martínez
Obtained qualification: 7.6
Date of reading: 06/2019



- 7** **Project title:** Enhanced tunnel electroresistance in ferroelectric/dielectric bilayer
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Sara Ramió Lafuente
Obtained qualification: 8.4
Date of reading: 06/2019
- 8** **Project title:** Photocurrent dependence on thickness in ferroelectric BaTiO₃ films
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Laia Pascua
Obtained qualification: 9
Date of reading: 06/2019
- 9** **Project title:** Relation between polarization y photocurrent phenomena in BaTiO₃ thin films
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Jaume Sebastia Martorell Serra
Obtained qualification: 7.9
Date of reading: 06/2019
- 10** **Project title:** Development of a room temperature characterization set for ferroelectrics materials
Entity: Universitat de Barcelona
Student: Mateu Jaume Masferrer
Obtained qualification: 8.1
Date of reading: 01/2019
- 11** **Project title:** Surface plamons creation in BaTiO₃ thin films to enhance photovoltaic efficiency
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Blai Barberà
Obtained qualification: 8.7
Date of reading: 01/2019
- 12** **Project title:** Tunnel electroresistance and coexisting effects in BaTiO₃ ferroelectric thin films
Type of project: Doctoral thesis
Co-director of thesis: I. Fina; J. Fontcuberta
Entity: Institut de Ciència de Materials de Barcelona (CSIC) **Type of entity:** State agency
City of entity: Barcelona, Catalonia, Spain
Student: Mengdi Qian
Obtained qualification: Excellent
Date of reading: 01/11/2018
- 13** **Project title:** Ferroelectric components to mimic neurons
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona
Student: Guillermo Prieto
Obtained qualification: 10 con honores
Date of reading: 07/2018



- 14** **Project title:** New materials for invisible memory devices
Entity: Universitat de Barcelona
Student: Carles Gómez
Obtained qualification: 9.5
Date of reading: 07/2018
- 15** **Project title:** Extrinsic effect in ferroelectric polarization characterization
Type of project: Master thesis
Co-director of thesis: I. Fina
Entity: Universitat de Barcelona **Type of entity:** University
City of entity: Barcelona, Spain
Student: Sergio Gonzalez
Obtained qualification: 7.8
Date of reading: 01/06/2018
- 16** **Project title:** Ferroelectric materials for photovoltaics
Type of project: Master thesis
Co-director of thesis: J. Fontcuberta; I. Fina
Entity: Universitat Politècnica de Catalunya **Type of entity:** University
City of entity: Barcelona, Spain
Student: Diego Vazquez
Obtained qualification: Excellent (9.7/10)
Date of reading: 01/09/2017
- 17** **Project title:** Photoelectric effects in BaTiO₃ ferroelectric thin films
Type of project: Doctoral thesis
Co-director of thesis: I. Fina; J. Fontcuberta
Entity: Institut de Ciència de Materials de Barcelona (CSIC) **Type of entity:** State agency
City of entity: Barcelona, Catalonia, Spain
Student: Fanmao Liu
Obtained qualification: Cum Laude
Date of reading: 01/07/2017
- 18** **Project title:** Thin films preparation by PLD of promising photovoltaic ceramics
Type of project: PhD stage
Entity: Sheffield Hallam University **Type of entity:** University
City of entity: Sheffield, United Kingdom
Student: Cristina Pascual-Gonzalez
Date of reading: 10/03/2017
- 19** **Project title:** Multiferroic tunnel structures
Type of project: Thesis mentoring
Entity: Martin-Luther-Universität Halle-Wittenberg **Type of entity:** University
City of entity: Halle, Germany
Student: Andy Quindeau
Date of reading: 01/03/2015
- 20** **Project title:** Multiferroic tunnel structures
Type of project: Thesis mentoring
Entity: Martin-Luther-Universität Halle-Wittenberg **Type of entity:** University



City of entity: Halle, Germany
Student: Geanina Apachitei
Date of reading: 01/03/2015

Teaching experience in courses and seminars for university teacher training

Type of event: Course
Name of the event: Certificado de Capacitación para la Enseñanza de la ciencia
Organising entity: Universitat de Barcelona **Type of entity:** University
Teaching date: 06/2006

Other activities/achievements not included above

- 1 Description of the activity:** Jury member of Bachelor thesis on Applied Physics
Organising entity: Universitat de Barcelona **Type of entity:** University
End date: 31/01/2018
- 2 Description of the activity:** After School teacher
City of activity: Castelldefels, Spain
Organising entity: Academia Gauss
End date: 09/2007

Scientific and technological experience

Scientific or technological activities

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

- 1 Name of the project:** Materiales multiferroicos energéticamente eficientes y compatibles industrialmente
Entity where project took place: ICMAB-CSIC **Type of entity:** Public Research Body
Funding entity or bodies:
Ministerio de Ciencia, Innovación y Universidades
City funding entity: Spain

Name of the programme: Plan nacional
Code according to the funding entity: PID2019-107727RB-I00
Start-End date: 01/06/2020 - 01/12/2023
Total amount: 60.500 €
- 2 Name of the project:** Electrocaloric effects in CMOS compatible ferroelectric oxides for cooling applications
Geographical area: Non EU International
Entity where project took place: Institut de Ciència de Materials, University of Cambridge, Politecnico di Milano
Name principal investigator (PI, Co-PI....): Ignasi Fina; Christian Rinaldi; Xavier Moyà; Florencio Sánchez
Funding entity or bodies:
Consejo Superior de Investigaciones Científicas **Type of entity:** State agency



Code according to the funding entity: LINKA20338
Start-End date: 01/01/2021 - 01/01/2023
Total amount: 23.712 €

3 Name of the project: Improved security magnetic memory device (ISMEM)
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona
Type of entity: State agency
Funding entity or bodies:
 AGENCIA DE GESTIO D'AJUTS UNIVERSITARIS I DE RECERCA
Start-End date: 01/09/2020 - 01/05/2021

4 Name of the project: Energy Saving Robust Antiferromagnetic Memory
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC) **Type of entity:** Public Research Body
City of entity: Barcelona, Spain
Name principal investigator (PI, Co-PI...): I. Fina
Funding entity or bodies:
 MINECO, Spanish Government **Type of entity:** Public Research Body
City funding entity: Madrid, Spain

Type of participation: Principal investigator
Code according to the funding entity: MAT2015-73839-JIN
Start-End date: 16/02/2017 - 16/02/2020 **Duration:** 3 years
Total amount: 169.500 €
Applicant's contribution: I am leading #ESRAM (Energy Saving Robust Antiferromagnetic Memory) project, which is focused on the investigation of the energy efficient electric control of antiferromagnetic order. Website: <https://sites.google.com/view/esram-project/main>.

5 Name of the project: Chalcogenide Ferroelectric Materials for Solar Energy Conversion
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** Non EU International
Entity where project took place: ICMAB, Barcelona, Spain and MIT, Massachusetts, USA
Name principal investigator (PI, Co-PI...): I. Fina; R. Jaramillo
Nº of researchers: 2
Funding entity or bodies:
 MIT and La Caixa (MIT-Spain "la Caixa" Foundation Seed Fund program) **Type of entity:** Business
City funding entity: Barcelona, Spain

Type of participation: Principal investigator
Start-End date: 01/01/2018 - 01/01/2020 **Duration:** 2 years
Total amount: 20.000 €
Applicant's contribution: In collaboration with Dr. R. Jaramillo from Massachusetts Institute of Technology (MIT), we planned a project in which we will explore a peculiar kind of material, called a ferroelectric semiconductor, that may offer a powerful, new mechanism for converting light into electricity.

6 Name of the project: Additional funding of Juan de la Cierva Incorporación Fellow
Type of project: Basic research (including archaeological digs, etc) **Geographical area:** National
Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)
City of entity: Bellaterra, Spain



Name principal investigator (PI, Co-PI....): I. Fina

Funding entity or bodies:

MINECO, Spanish Government

Type of entity: Public Research Body

City funding entity: Madrid, Spain

Type of participation: Principal investigator

Code according to the funding entity: IJCI-2014-19102

Start-End date: 16/03/2016 - 16/03/2018

Duration: 2 years

Total amount: 6.000 €

Applicant's contribution: I used the additional funding of the fellowship mainly to fund my work on photoferroelectric materials, and strength my links with several groups of different research institutes around Europe.

7 Name of the project: Towards oxide based electronics (TOBE)

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Entity where project took place: Max Planck Institute and Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

City of entity: Halle, Germany

Name principal investigator (PI, Co-PI....): F. Miletto

Funding entity or bodies:

European Union

Code according to the funding entity: MP1308

Start-End date: 2014 - 2018

Duration: 4 years

Applicant's contribution: Participate in TOBE project has allowed me to strength relations with different groups from different research institutes across Europe.

8 Name of the project: Functionality of oxide interfaces

Type of project: Basic research (including archaeological digs, etc)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Max Planck Institute of Microstructure Physics

Funding entity or bodies:

Deutsche Forschungsgemeinschaft (German government)

Code according to the funding entity: SFB 762

Start-End date: 2008 - 2015

Duration: 7 years

Total amount: 955.000 €

Applicant's contribution: I participated in this big German consortium (24 institutions) from my position in Max Planck Institute with my work related to spintronic functionalities in multiferroic structures. The budget amount (955.000€) only refers to my institution sub-project and during the period that I participated.

9 Name of the project: Responsive multifunctional oxides and hybrid structures

Type of project: Basic research (including archaeological digs, etc)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Name principal investigator (PI, Co-PI....): F. Sánchez

Funding entity or bodies:

CENTRO DE ACUSTICA APLICADA Y
EVALUACION NO DESTRUCTIVA

Type of entity: Associations and Groups

Ministerio de Ciencia e Innovación (Spanish government)



Name of the programme: Plan Nacional de Materiales

Code according to the funding entity: MAT2011-29269-C03-01

Start-End date: 2011 - 2014

Duration: 3 years

Total amount: 490.000 €

Applicant's contribution: I contributed to this national project leading the ferroelectric and magnetoelectric characterization work-package with strong collaboration with project partners from Universitat de Barcelona and Universitat Politècnica de Catalunya.

10 Name of the project: Grup Recerca Consolidat de Catalunya: Materials Magnètics i Òxids Funcionals

Type of project: Basic research (including archaeological digs, etc)

Geographical area: Regional

Degree of contribution: Researcher

Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Name principal investigator (PI, Co-PI...): J. Fontcuberta

Funding entity or bodies:

Generalitat de Catalunya (Catalan Government)

Code according to the funding entity: 2009 SGR 00376

Start-End date: 2010 - 2014

Duration: 4 years

Total amount: 52.000 €

11 Name of the project: Interfacing oxides (IFOX)

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Entity where project took place: Max Planck Institute of Microstructure Physics

City of entity: Halle, Germany

Name principal investigator (PI, Co-PI...): D. Hesse

Funding entity or bodies:

European Union

Code according to the funding entity: FP7-NMP3-LA-2010-246102

Start-End date: 2007 - 2014

Duration: 7 years

Applicant's contribution: From my position in Max Planck Institute I contributed with my work related to spintronic functionalities in multiferroic structures.

12 Name of the project: Materiales avanzados y nanotecnologías para dispositivos y sistemas eléctricos, electrónicos y magnetoelectrónicos innovadores (NANOSELECT) - Advanced Materials and Nanotechnologies for electric, electronic, and magnetoelectric devices.

Type of project: Basic research (including archaeological digs, etc)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Funding entity or bodies:

Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Name of the programme: CONSOLIDER

Code according to the funding entity: CSD2007-00041

Start-End date: 2007 - 2012

Total amount: 700.000 €

Applicant's contribution: I led the ferroelectric/dielectric/magnetoelectric characterization of the project.



13 Name of the project: Óxidos multifuncionales para la manipulación de espines y comunicaciones ágiles - Multifunctional oxides for spin manipulation and fast communication

Type of project: Basic research (including archaeological digs, etc)

Geographical area: National

Degree of contribution: Researcher

Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Name principal investigator (PI, Co-PI...): J. Fontcuberta

Funding entity or bodies:

Ministerio de Ciencia e Innovación (Spanish government)

Name of the programme: Plan Nacional de Materiales

Code according to the funding entity: MAT2008-06761-C03-01

Start-End date: 2008 - 2011

Duration: 3 years

Total amount: 544.500 €

Applicant's contribution: I led the ferroelectric/dielectric/magnetolectric characterization work-package of the project.

14 Name of the project: Manipulate the coupling in multiferroic thin films (MaCoMuFi)

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Degree of contribution: Researcher

Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Name principal investigator (PI, Co-PI...): W. Prellier; J. Fontcuberta

Funding entity or bodies:

European Union

Code according to the funding entity: 033221-UE

Start-End date: 2006 - 2009

Total amount: 455.000 €

Applicant's contribution: From my position at Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), I led the ferroelectric/dielectric/magnetolectric materials characterization, with strong collaboration with groups from Netherlands (B. Noheda, University of Groningen) and Switzerland (Paruch, University of Geneva).

15 Name of the project: Thin Films For Novel Oxide Devices (THIOX)

Type of project: Basic research (including archaeological digs, etc)

Geographical area: European Union

Entity where project took place: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

City of entity: Barcelona, Spain

Funding entity or bodies:

European Science Foundation

Type of participation: Team member

Code according to the funding entity: FP6-NMP-33221

Start-End date: 06/2003 - 03/2008

Duration: 5 years

Applicant's contribution: I performed ferroelectric/dielectric/magnetolectric characterization.



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

1 Name of the project: Nuevas memorias flexibles basadas en antiferromagnéticos

Type of project: Industrial research

Degree of contribution: Scientific coordinator

Name principal investigator (PI, Co-PI....): I. Fina

Funding entity or bodies:

La Fábrica Nacional de Moneda y Timbre

Type of entity: Business

City funding entity: Burgos, Spain

Code according to the funding entity: 45196522-DI

Start date: 09/2014

Duration: 5 months

Total amount: 30.000 €

Relevant results: The project is continuation of my previous works on the study of antiferromagnetic materials for memory applications. The objective was the implementation of selected antiferromagnetic materials in flexible substrates for their integration in paper to be part of notes or certificates. The results were that the materials can be included in particular flexible substrates that (awaiting more research) can not be integrated properly in paper.

2 Name of the project: Vehicle classification system based on ferroelectric materials

Type of project: Industrial research

Degree of contribution: Scientific coordinator

Name principal investigator (PI, Co-PI....): I. Fina

Funding entity or bodies:

IGSresearch

Type of entity: Business

City funding entity: Tarragona, Spain

Code according to the funding entity: A150010

Start date: 05/04/2014

Duration: 1 year

Total amount: 15.000 €

Relevant results: This work follows up my expertise on ferroelectric materials. In particular, it was aimed to take advantage of the high piezoelectric coefficient of ferroelectric materials to use them to prototype an energy efficient device able to detect and classify vehicles. The prototype was developed, and it is available in the portfolio of the funding company IGSresearch, although it has been commercialized to the best of my knowledge.

Scientific and technological activities

Scientific production

H index: 25

Date of application: 26/01/2022

Fuente de Índice H: WOS

Publications, scientific and technical documents

- 1** T. Song; S. Estandía; H. Tan; N. Dix; J. Gàzquez; I. Fina; F. Sánchez. Positive Effect of Parasitic Monoclinic Phase of Hf_{0.5}Zr_{0.5}O₂ on Ferroelectric Endurance. *Advanced Electronic Materials*. 8 - 1, 2022. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114688686&doi=10.1002%2faelm.202100420&partnerID=40&md5=c93e5000c6222a03434c50289a1c8a0>>.
Type of production: Scientific paper **Format:** Journal
- 2** Y. Sheng; I. Fina; M. Gospodinov; A.M. Schankler; A.M. Rappe; J. Fontcuberta. Bulk photovoltaic effect in hexagonal LuMnO₃ single crystals. *Physical Review B*. 104 - 18, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85121112233&doi=10.1103%2fPhysRevB.104.184116&partnerID=40&md5=9112aecfa242cfcf0564dbf2824a869>>.
Type of production: Scientific paper **Format:** Journal
- 3** S. Estandía; J. Gàzquez; M. Varela; N. Dix; M. Qian; R. Solanas; I. Fina; F. Sánchez. Critical effect of the bottom electrode on the ferroelectricity of epitaxial Hf_{0.5}Zr_{0.5}O₂ thin films. *Journal of Materials Chemistry C*. 9 - 10, pp. 3486 - 3492. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85102924479&doi=10.1039%2fd0tc05853j&partnerID=40&md5=8ecf0ae516cc027210a20ee31174110a>>.
Type of production: Scientific paper **Format:** Journal
- 4** P. MacHado; I. Canõ; C. Menéndez; C. Cazorla; H. Tan; I. Fina; M. Campoy-Quiles; C. Escudero; M. Tallarida; M. Coll. Enhancement of phase stability and optoelectronic performance of BiFeO₃ thin films: Via cation co-substitution. *Journal of Materials Chemistry C*. 9 - 1, pp. 330 - 339. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099206424&doi=10.1039%2fd0tc04304d&partnerID=40&md5=022af3fad7116632eef7a2b1ed60de75>>.
Type of production: Scientific paper **Format:** Journal
- 5** I. Fina; F. Sánchez. Epitaxial Ferroelectric HfO₂ Films: Growth, Properties, and Devices. *ACS Applied Electronic Materials*. 3 - 4, pp. 1530 - 1549. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85105702952&doi=10.1021%2facsaelm.1c00110&partnerID=40&md5=0707672b40b9bdce2f55d0b949e0cbdb>>.
Type of production: Scientific paper **Format:** Journal
- 6** V.A. Turchenko; S.V. Trukhanov; V.G. Kostishin; F. Damay; F. Porcher; D.S. Klygach; M.G. Vakhitov; D. Lyakhov; D. Michels; B. Bozzo; I. Fina; M.A. Almessiere; Y. Slimani; A. Baykal; D. Zhou; A.V. Trukhanov. Features of structure, magnetic state and electrodynamic performance of SrFe_{12-x}In_xO₁₉. *Scientific Reports*. 11 - 1, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85115208104&doi=10.1038%2fs41598-021-97684-8&partnerID=40&md5=a3381e78d91c1cfebe24e24c39a98ad>>.
Type of production: Scientific paper **Format:** Journal



7

D. Han; R. Moalla; I. Fina; V.M. Giordano; M. D'Esperonnat; C. Botella; G. Grenet; R. Debord; S. Pailhès; G. Saint-Girons; R. Bachelet. Giant Tuning of Electronic and Thermoelectric Properties by Epitaxial Strain in p-Type Sr-Doped LaCrO₃ Transparent Thin Films. ACS Applied Electronic Materials. 3 - 8, pp. 3461 - 3471. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85112555987&doi=10.1021%2facsaelm.1c00425&partnerID=40&md5=ea9ffc52ba17d8bcc1c4ba6efc388920>>.

Type of production: Scientific paper

Format: Journal

8

A. Castets; I. Fina; J.R. Guarín; J. Oró-Solé; C. Frontera; C. Ritter; J. Fontcuberta; A. Fuertes. High-Temperature Synthesis and Dielectric Properties of LaTaON₂. Inorganic Chemistry. 60 - 21, pp. 16484 - 16491. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85117577764&doi=10.1021%2facsa.inorgchem.1c02325&partnerID=40&md5=84ba686f993282580c46b26eb23c8>>.

Type of production: Scientific paper

Format: Journal

9

T. Song; H. Tan; R. Bachelet; G. Saint-Girons; I. Fina; F. Sánchez. Impact of la Concentration on Ferroelectricity of La-Doped HfO₂ Epitaxial Thin Films. ACS Applied Electronic Materials. 3 - 11, pp. 4809 - 4816. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85118626497&doi=10.1021%2facsaelm.1c00672&partnerID=40&md5=fc2703348ce6eb0d0ebc27adf51291fa>>.

Type of production: Scientific paper

Format: Journal

10

S. Estandía; T. Cao; R. Mishra; I. Fina; F. Sánchez; J. Gazquez. Insights into the atomic structure of the interface of ferroelectric Hf_{0.5}Zr_{0.5}O₂ grown epitaxially on La_{2/3}Sr_{1/3}MnO₃. Physical Review Materials. 5 - 7, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111536700&doi=10.1103%2fPhysRevMaterials.5.074410&partnerID=40&md5=1a788a155b0f2263c966645016>>.

Type of production: Scientific paper

Format: Journal

11

X. Long; H. Tan; F. Sánchez; I. Fina; J. Fontcuberta. Non-volatile optical switch of resistance in photoferroelectric tunnel junctions. Nature Communications. 12 - 1, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85099485248&doi=10.1038%2fs41467-020-20660-9&partnerID=40&md5=4777720a1835bf73ea7d2da77a9b582>>.

Type of production: Scientific paper

Format: Journal

12

M. Cervo Sulzbach; H. Tan; S. Estandía; J. Gàzquez; F. Sánchez; I. Fina; J. Fontcuberta. Polarization and Resistive Switching in Epitaxial 2 nm Hf_{0.5}Zr_{0.5}O₂ Tunnel Junctions. ACS Applied Electronic Materials. 3 - 8, pp. 3657 - 3666. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85114030631&doi=10.1021%2facsaelm.1c00604&partnerID=40&md5=ac91e5a3d8bf15f673a008d643897cea>>.

Type of production: Scientific paper

Format: Journal

13

T. Song; H. Tan; N. Dix; R. Moalla; J. Lyu; G. Saint-Girons; R. Bachelet; F. Sánchez; I. Fina. Stabilization of the Ferroelectric Phase in Epitaxial Hf_{1-x}Zr_xO₂ Enabling Coexistence of Ferroelectric and Enhanced Piezoelectric Properties. ACS Applied Electronic Materials. 3 - 5, pp. 2106 - 2113. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85106623140&doi=10.1021%2facsaelm.1c00122&partnerID=40&md5=dd4465aefb0dd6284548a7828b2858cb>>.

Type of production: Scientific paper

Format: Journal

14

V. Turchenko; V.G. Kostishin; S. Trukhanov; F. Damay; M. Balasoiu; B. Bozzo; I. Fina; V.V. Burkhovetsky; S. Polosan; M.V. Zdorovets; A.L. Kozlovskiy; K.A. Astapovich; A. Trukhanov. Structural features, magnetic and ferroelectric properties of SrFe_{10.8}In_{1.2}O₁₉ compound. Materials Research Bulletin. 138, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85100064163&doi=10.1016%2fj.materresbull.2021.111236&partnerID=40&md5=f92fbc27aaf6941c2ce38bcd9a68>>.

Type of production: Scientific paper

Format: Journal



- 15** Y. Sheng; I. Fina; M. Gospodinov; J. Fontcuberta. Switchable photovoltaic response in hexagonal LuMnO₃ single crystals. *Applied Physics Letters*. 118 - 23, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85107555609&doi=10.1063%2f5.0053379&partnerID=40&md5=74037525edde0bd04a9b2f6831694f75>>.
Type of production: Scientific paper **Format:** Journal
- 16** A.V. Trukhanov; V.A. Turchenko; V.G. Kostishin; F. Damay; F. Porcher; N. Lupu; B. Bozzo; I. Fina; S. Polosan; M.V. Silibin; M.M. Salem; D.I. Tishkevich; S.V. Trukhanov. The origin of the dual ferroic properties in quasi-centrosymmetrical SrFe_{12-x}In_xO₁₉ hexaferrites. *Journal of Alloys and Compounds*. 886, 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85111203541&doi=10.1016%2fj.jallcom.2021.161249&partnerID=40&md5=8928a65b058ba33edc2c557df37a991>>.
Type of production: Scientific paper **Format:** Journal
- 17** T. Song; R. Bachelet; G. Saint-Girons; N. Dix; I. Fina; F. Sánchez. Thickness effect on the ferroelectric properties of La-doped HfO₂ epitaxial films down to 4.5 nm. *Journal of Materials Chemistry C*. 9 - 36, pp. 12224 - 12230. 2021. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85115844647&doi=10.1039%2fd1tc02512k&partnerID=40&md5=5760d3146202d994dd432aee116a009e>>.
Type of production: Scientific paper **Format:** Journal
- 18** M.C. Sulzbach; S. Estandía; J. Gàzquez; F. Sánchez; I. Fina; J. Fontcuberta. Blocking of Conducting Channels Widens Window for Ferroelectric Resistive Switching in Interface-Engineered Hf_{0.5}Zr_{0.5}O₂ Tunnel Devices. *Advanced Functional Materials*. 30 - 32, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086239457&doi=10.1002%2fdmf.202002638&partnerID=40&md5=dd4f94aab7b290e4ca3a6114b3a6efaa>>.
Type of production: Scientific paper **Format:** Journal
- 19** V. Turchenko; V.G. Kostishyn; S. Trukhanov; F. Damay; F. Porcher; M. Balasoiu; N. Lupu; B. Bozzo; I. Fina; A. Trukhanov; J. Waliszewski; K. Recko; S. Polosan. Crystal and magnetic structures, magnetic and ferroelectric properties of strontium ferrite partially substituted with in ions. *Journal of Alloys and Compounds*. 821, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076968427&doi=10.1016%2fj.jallcom.2019.153412&partnerID=40&md5=6b72ab5eb981d9b827a5fce97a204ae>>.
Type of production: Scientific paper **Format:** Journal
- 20** S. Filippone; B. Zhao; S. Niu; N.Z. Koocher; D. Silevitch; I. Fina; J.M. Rondinelli; J. Ravichandran; R. Jaramillo. Discovery of highly polarizable semiconductors BaZr S₃ and Ba₃ Zr₂ S₇. *Physical Review Materials*. 4 - 9, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092574129&doi=10.1103%2fPhysRevMaterials.4.091601&partnerID=40&md5=6654675a8a4632b7f3bf58f87a>>.
Type of production: Scientific paper **Format:** Journal
- 21** S. Estandía; N. Dix; M.F. Chisholm; I. Fina; F. Sánchez. Domain-Matching Epitaxy of Ferroelectric Hf_{0.5}Zr_{0.5}O₂(111) on La_{2/3}Sr_{1/3}MnO₃(001). *Crystal Growth and Design*. 20 - 6, pp. 3801 - 3806. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087339341&doi=10.1021%2ffacs.cgd.0c00095&partnerID=40&md5=01dfef9fcc3d8f43268e6af1f958684a>>.
Type of production: Scientific paper **Format:** Journal
- 22** J. Oró-Solé; I. Fina; C. Frontera; J. Gàzquez; C. Ritter; M. Cunquero; P. Loza-Alvarez; S. Conejeros; P. Alemany; E. Canadell; J. Fontcuberta; A. Fuertes. Engineering Polar Oxynitrides: Hexagonal Perovskite BaWON₂. *Angewandte Chemie - International Edition*. 59 - 42, pp. 18395 - 18399. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089514485&doi=10.1002%2ffanie.202006519&partnerID=40&md5=05f32f940dfec500824ab5509674c442>>.
Type of production: Scientific paper **Format:** Journal



- 23** T. Song; R. Bachelet; G. Saint-Girons; R. Solanas; I. Fina; F. Sanchez. Epitaxial ferroelectric La-doped Hf_{0.5}Zr_{0.5}O₂ thin films. ACS Applied Electronic Materials. 2 - 10, pp. 3221 - 3232. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096565513&doi=10.1021%2facsaelm.0c00560&partnerID=40&md5=3af5acbf281bedad64e275eed6ef6d4e>>.
Type of production: Scientific paper **Format:** Journal
- 24** J. Lyu; I. Fina; F. Sánchez. Fatigue and retention in the growth window of ferroelectric Hf_{0.5}Zr_{0.5}O₂ thin films. Applied Physics Letters. 117 - 7, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090153859&doi=10.1063%2f5.0017738&partnerID=40&md5=d7de935a3bc5194fdd07cb0a24b45198>>.
Type of production: Scientific paper **Format:** Journal
- 25** I. Fina; N. Dix; E. Menéndez; A. Crespi; M. Foerster; L. Aballe; F. Sánchez; J. Fontcuberta. Flexible Antiferromagnetic FeRh Tapes as Memory Elements. ACS Applied Materials and Interfaces. 12 - 13, pp. 15389 - 15395. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082780061&doi=10.1021%2facsam.0c00704&partnerID=40&md5=1abd4d7ee70c0fe4824d4b0ba49195fd>>.
Type of production: Scientific paper **Format:** Journal
- 26** J. Lyu; T. Song; I. Fina; F. Sánchez. High polarization, endurance and retention in sub-5 nm Hf_{0.5}Zr_{0.5}O₂ films. Nanoscale. 12 - 20, pp. 11280 - 11287. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085586113&doi=10.1039%2fd0nr02204g&partnerID=40&md5=3b90003220db35d3d5ecd0f783e496f3>>.
Type of production: Scientific paper **Format:** Journal
- 27** M. Foerster; E. Menéndez; E. Coy; A. Quintana; C. Gómez-Olivella; D. Esqué De Los Ojos; O. Vallcorba; C. Frontera; L. Aballe; J. Nogués; J. Sort; I. Fina. Local manipulation of metamagnetism by strain nanopatterning. Materials Horizons. 7 - 8, pp. 2056 - 2062. 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089576687&doi=10.1039%2fd0mh00601g&partnerID=40&md5=1186242b26fc6c589c0713c82dbddd94>>.
Type of production: Scientific paper **Format:** Journal
- 28** V.A. Turchenko; A. Trukhanov; S. Trukhanov; F. Damay; F. Porcher; M. Balasoiu; N. Lupu; H. Chiriac; B. Bozzo; I. Fina; J. Waliszewski; V.G. Kostishyn; K. Recko; S. Polosan. Magnetic and ferroelectric properties, crystal and magnetic structures of SrFe_{11.9}In_{0.1}O₁₉. Physica Scripta. 95 - 4, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082295735&doi=10.1088%2f1402-4896%2fab60fb&partnerID=40&md5=9b0d646d71b51e3125ccfa410ebd313>>.
Type of production: Scientific paper **Format:** Journal
- 29** I. Fina; J. Fontcuberta. Strain and voltage control of magnetic and electric properties of FeRh films. Journal of Physics D: Applied Physics. 53 - 2, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075910819&doi=10.1088%2f1361-6463%2fab4abd&partnerID=40&md5=3a3b0eee2a1546e0cd5df333ccff9e3>>.
Type of production: Scientific paper **Format:** Journal
- 30** J.W. Adkins; I. Fina; F. Sánchez; S.R. Bakaul; J.T. Abiade. Thermal evolution of ferroelectric behavior in epitaxial Hf_{0.5}Zr_{0.5}O₂. Applied Physics Letters. 117 - 14, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092320666&doi=10.1063%2f5.0015547&partnerID=40&md5=9f11a225cf697ff05298927c13586ead>>.
Type of production: Scientific paper **Format:** Journal
- 31** M.C. Sulzbach; S. Estandía; X. Long; J. Lyu; N. Dix; J. Gàzquez; M.F. Chisholm; F. Sánchez; I. Fina; J. Fontcuberta. Unraveling Ferroelectric Polarization and Ionic Contributions to Electroresistance in Epitaxial Hf_{0.5}Zr_{0.5}O₂ Tunnel Junctions. Advanced Electronic Materials. 6 - 1, 2020. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075074661&doi=10.1002%2faelm.201900852&partnerID=40&md5=50cb9b2b0d2b860cd5b6344ca459d377>>.
Type of production: Scientific paper **Format:** Journal



- 32** M. Qian; I. Fina; F. Sánchez; J. Fontcuberta. Asymmetric Resistive Switching Dynamics in BaTiO₃ Tunnel Junctions. *Advanced Electronic Materials*. 5 - 1, 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85056481770&doi=10.1002%2faelm.201800407&partnerID=40&md5=0c630fc31c771ca87bf9941cf95b9dad>>.
Type of production: Scientific paper **Format:** Journal
- 33** P. Machado; M. Scigaj; J. Gazquez; E. Rueda; A. Sánchez-Díaz; I. Fina; M. Gibert-Roca; T. Puig; X. Obradors; M. Campoy-Quiles; M. Coll. Band Gap Tuning of Solution-Processed Ferroelectric Perovskite BiFe 1- x Co x O 3 Thin Films. *Chemistry of Materials*. 31 - 3, pp. 947 - 954. 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85061640717&doi=10.1021%2facscemater.8b04380&partnerID=40&md5=ce3525bda5189b941d6bbf03ecbe>>.
Type of production: Scientific paper **Format:** Journal
- 34** M. Qian; I. Fina; F. Sánchez; J. Fontcuberta. Complementary Resistive Switching Using Metal–Ferroelectric–Metal Tunnel Junctions. *Small*. 15 - 11, 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85061509701&doi=10.1002%2fsmall.201805042&partnerID=40&md5=153292c62e7867b74b1b1bc08acfb5c9>>.
Type of production: Scientific paper **Format:** Journal
- 35** S. González-Casal; I. Fina; F. Sánchez; J. Fontcuberta. Direct Reversible Magnetoelectric Coupling in a Ferroelectric/Ferromagnetic Structure Controlled by Series Resistance Engineering. *ACS Applied Electronic Materials*. 1 - 9, pp. 1937 - 1944. 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091095859&doi=10.1021%2facsaelm.9b00427&partnerID=40&md5=af35e954c2dc44d19e334182cf344b30>>.
Type of production: Scientific paper **Format:** Journal
- 36** M. Foerster; I. Fina; S. Finizio; B. Casals; A. Mandziak; F. Fauth; L. Aballe. Disclosing odd symmetry, strain driven magnetic response of Co on Pt/PMN-PT (0 1 1). *Journal of Physics Condensed Matter*. 31 - 8, 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85060392175&doi=10.1088%2f11361-648X%2faaf7ee&partnerID=40&md5=887675d2238b66579cf72b9b229433b0>>.
Type of production: Scientific paper **Format:** Journal
- 37** E. Menéndez; V. Sireus; A. Quintana; I. Fina; B. Casals; R. Cichelero; M. Kataja; M. Stengel; G. Herranz; G. Catalán; M.D. Baró; S. Suriñach; J. Sort. Disentangling Highly Asymmetric Magnetoelectric Effects in Engineered Multiferroic Heterostructures. *Physical Review Applied*. 12 - 1, 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073645020&doi=10.1103%2fPhysRevApplied.12.014041&partnerID=40&md5=aa1ccbb4b4ecb6c2fbf5c62c0f2>>.
Type of production: Scientific paper **Format:** Journal
- 38** S. Estandía; N. Dix; J. Gazquez; I. Fina; J. Lyu; M.F. Chisholm; J. Fontcuberta; F. Sánchez. Engineering Ferroelectric Hf_{0.5}Zr_{0.5}O₂ Thin Films by Epitaxial Stress. *ACS Applied Electronic Materials*. 1 - 8, pp. 1449 - 1457. 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075069396&doi=10.1021%2facsaelm.9b00256&partnerID=40&md5=88cf8b4a3beccc03627407d6719cc8d9>>.
Type of production: Scientific paper **Format:** Journal
- 39** J. Lyu; I. Fina; R. Bachelet; G. Saint-Girons; S. Estandía; J. Gázquez; J. Fontcuberta; F. Sánchez. Enhanced ferroelectricity in epitaxial Hf_{0.5}Zr_{0.5}O₂ thin films integrated with Si(001) using SrTiO₃ templates. *Applied Physics Letters*. 114 - 22, 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85066873736&doi=10.1063%2f1.5096002&partnerID=40&md5=d0142086dfa15a333d5ecc94d20b8c62>>.
Type of production: Scientific paper **Format:** Journal
- 40** J. Lyu; I. Fina; J. Fontcuberta; F. Sánchez. Epitaxial Integration on Si(001) of Ferroelectric Hf 0.5 Zr 0.5 O 2 Capacitors with High Retention and Endurance. *ACS Applied Materials and Interfaces*. 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85061247623&doi=10.1021%2facsam.8b18762&partnerID=40&md5=d6762aa482c85a4d2f57141183e5b7a7>>.

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

- 41** J. Lyu; I. Fina; R. Solanas; J. Fontcuberta; F. Sanchez. Growth Window of Ferroelectric Epitaxial Hf_{0.5}Zr_{0.5}O₂ Thin Films. ACS Applied Electronic Materials. 1 - 2, pp. 220 - 228. 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85066877473&doi=10.1021%2facsaelm.8b00065&partnerID=40&md5=8034f68d9e9e662ec36a42337963ffe1>>.
- Type of production:** Scientific paper **Format:** Journal
- 42** M. Qian; I. Fina; M.C. Sulzbach; F. Sánchez; J. Fontcuberta. Synergetic Electronic and Ionic Contributions to Electroresistance in Ferroelectric Capacitors. Advanced Electronic Materials. 5 - 3, 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85060850395&doi=10.1002%2faelm.201800646&partnerID=40&md5=8affc7c2b64ea56ffc4a3b82339943ff>>.
- Type of production:** Scientific paper **Format:** Journal
- 43** M. Coll; J. Fontcuberta; M. Althammer; M. Bibes; H. Boschker; A. Calleja; G. Cheng; M. Cuoco; R. Dittmann; B. Dkhil; I. El Baggari; M. Fanciulli; I. Fina; E. Fortunato; C. Frontera; S. Fujita; V. Garcia; S.T.B. Goennenwein; C.-G. Granqvist; J. Grollier; R. Gross; A. Hagfeldt; G. Herranz; K. Hono; E. Houwman; M. Huijben; A. Kalaboukhov; D.J. Keeble; G. Koster; L.F. Kourkoutis; J. Levy; M. Lira-Cantu; J.L. MacManus-Driscoll; J. Mannhart; R. Martins; S. Menzel; T. Mikolajick; M. Napari; M.D. Nguyen; G. Niklasson; C. Paillard; S. Panigrahi; G. Rijnders; F. Sánchez; P. Sanchis; S. Sanna; D.G. Schlom; U. Schroeder; K.M. Shen; A. Siemon; M. Spreitzer; H. Sukegawa; R. Tamayo; J. van den Brink; N. Pryds; F.M. Granozio. Towards Oxide Electronics: a Roadmap. Applied Surface Science. 482, pp. 1 - 93. 2019. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85064343610&doi=10.1016%2fj.apsusc.2019.03.312&partnerID=40&md5=fad08c57b7162ae7977c9373edf0bde>>.
- Type of production:** Scientific paper **Format:** Journal
- 44** J. Lyu; S. Estandía; J. Gazquez; M.F. Chisholm; I. Fina; N. Dix; J. Fontcuberta; F. Sánchez. Control of Polar Orientation and Lattice Strain in Epitaxial BaTiO₃ Films on Silicon. ACS Applied Materials and Interfaces. 10 - 30, pp. 25529 - 25535. 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85049826876&doi=10.1021%2facsam.8b07778&partnerID=40&md5=07828d7bc83c3eb012ad46936f991e21>>.
- Type of production:** Scientific paper **Format:** Journal
- 45** F. Liu; I. Fina; G. Sauthier; F. Sánchez; A.M. Rappe; J. Fontcuberta. Control of the Polarization of Ferroelectric Capacitors by the Concurrent Action of Light and Adsorbates. ACS Applied Materials and Interfaces. 10 - 28, pp. 23968 - 23975. 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85048891686&doi=10.1021%2facsam.8b05751&partnerID=40&md5=a4e943c8f492ff399fd5efa497657361>>.
- Type of production:** Scientific paper **Format:** Journal
- 46** E. Coy; I. Fina; K. Załuski; A. Krysztofik; L. Yate; L. Rodriguez; P. Graczyk; H. Głowiński; C. Ferrater; J. Dubowik; M. Varela. High-temperature Magnetodielectric Bi (Fe_{0.5}Mn_{0.5}) O₃ Thin Films with Checkerboard-Ordered Oxygen Vacancies and Low Magnetic Damping. Physical Review Applied. 10 - 5, 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85057584374&doi=10.1103%2fPhysRevApplied.10.054072&partnerID=40&md5=f86237589ca89c253f095d066d>>.
- Type of production:** Scientific paper **Format:** Journal
- 47** I. Fina; A. Quintana; X. Martí; F. Sánchez; M. Foerster; L. Aballe; J. Sort; J. Fontcuberta. Reversible and magnetically unassisted voltage-driven switching of magnetization in FeRh/PMN-PT. Applied Physics Letters. 113 - 15, 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85054657351&doi=10.1063%2f1.5040184&partnerID=40&md5=91808ebde0bf6df5b35bfb6db0254aff>>.
- Type of production:** Scientific paper **Format:** Journal
- 48** J. Lyu; I. Fina; R. Solanas; J. Fontcuberta; F. Sánchez. Robust ferroelectricity in epitaxial Hf_{1/2}Zr_{1/2}O₂ thin films. Applied Physics Letters. 113 - 8, 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85052460271&doi=10.1063%2f1.5041715&partnerID=40&md5=b0180d1a960c08783f09aef1d0e0b452>>.
- Type of production:** Scientific paper **Format:** Journal

- 49** J. Lyu; I. Fina; R. Solanas; J. Fontcuberta; F. Sánchez. Selectable texture in epitaxial ferroelectric BaTiO₃ films integrated with silicon. *CrystEngComm*. 20 - 40, pp. 6225 - 6229. 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85054962791&doi=10.1039%2fc8ce01093e&partnerID=40&md5=855f9de1409c0674d3c7859a62c87e73>>.
Type of production: Scientific paper **Format:** Journal
- 50** J. Lyu; I. Fina; R. Solanas; J. Fontcuberta; F. Sánchez. Tailoring Lattice Strain and Ferroelectric Polarization of Epitaxial BaTiO₃ Thin Films on Si(001). *Scientific Reports*. 8 - 1, 2018. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85040446489&doi=10.1038%2fs41598-017-18842-5&partnerID=40&md5=b0681f9660f32c114d3ccb757bddc236>>.
Type of production: Scientific paper **Format:** Journal
- 51** I. Fina; X. Marti. Electric Control of Antiferromagnets. *IEEE Transactions on Magnetics*. 53 - 2, 2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85027496305&doi=10.1109%2fTMAG.2016.2606561&partnerID=40&md5=4da5bd425a4dfb6a4108ee5e6f4f12f2>>.
Type of production: Scientific paper **Format:** Journal
- 52** I. Fina; A. Quintana; J. Padilla-Pantoja; X. Martí; F. Macià; F. Sánchez; M. Foerster; L. Aballe; J. Fontcuberta; J. Sort. Electric-Field-Adjustable Time-Dependent Magnetoelectric Response in Martensitic FeRh Alloy. *ACS Applied Materials and Interfaces*. 9 - 18, pp. 15577 - 15582. 2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85019239235&doi=10.1021%2facsam.7b00476&partnerID=40&md5=904a93dae5db7f18f27fef409cea7a3f>>.
Type of production: Scientific paper **Format:** Journal
- 53** J.D. Clarkson; I. Fina; Z.Q. Liu; Y. Lee; J. Kim; C. Frontera; K. Cordero; S. Wisotzki; F. Sanchez; J. Sort; S.L. Hsu; C. Ko; L. Aballe; M. Foerster; J. Wu; H.M. Christen; J.T. Heron; D.G. Schlom; S. Salahuddin; N. Kioussis; J. Fontcuberta; X. Marti; R. Ramesh. Hidden Magnetic States Emergent under Electric Field, in A Room Temperature Composite Magnetoelectric Multiferroic. *Scientific Reports*. 7 - 1, 2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85034252483&doi=10.1038%2fs41598-017-13760-y&partnerID=40&md5=31b2b3f96a3ca2a8e24969ed45a1a226>>.
Type of production: Scientific paper **Format:** Journal
- 54** L.E. Coy; I. Fina; J. Ventura; L. Yate; E. Langenberg; M.C. Polo; C. Ferrater; M. Varela. Dielectric characterization of multiferroic magnetoelectric double-perovskite Y(Ni_{0.5}Mn_{0.5})O₃ thin films. *Applied Physics Letters*. 109 - 15, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84992718244&doi=10.1063%2f1.4964439&partnerID=40&md5=30be9a6d4f720fd95bf7322fbc6cab4f>>.
Type of production: Scientific paper **Format:** Journal
- 55** M. Scigaj; C.H. Chao; J. Gázquez; I. Fina; R. Moalla; G. Saint-Girons; M.F. Chisholm; G. Herranz; J. Fontcuberta; R. Bachelet; F. Sánchez. High ferroelectric polarization in c-oriented BaTiO₃ epitaxial thin films on SrTiO₃/Si(001). *Applied Physics Letters*. 109 - 12, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84988737068&doi=10.1063%2f1.4962836&partnerID=40&md5=2eea794cb5dd36c88b67324cf1181a4b>>.
Type of production: Scientific paper **Format:** Journal
- 56** V. Saidl; M. Brajer; L. Horák; H. Reichlová; K. Výborný; M. Veis; T. Janda; F. Trojánek; M. Maryško; I. Fina; X. Marti; T. Jungwirth; P. Němec. Investigation of magneto-structural phase transition in FeRh by reflectivity and transmittance measurements in visible and near-infrared spectral region. *New Journal of Physics*. 18 - 8, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84983606239&doi=10.1088%2f1367-2630%2f18%2f8%2f083017&partnerID=40&md5=8a506feb6a4640ee7382b>>.
Type of production: Scientific paper **Format:** Journal



- 57** R. Galceran; I. Fina; J. Cisneros-Fernández; B. Bozzo; C. Frontera; L. López-Mir; H. Deniz; K.-W. Park; B.-G. Park; L. Balcells; X. Martí; T. Jungwirth; B. Martínez. Isothermal anisotropic magnetoresistance in antiferromagnetic metallic IrMn. *Scientific Reports*. 6, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84992412568&doi=10.1038%2fsrep35471&partnerID=40&md5=859c8fd3a3d74e47d32ab6d4fbb693a2>>.
Type of production: Scientific paper **Format:** Journal
- 58** M. Scigaj; N. Dix; J. Gázquez; M. Varela; I. Fina; N. Domingo; G. Herranz; V. Skumryev; J. Fontcuberta; F. Sánchez. Monolithic integration of room-temperature multifunctional BaTiO₃-CoFe₂O₄ epitaxial heterostructures on Si(001). *Scientific Reports*. 6, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84984607923&doi=10.1038%2fsrep31870&partnerID=40&md5=44dd563f7b7d40f8d624ab7117070c99>>.
Type of production: Scientific paper **Format:** Journal
- 59** G. Radaelli; D. Gutiérrez; M. Qian; I. Fina; F. Sánchez; L. Baldrati; J. Heidler; C. Piamonteze; R. Bertacco; J. Fontcuberta. Strain-Controlled Responsiveness of Slave Half-Doped Manganite La_{0.5}Sr_{0.5}MnO₃ Layers Inserted in BaTiO₃ Ferroelectric Tunnel Junctions. *Advanced Electronic Materials*. 2 - 12, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85003816188&doi=10.1002%2faelm.201600368&partnerID=40&md5=a81fe6012ce57364e3db0fb6f6df60f0>>.
Type of production: Scientific paper **Format:** Journal
- 60** F. Liu; I. Fina; R. Bertacco; J. Fontcuberta. Unravelling and controlling hidden imprint fields in ferroelectric capacitors. *Scientific Reports*. 6, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964823357&doi=10.1038%2fsrep25028&partnerID=40&md5=8dfeafaa094f14c3a20802484d4c1d00>>.
Type of production: Scientific paper **Format:** Journal
- 61** E. Khestanova; N. Dix; I. Fina; M. Scigaj; J.M. Rebled; C. Magén; S. Estradé; F. Peiró; G. Herranz; J. Fontcuberta; F. Sánchez. Untangling Electrostatic and Strain Effects on the Polarization of Ferroelectric Superlattices. *Advanced Functional Materials*. 26 - 35, pp. 6446 - 6453. 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84978646286&doi=10.1002%2fadfm.201602084&partnerID=40&md5=c4ad4e9abb52277616e82394992ae85a>>.
Type of production: Scientific paper **Format:** Journal
- 62** A. Quindeau; I. Fina; X. Martí; G. Apachitei; P. Ferrer; C. Nicklin; E. Pippel; D. Hesse; M. Alexe. Four-state ferroelectric spin-valve. *Scientific Reports*. 5, 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84929192084&doi=10.1038%2fsrep09749&partnerID=40&md5=07449b9183e2e72c9897b703ca1a8bf5>>.
Type of production: Scientific paper **Format:** Journal
- 63** I. Fina; G. Apachitei; D. Preziosi; H. Deniz; D. Kriegner; X. Martí; M. Alexe. In-plane tunnelling field-effect transistor integrated on Silicon. *Scientific Reports*. 5, 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84942746569&doi=10.1038%2fsrep14367&partnerID=40&md5=211b0dbc70069920b2c6962c53bc8943>>.
Type of production: Scientific paper **Format:** Journal
- 64** M. Coll; J. Gázquez; I. Fina; Z. Khayat; A. Quindeau; M. Alexe; M. Varela; S. Trolier-Mckinstry; X. Obradors; T. Puig. Nanocrystalline Ferroelectric BiFeO₃ Thin Films by Low-Temperature Atomic Layer Deposition. *Chemistry of Materials*. 27 - 18, pp. 6322 - 6328. 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84942122808&doi=10.1021%2fac.chemmater.5b02093&partnerID=40&md5=92b618d282545a1532e855100739>>.
Type of production: Scientific paper **Format:** Journal



65

A. Quindeau; V. Borisov; I. Fina; S. Ostanin; E. Pippel; I. Mertig; D. Hesse; M. Alexe. Origin of tunnel electroresistance effect in PbTiO₃-based multiferroic tunnel junctions. *Physical Review B - Condensed Matter and Materials Physics*. 92 - 3, 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84938904570&doi=10.1103%2fPhysRevB.92.035130&partnerID=40&md5=f3f5839161ace860a630da82fdc6dc46>>

Type of production: Scientific paper

Format: Journal

66

X. Marti; I. Fina; T. Jungwirth. Prospect for antiferromagnetic spintronics. *IEEE Transactions on Magnetics*. 51 - 4, 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84930506352&doi=10.1109%2fTMAG.2014.2358939&partnerID=40&md5=8436012f16fe73977ccfe107ecf5b396>>

Type of production: Scientific paper

Format: Journal

67

F. Liu; I. Fina; D. Gutiérrez; G. Radaelli; R. Bertacco; J. Fontcuberta. Selecting Steady and Transient Photocurrent Response in BaTiO₃ Films. *Advanced Electronic Materials*. 1 - 9, 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964865745&doi=10.1002%2faelm.201500171&partnerID=40&md5=f682571c4786968a2261185a13121382>>

Type of production: Scientific paper

Format: Journal

68

I. Fina; X. Marti; D. Yi; J. Liu; J.H. Chu; C. Rayan-Serrao; S. Suresha; A.B. Shick; J. Železný; T. Jungwirth; J. Fontcuberta; R. Ramesh. Anisotropic magnetoresistance in an antiferromagnetic semiconductor. *Nature Communications*. 5, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84907857344&doi=10.1038%2fncomms5671&partnerID=40&md5=c1dab1fcfed78e440088094661de75e1>>

Type of production: Scientific paper

Format: Journal

69

G. Radaelli; D. Petti; E. Plekhanov; I. Fina; P. Torelli; B.R. Salles; M. Cantoni; C. Rinaldi; D. Gutiérrez; G. Panaccione; M. Varela; S. Picozzi; J. Fontcuberta; R. Bertacco. Electric control of magnetism at the Fe/BaTiO₃ interface. *Nature Communications*. 5, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84903893862&doi=10.1038%2fncomms4404&partnerID=40&md5=32ac26c11c551e1bfdf0ef6749b2466>>

Type of production: Scientific paper

Format: Journal

70

M. Gich; I. Fina; A. Morelli; F. Sánchez; M. Alexe; J. Gàzquez; J. Fontcuberta; A. Roig. Multiferroic iron oxide thin films at room temperature. *Advanced Materials*. 26 - 27, pp. 4645 - 4652. 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84904514359&doi=10.1002%2fadma.201400990&partnerID=40&md5=e086f8977169a7069a61a43e328e7dcf>>

Type of production: Scientific paper

Format: Journal

71

X. Marti; I. Fina; C. Frontera; J. Liu; P. Wadley; Q. He; R.J. Paull; J.D. Clarkson; J. Kudrnovský; I. Turek; J. Kuneš; D. Yi; J.-H. Chu; C.T. Nelson; L. You; E. Arenholz; S. Salahuddin; J. Fontcuberta; T. Jungwirth; R. Ramesh. Room-temperature antiferromagnetic memory resistor. *Nature Materials*. 13 - 4, pp. 367 - 374. 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84897040058&doi=10.1038%2fnmat3861&partnerID=40&md5=66364f0712cb47ad2fa991bc152ec493>>

Type of production: Scientific paper

Format: Journal

72

J.H. Lee; I. Fina; X. Marti; Y.H. Kim; D. Hesse; M. Alexe. Spintronic functionality of BiFeO₃ domain walls. *Advanced Materials*. 26 - 41, pp. 7078 - 7082. 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84915748181&doi=10.1002%2fadma.201402558&partnerID=40&md5=d6ad1c0f5c02d16279e4d9b896bbfb7e>>

Type of production: Scientific paper

Format: Journal

73

D. Preziosi; I. Fina; E. Pippel; D. Hesse; X. Marti; F. Bern; M. Ziese; M. Alexe. Tailoring the interfacial magnetic anisotropy in multiferroic field-effect devices. *Physical Review B - Condensed Matter and Materials Physics*. 90 - 12, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84907452223&doi=10.1103%2fPhysRevB.90.125155&partnerID=40&md5=3cbd8c1c2f56b58fb51559959d2ecd15>>

Type of production: Scientific paper

Format: Journal

- 74** N. Dix; I. Fina; R. Bachelet; L. Fàbrega; C. Kanamadi; J. Fontcuberta; F. Sánchez. Large out-of-plane ferroelectric polarization in flat epitaxial BaTiO₃ on CoFe₂O₄ heterostructures. *Applied Physics Letters*. 102 - 17, 2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84877259739&doi=10.1063%2f1.4803943&partnerID=40&md5=b00df45f95eb81e57e762ed9149ae496>>.
Type of production: Scientific paper **Format:** Journal
- 75** I. Fina; V. Skumryev; D. O'Flynn; G. Balakrishnan; J. Fontcuberta. Phase coexistence and magnetically tuneable polarization in cycloidal multiferroics. *Physical Review B - Condensed Matter and Materials Physics*. 88 - 10, 2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84884855637&doi=10.1103%2fPhysRevB.88.100403&partnerID=40&md5=cb54836d45eadf95481f191ef3b33793>>.
Type of production: Scientific paper **Format:** Journal
- 76** D. Petti; E. Albisetti; H. Reichlová; J. Gazquez; M. Varela; M. Molina-Ruiz; A.F. Lopeandía; K. Olejník; V. Novák; I. Fina; B. Dkhil; J. Hayakawa; X. Martí; J. Wunderlich; T. Jungwirth; R. Bertacco. Storing magnetic information in IrMn/MgO/Ta tunnel junctions via field-cooling. *Applied Physics Letters*. 102 - 19, 2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84877978965&doi=10.1063%2f1.4804429&partnerID=40&md5=974abddabcf341814632c8e25c09f3e6>>.
Type of production: Scientific paper **Format:** Journal
- 77** I. Fina; N. Dix; J.M. Rebled; P. Gemeiner; X. Martí; F. Peiró; B. Dkhil; F. Sánchez; L. Fàbrega; J. Fontcuberta. The direct magnetoelectric effect in ferroelectric-ferromagnetic epitaxial heterostructures. *Nanoscale*. 5 - 17, pp. 8037 - 8044. 2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84881516692&doi=10.1039%2fc3nr01011b&partnerID=40&md5=e542475df2289bfb110e96091d22836f>>.
Type of production: Scientific paper **Format:** Journal
- 78** M. Scigaj; N. Dix; I. Fina; R. Bachelet; B. Warot-Fonrose; J. Fontcuberta; F. Sánchez. Ultra-flat BaTiO₃ epitaxial films on Si(001) with large out-of-plane polarization. *Applied Physics Letters*. 102 - 11, 2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84875720729&doi=10.1063%2f1.4798246&partnerID=40&md5=e23e4b4ad0e5c8f0b66deca772af2633>>.
Type of production: Scientific paper **Format:** Journal
- 79** G. Radaelli; S. Brivio; I. Fina; R. Bertacco. Correlation between growth dynamics and dielectric properties of epitaxial BaTiO₃ films. *Applied Physics Letters*. 100 - 10, 2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84858415915&doi=10.1063%2f1.3692732&partnerID=40&md5=8b3773e6318b8dde7926b3f08ff6062e>>.
Type of production: Scientific paper **Format:** Journal
- 80** E. Langenberg; I. Fina; J. Ventura; B. Noheda; M. Varela; J. Fontcuberta. Dielectric properties of (Bi_{0.9}La_{0.1})₂NiMnO₆ thin films: Determining the intrinsic electric and magnetoelectric response. *Physical Review B - Condensed Matter and Materials Physics*. 86 - 8, 2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84865102424&doi=10.1103%2fPhysRevB.86.085108&partnerID=40&md5=2a2914796b8eabaede89e34d3170b2>>.
Type of production: Scientific paper **Format:** Journal
- 81** D. Gutiérrez; M. Foerster; I. Fina; J. Fontcuberta; D. Fritsch; C. Ederer. Dielectric response of epitaxially strained CoFe₂O₄ spinel thin films. *Physical Review B - Condensed Matter and Materials Physics*. 86 - 12, 2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84866386289&doi=10.1103%2fPhysRevB.86.125309&partnerID=40&md5=38fe17109ebd0bb1aace2e7b5831971>>.
Type of production: Scientific paper **Format:** Journal



- 82** E. Langenberg; I. Fina; P. Gemeiner; B. Dkhil; L. Fàbrega; M. Varela; J. Fontcuberta. Ferroelectric phase transition in strained multiferroic (Bi 0.9La 0.1) 2NiMnO 6 thin films. *Applied Physics Letters*. 100 - 2, 2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84855919848&doi=10.1063%2f1.3675869&partnerID=40&md5=476c05bf383becf1a9235f0c8dc96d97>>.
Type of production: Scientific paper **Format:** Journal
- 83** F. Jiménez-Villacorta; J.A. Gallastegui; I. Fina; X. Martí; J. Fontcuberta. Strain-driven transition from E-type to A-type magnetic order in YMnO 3 epitaxial films. *Physical Review B - Condensed Matter and Materials Physics*. 86 - 2, 2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84864484132&doi=10.1103%2fPhysRevB.86.024420&partnerID=40&md5=956260d0fde6dd53f926bba9abf11f99>>.
Type of production: Scientific paper **Format:** Journal
- 84** I. Fina; L. Fàbrega; X. Martí; F. Sánchez; J. Fontcuberta. Chiral domains in cycloidal multiferroic thin films: Switching and memory effects. *Physical Review Letters*. 107 - 25, 2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-83655191149&doi=10.1103%2fPhysRevLett.107.257601&partnerID=40&md5=d67479725c13ebc75684c8ea3e48>>.
Type of production: Scientific paper **Format:** Journal
- 85** I. Fina; L. Fàbrega; X. Martí; F. Sánchez; J. Fontcuberta. Erratum: Magnetic switch of polarization in epitaxial orthorhombic YMnO3 thin films (*Applied Physics Letters* (2010) 97 (232905)). *Applied Physics Letters*. 99 - 21, 2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-81855228639&doi=10.1063%2f1.3663627&partnerID=40&md5=8956c17840a3d11d18a664477042833d>>.
Type of production: Scientific paper **Format:** Journal
- 86** J. Fontcuberta; I. Fina; L. Fabrega; F. Sánchez; X. Martí; V. Skumryev. Ferroelectricity and strain effects in orthorhombic YMnO3 thin films. *Phase Transitions*. 84 - 5-6, pp. 555 - 568. 2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-79957875258&doi=10.1080%2f01411594.2010.548023&partnerID=40&md5=dbd74a1af91dc48942473b2421474>>.
Type of production: Scientific paper **Format:** Journal
- 87** V. Skumryev; V. Laukhin; I. Fina; X. Martí; F. Sánchez; M. Gospodinov; J. Fontcuberta. Magnetization reversal by electric-field decoupling of magnetic and ferroelectric domain walls in multiferroic-based heterostructures. *Physical Review Letters*. 106 - 5, 2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-79551630435&doi=10.1103%2fPhysRevLett.106.057206&partnerID=40&md5=bed980d96144a92f85ad4ee59886>>.
Type of production: Scientific paper **Format:** Journal
- 88** I. Fina; L. Fábrega; E. Langenberg; X. Mart; F. Sánchez; M. Varela; J. Fontcuberta. Nonferroelectric contributions to the hysteresis cycles in manganite thin films: A comparative study of measurement techniques. *Journal of Applied Physics*. 109 - 7, 2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-79955420750&doi=10.1063%2f1.3555098&partnerID=40&md5=5b6fca51861b54a104ca1211b264c378>>.
Type of production: Scientific paper **Format:** Journal
- 89** I. Fina; X. Martí; L. Fàbrega; F. Sánchez; J. Fontcuberta. Dielectric anomalies in orthorhombic YMnO3 thin films. *Thin Solid Films*. 518 - 16, pp. 4710 - 4713. 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-77955619980&doi=10.1016%2fj.tsf.2009.12.065&partnerID=40&md5=1c123acd29d2b794e82ac827ea1d278b>>.
Type of production: Scientific paper **Format:** Journal
- 90** I. Fina; N. Dix; L. Fbrega; F. Sánchez; J. Fontcuberta. Effects of morphology and strain on the dielectric response of multiferroic CoFe2O4-BaTiO3 nanocomposite thin films. *Journal of Applied Physics*. 108 - 3, 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-77955877796&doi=10.1063%2f1.3462449&partnerID=40&md5=a0baa51e82889dc173927ca8aa0f3978>>.
Type of production: Scientific paper **Format:** Journal



- 91** I. Fina; L. Fbrega; X. Martí; F. Sánchez; J. Fontcuberta. Magnetic switch of polarization in epitaxial orthorhombic YMnO₃ thin films. *Applied Physics Letters*. 97 - 23, 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-78650394845&doi=10.1063%2f1.3523352&partnerID=40&md5=13e6daf9932fee42050772b55dbd1806>>.
Type of production: Scientific paper **Format:** Journal
- 92** I. Fina; N. Dix; L. Fàbrega; F. Sánchez; J. Fontcuberta. Magnetocapacitance in BaTiO₃-CoFe₂O₄ nanocomposites. *Thin Solid Films*. 518 - 16, pp. 4634 - 4636. 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-77955622530&doi=10.1016%2fj.tsf.2009.12.048&partnerID=40&md5=3c2d24bd89dc6977cb698f80799275d1>>.
Type of production: Scientific paper **Format:** Journal
- 93** J. Ventura; I. Fina; C. Ferrater; E. Langenberg; L.E. Coy; M.C. Polo; M.V. García-Cuenca; L. Fàbrega; M. Varela. Structural and dielectric properties of (001) and (111)-oriented BaZr_{0.2}Ti_{0.8}O₃ epitaxial thin films. *Thin Solid Films*. 518 - 16, pp. 4692 - 4695. 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-77955596702&doi=10.1016%2fj.tsf.2009.12.061&partnerID=40&md5=f71f88fba6c748da6a58a700c9313f0e>>.
Type of production: Scientific paper **Format:** Journal
- 94** I. Fina; N. Dix; V. Laukhin; L. Fàbrega; F. Sánchez; J. Fontcuberta. Dielectric properties of BaTiO₃-CoFe₂O₄ nanocomposite thin films. *Journal of Magnetism and Magnetic Materials*. 321 - 11, pp. 1795 - 1798. 2009. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-64149125653&doi=10.1016%2fj.jmmm.2009.02.012&partnerID=40&md5=35197570039bb79b69f3895c59b1f01e>>.
Type of production: Scientific paper **Format:** Journal
- 95** E. Langenberg; M. Varela; M.V. García-Cuenca; C. Ferrater; M.C. Polo; I. Fina; L. Fàbrega; F. Sánchez; J. Fontcuberta. Epitaxial thin films of (Bi_{0.9}La_{0.1})₂NiMnO₆ obtained by pulsed laser deposition. *Journal of Magnetism and Magnetic Materials*. 321 - 11, pp. 1748 - 1753. 2009. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-64149108905&doi=10.1016%2fj.jmmm.2009.02.005&partnerID=40&md5=52797b79727e1f0ef241f3a19d6598aa>>.
Type of production: Scientific paper **Format:** Journal
- 96** N. Dix; R. Muralidharan; J.M. Caicedo; D. Hrabovsky; I. Fina; L. Fàbrega; V. Skumryev; M. Varela; J. Guyonnet; P. Paruch; F. Sánchez; J. Fontcuberta. Influence of substrate temperature in BiFeO₃-CoFe₂O₄ nanocomposites deposited on SrTiO₃ (0 0 1). *Journal of Magnetism and Magnetic Materials*. 321 - 11, pp. 1790 - 1794. 2009. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-64149097564&doi=10.1016%2fj.jmmm.2009.02.016&partnerID=40&md5=983addde16e2da883d7d0faa515884b1>>.
Type of production: Scientific paper **Format:** Journal
- 97** X. Martí; I. Fina; V. Skumryev; C. Ferrater; M. Varela; L. Fàbrega; F. Sánchez; J. Fontcuberta. Strain tuned magnetoelectric coupling in orthorhombic YMnO₃ thin films. *Applied Physics Letters*. 95 - 14, 2009. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-70349925112&doi=10.1063%2f1.3238287&partnerID=40&md5=982593706319b73d1d9138f175df3a42>>.
Type of production: Scientific paper **Format:** Journal
- 98** J. Garcés; I. Fina; X. Martí. IGSresearch: From science to business in the markets of security, smartcity management, and geological monitoring. *Supporting University Ventures in Nanotechnology, Biomaterials and Magnetic Sensing Applications: Policies, Practices, and Future*. pp. 159 - 163. 2017. Available on-line at: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055219362&doi=10.1007%2f978-3-319-61237-9_8&partnerID=40&md5=2b6efa9ea309dd9c24c842b8bf6666f0>.
Type of production: Scientific book or monograph **Format:** Book



99

X. Marti; I. Fina; G. Catalan; A. Veà. The profile of researchers moving towards scientific entrepreneurship. Supporting University Ventures in Nanotechnology, Biomaterials and Magnetic Sensing Applications: Policies, Practices, and Future. pp. 143 - 157. 2017. Available on-line at: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85055225202&doi=10.1007%2f978-3-319-61237-9_7&partnerID=40&md5=a508b71ff90718e0a50363468ec6a2fb>
Type of production: Scientific book or monograph **Format:** Book

Works submitted to national or international conferences

- 1** **Title of the work:** Dependence of piezoelectric, retention and endurance properties on ferroelectric/paraelectric phase ratio in epitaxial HZO films.
Name of the conference: E-MRS Fall Meeting 2021
Corresponding author: Yes
City of event: Warsaw (on-line), Poland
Date of event: 22/09/2021
Tingfeng Song; Huan Tan; Saul Estandía; Nico Dix; Jaume Gàzquez; Florencio Sánchez; Ignasi Fina.
- 2** **Title of the work:** Enhanced Stability of Orthorhombic Ferroelectric Phase in HfxZr1-xO2 Films Enabled by Epitaxial Stabilization
Name of the conference: IEEE International Symposium on Applications of Ferroelectrics (ISAF 2021).
Corresponding author: Yes
City of event: Sydney (on-line), Australia
Date of event: 16/05/2021
End date: 21/05/2021
Tingfeng Song; Huan Tan; Florencio Sánchez; Ignasi Fina.
- 3** **Title of the work:** Optical Switch of Resistance in Ferroelectric Junctions
Name of the conference: IEEE International Symposium on Applications of Ferroelectrics (ISAF 2021)
Corresponding author: Yes
City of event: Sydney (on-line), Australia
Date of event: 16/05/2021
End date: 21/05/2021
Xiao Long; Huan Tan; Florencio Sánchez; Josep Fontcuberta; Ignasi Fina.
- 4** **Title of the work:** Electric control of antiferromagnetic/ferromagnetic order
Name of the conference: Magnetism and Magnetic Materials Conference (MMM2019)
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Las Vegas, United States of America
Date of event: 07/11/2019
Ignasi Fina.
- 5** **Title of the work:** Storing data in complementary resistive switching ferroelectric capacitor
Name of the conference: IEEE International Symposium on Applications of Ferroelectrics (F2CPI2 2019)
Corresponding author: Yes
City of event: Lausanne, Switzerland
Date of event: 16/07/2019
Mengdi Qian; Ignasi Fina; Florencio Sánchez; Josep Fontcuberta.



- 6** **Title of the work:** Tunnel Electroresistance in Epitaxial Ferroelectric Hf_{0.5}Zr_{0.5}O₂ Thin Films.
Name of the conference: IEEE International Symposium on Applications of Ferroelectrics (F2CPI2 2019).
Corresponding author: Yes
City of event: Lausanne, Switzerland
Date of event: 16/07/2019
Ignasi Fina; Florencio Sánchez; Josep Fontcuberta.
- 7** **Title of the work:** Control of ferroelectric polarization by light
Name of the conference: E-MRS Spring 2019
Corresponding author: Yes
City of event: Nice, France
Date of event: 27/05/2019
End date: 31/05/2019
Ignasi Fina; Fanmao Liu; Florencio Sáchez; Josep Fontcuberta.
- 8** **Title of the work:** Electroresistance in ferroelectric tunnel Hf_{0.5}Zr_{0.5}O₂ barriers
Name of the conference: E-MRS Spring 2019
Corresponding author: Yes
City of event: Nice, France
Date of event: 27/05/2019
End date: 31/05/2019
Milena Sulzbach; Jike Lyu; Xiao Long; Florencio Sánchez; Ignasi Fina; Josep Fontcuberta.
- 9** **Title of the work:** Double switching process in antiseriial connection of ferroelectric tunnel devices.
Name of the conference: E-MRS Spring 2019
Corresponding author: Yes
City of event: Nice, France
Date of event: 17/05/2019
End date: 21/05/2019
Ignasi Fina; Mengdi Qian; Florencio Sánchez; Josep Fontcuberta.
- 10** **Title of the work:** Cloaking magnetic information
Name of the conference: WMRIF Early Career Scientist Summit
Corresponding author: Yes
City of event: Teddington, United Kingdom
Date of event: 18/06/2018
End date: 21/06/2018
- 11** **Title of the work:** Antiferromagnetc materials for security applications
Name of the conference: International Workshop on Magneto-electric actuation, magneto-ionics and related phenomena in high-surface area materials
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Gavà, Spain
Date of event: 28/05/2018
I. Fina.
- 12** **Title of the work:** Photoferroelectric oxides
Name of the conference: An Oxide Technology Roadmap
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk



City of event: Sant Feliu de Guíxols, Spain
Date of event: 12/03/2018
I. Fina.

- 13** **Title of the work:** Tuning photoelectric response in ferroelectric thin films.
Name of the conference: EMRS Fall Meeting 2017
Type of participation: 'Participatory - poster
Date of event: 19/09/2017
I. Fina; F. Liu; F. Sánchez; J. Fontcuberta.
- 14** **Title of the work:** Thermally and electrically stimulated observation of magnetic memory effect in a Ferromagnetic-Antiferromagnetic phase transition
Name of the conference: EMRS Fall Meeting 2017
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Warsaw, Poland
Date of event: 18/09/2017
I. Fina.
- 15** **Title of the work:** Photoelectric effects in ferroelectric thin films
Name of the conference: Photoelectric effects in ferroelectric thin films
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Barcelona, Spain
Date of event: 13/09/2017
I. Fina.
- 16** **Title of the work:** Antiferromagnetic-Ferromagnetic mixed phase system with thermal and electric encrypted magnetic memory performance
Name of the conference: ISAF 2016
Type of participation: 'Participatory - poster
City of event: Darmstadt, Germany
Date of event: 22/08/2017
I. Fina.
- 17** **Title of the work:** Cloaking magnetic information
Name of the conference: Bienal RSEF2017
Type of participation: Participatory - Plenary session **Reasons for participation:** Upon invitation
City of event: Santiago de Compostela, Spain
Date of event: 19/07/2017
I. Fina.
- 18** **Title of the work:** Thermally and electrically stimulated magnetic memory effect in a Ferromagnetic-Antiferromagnetic martensitic alloy
Name of the conference: Bienal RSEF2017
Type of participation: Participatory - oral communication
City of event: Santiago de Compostela, Spain
Date of event: 17/07/2017
I. Fina; A. Quintana; C. Frontera; J. Padilla-Pantoja; X. Martí; F. Màcia; F. Sánchez; M. Foerster; L. Aballe; R. Ramesh; J. Sort; J. Fontcuberta.



- 19** **Title of the work:** Time dependent Adjustable magnetoelectric coupling in Martensitic FeRh alloys
Name of the conference: Nanoselect 2017
Type of participation: Participatory - oral communication
City of event: Sant Feliu de Guixols, Spain
Date of event: 13/07/2017
Ignasi Fina.
- 20** **Title of the work:** Disentangling tunneling and non-tunneling contributions on electroresistance in BTO-based ferroelectric nanometric junctions
Name of the conference: EMRS Spring Meeting 2017
Type of participation: Participatory - oral communication
City of event: Lille, France
Date of event: 25/05/2017
I. Fina; M. Qian; F. Sánchez; J. Fontcuberta.
- 21** **Title of the work:** Electrically driven magnetic memory effect in Antiferromagnetic-Ferromagnetic mixed phase system
Name of the conference: EMRS Spring Meeting 2017
Type of participation: Participatory - oral communication
City of event: Lille, France
Date of event: 25/05/2017
I. Fina; A. Quintana; F. Sánchez; J. Sort; X. Martí; J. Fontcuberta.
- 22** **Title of the work:** Vehicle classification system based on ferroelectric materials
Name of the conference: ISAF 2016
Type of participation: Participatory - oral communication
City of event: Darmstadt, Germany
Date of event: 22/08/2016
I. Fina.
- 23** **Title of the work:** Role of surface states on the photoresponse of BaTiO₃ thin films
Name of the conference: TO-BE Spring Meeting 2015
Type of participation: Participatory - oral communication
City of event: Warwick, United Kingdom
Date of event: 07/04/2016
- 24** **Title of the work:** Spintronic functionalities in multiferroic systems
Name of the conference: GEFES 2016
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Cuenca, Spain
Date of event: 13/01/2016
I. Fina.
- 25** **Title of the work:** Antiferromagnetic-Ferromagnetic mixed phase system with thermal encrypted magnetic memory performance
Name of the conference: E-MRS 2015.
Type of participation: Participatory - oral communication
City of event: Warsaw, Poland
Date of event: 09/2015



I. Fina; J. Clarkson; C. Frontera; K. Cordero; S. Wizotsky; F. Sanchez; X. Marti; J. Fontcuberta; G. Catalan; R. Ramesh.

- 26** **Title of the work:** Relation between short-circuit photocurrent and ferroelectric retention in BaTiO₃ thin films.
Name of the conference: TO-BE Spring Meeting 2015
Type of participation: Participatory - oral communication
City of event: Aveiro, Portugal
Date of event: 30/05/2015
I. Fina; F. Liu; D. Gutiérrez; G. Radaelli; R. Bertacco; J. Fontcuberta.
- 27** **Title of the work:** Antiferromagnetic Spintronics
Name of the conference: EMRS Spring Meeting 2015
Type of participation: Participatory - invited/keynote talk
City of event: Lille, France
Date of event: 13/05/2015
I. Fina.
- 28** **Title of the work:** Relation between short-circuit photocurrent and ferroelectric retention in BaTiO₃ thin films
Name of the conference: EMRS Spring Meeting 2015
Type of participation: Participatory - oral communication
City of event: Lille, France
Date of event: 12/05/2015
I. Fina; F. Liu; D. Gutiérrez; G. Radaelli; R. Bertacco; J. Fontcuberta.
- 29** **Title of the work:** Spintronic functionalities in multiferroic systems
Name of the conference: EMRS Spring Meeting 2015
Type of participation: Participatory - oral communication
City of event: Lille, France
Date of event: 12/05/2015
I. Fina; X. Martí; J.H. Lee; D. Preziosi; A. Quindeau; H. Deniz; D. Kriegner; M. Ziese; F. Bern; G. Apachitei; P. Ferrer; C. Nicklin; E. Pippel; Y.H. Kim; D. Hesse; M. Alexe.
- 30** **Title of the work:** Multiferroic Iron Oxide Thin Films at Room-Temperature
Name of the conference: EMRS Spring Meeting 2015
Type of participation: Participatory - poster
City of event: Lille, France
Date of event: 11/05/2015
I. Fina.
- 31** **Title of the work:** Exploiting spin-orbit coupling for data storage
Name of the conference: Nanoselect 2014
Type of participation: Participatory - invited/keynote **Reasons for participation:** Upon invitation talk
City of event: Sant Feliu de Guíxols, Spain
Date of event: 25/06/2014
I. Fina.
- 32** **Title of the work:** SPINWIRE(R): the smart solution for cities in motion
Name of the conference: DPG 2014
Type of participation: Participatory - oral communication
City of event: Dresden, Germany

Date of event: 04/05/2014

I. Fina; X. Marti; J. Garces; T. Jungwirth.

33 Title of the work: Antiferromagnetic spintronics

Name of the conference: DPG 2014

Type of participation: Participatory - oral communication

City of event: Dresden, Germany

Date of event: 01/05/2014

I. Fina; X. Marti; D. Yi; C. Rayan-Serrao; J. Liu; Jiun-Haw Chu; S.J. Suresha; J. Zelezny; T. Jungwirth; J. Fontcuberta; R. Ramesh.

34 Title of the work: Different routes for enhanced control of ferroelectric polarization by magnetic field

Name of the conference: DPG 2014

Type of participation: Participatory - oral communication

City of event: Dresden, Germany

Date of event: 01/05/2014

I. Fina; V. Skumryev; D.O'Flynn; G. Balakrishnan; N. Dix; J. M. Rebled; P. Gemeiner; X. Martí; F. Peiró; B. Dkhil; F. Sánchez; L. Fàbrega; J. Fontcuberta.

35 Title of the work: Room temperature magnetism and ferroelectricity in eps-Fe₂O₃ thin films.

Name of the conference: DPG 2014

Type of participation: Participatory - oral communication

City of event: Dresden, Germany

Date of event: 01/05/2014

I. Fina; M.Gich; A. Morelli; F. Sánchez; M. Alexe; J. Fontcuberta; A. Roig.

36 Title of the work: Different routes for enhanced control of ferroelectric polarization by magnetic field

Name of the conference: GEFES 2014

Type of participation: Participatory - oral communication

City of event: Ciudad Real, Spain

Date of event: 23/01/2014

I. Fina; V. Skumryev; D.O'Flynn; G. Balakrishnan; N. Dix; J. M. Rebled; P. Gemeiner; X. Martí; F. Peiró; B. Dkhil; F. Sánchez; L. Fàbrega; J. Fontcuberta.

37 Title of the work: Antiferromagnetic spintronics

Name of the conference: E-MRS 2013

Type of participation: Participatory - oral communication

Reasons for participation: Upon invitation

City of event: Warsaw, Poland

Date of event: 11/2013

I. Fina; X. Marti; D. Yi; C. Rayan-Serrao; J. Liu; Jiun-Haw Chu; S.J. Suresha; J. Zelezny; T. Jungwirth; J. Fontcuberta; R. Ramesh.

38 Title of the work: Ferroelectric and magnetodielectric properties of AlFeO₃ and AlFeO₃/eps-Fe₂O₃ thin films at room temperature

Name of the conference: E-MRS 2013

Type of participation: Participatory - oral communication

City of event: Warsaw, Poland

Date of event: 11/2013

I. Fina; M.Gich; A. Morelli; F. Sánchez; M. Alexe; J. Fontcuberta; A. Roig.



- 39** **Title of the work:** Antiferromagnetic spintronics
Name of the conference: IMPRS/SFB-NANO
Type of participation: Participatory - oral communication
City of event: Halle, Germany
Date of event: 10/2013
X. Martí; D. Yi; C. Rayan-Serrao; J. Liu; Jiun-Haw Chu; S.J. Suresha; J. Zelezny; T. Jungwirth; J. Fontcuberta; R. Ramesh.
- 40** **Title of the work:** Large direct magnetoelectric effect in ferroelectric - ferromagnetic epitaxial heterostructures thanks to appropriate architecture selection
Name of the conference: E-MRS 2013
Type of participation: Participatory - oral communication
City of event: Strasbourg, France
Date of event: 05/2013
I. Fina; N. Dix; J. M. Rebled; P. Gemeiner; X. Martí; S. Estradé; F. Peirò; B. Dkhil; F. Sánchez; L. Fàbrega; J. Fontcuberta.
- 41** **Title of the work:** Phase coexistence and magnetically-tuneable polarization in cycloidal multiferroics
Name of the conference: MAMA-Trend
Type of participation: Participatory - oral communication
City of event: Sorrento, Italy
Date of event: 05/2013
I. Fina; D.O'Flynn; G. Balakrishnan; J. Fontcuberta.
- 42** **Title of the work:** Magnetoelectric response dependence on stacking order in epitaxial CoFe₂O₄-BaTiO₃ bilayers
Name of the conference: ISAF 2012
Type of participation: Participatory - oral communication
City of event: Aveiro, Portugal
Date of event: 07/2012
I. Fina; J.M. Rebled; R. Bachelet; N. Dix; X. Martí; B. Dkhil; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 43** **Title of the work:** Effects of strain on the magnetoelectric behaviour of orthorhombic YMnO₃ thin films
Name of the conference: ISIF 2011
Type of participation: Participatory - oral communication
City of event: Cambridge, United Kingdom
Date of event: 07/2011
I. Fina; X. Martí; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 44** **Title of the work:** Ferroelectric switching and cycloidal order in o-YMnO₃ thin films
Name of the conference: ISIF 2011
Type of participation: Participatory - poster
City of event: Cambridge, United Kingdom
Date of event: 07/2011
I. Fina; X. Martí; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 45** **Title of the work:** Tailoring ferroelectricity in CoFe₂O₄-BaTiO₃ bilayers
Name of the conference: ISIF 2011
Type of participation: Participatory - poster
City of event: Cambridge, United Kingdom
Date of event: 07/2011



I. Fina; N. Dix; R. Bachelet; L. Fàbrega; F. Sánchez; J. Fontcuberta.

- 46** **Title of the work:** Ferroelectric Switching and Cycloidal Order in YMnO₃ Thin Films
Name of the conference: EMF 2011
Type of participation: 'Participatory - poster
City of event: Bordeaux, France
Date of event: 06/2011
I. Fina; L. Fàbrega; X.Martí; F. Sánchez; J. Fontcuberta.
- 47** **Title of the work:** Ferroelectric properties of multiferroic CoFe₂O₄/BaTiO₃ bilayers
Name of the conference: EMF 2011
Type of participation: 'Participatory - poster
City of event: Bordeaux, France
Date of event: 06/2011
I. Fina; N. Dix; R. Bachelet; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 48** **Title of the work:** Ferroelectric properties of multiferroic CoFe₂O₄/BaTiO₃ layered heterostructures
Name of the conference: Nanoselect 2011
Type of participation: 'Participatory - poster
City of event: Sant Feliu de Guíxols, Spain
Date of event: 06/2011
I. Fina; N. Dix; R. Bachelet; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 49** **Title of the work:** Ferroelectricity and Strain Effects in Orthorhombic YMnO₃ Thin Films
Name of the conference: EMF 2011
Type of participation: Participatory - oral communication
City of event: Bordeaux, France
Date of event: 06/2011
I. Fina; X. Martí; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 50** **Title of the work:** Ferroelectricity and strain effects in orthorhombic RMnO₃ thin films
Name of the conference: Nanoselect 2011
Type of participation: 'Participatory - poster
City of event: Sant Feliu de Guíxols, Spain
Date of event: 06/2011
I. Fina; X. Martí; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 51** **Title of the work:** Magnetic switching of electric polarization in multiferroic thin films
Name of the conference: Nanoselect 2011
Type of participation: Participatory - oral communication
City of event: Sant Feliu de Guíxols, Spain
Date of event: 06/2011
I. Fina; L. Fàbrega; F. Sánchez; V. Skumryev; X. Martí; J. Fontcuberta.
- 52** **Title of the work:** Ferroelectric properties of LuMnO₃ single crystals
Name of the conference: ISAF-ECAPD 2010
Type of participation: 'Participatory - poster
City of event: Edinburgh, United Kingdom
Date of event: 08/2010
I. Fina; L. Fàbrega; V. Skumryev; V. Laukhin; M. Gospodinov; J. Fontcuberta.



- 53** **Title of the work:** Ferroelectricity and magnetoelectric coupling in strain engineered orthorhombic YMnO₃ epitaxial thin film
Name of the conference: ISAF-ECAPD 2010
Type of participation: Participatory - oral communication
City of event: Edinburgh, United Kingdom
Date of event: 08/2010
I. Fina; L. Fàbrega; X. Martí; F. Sánchez; J. Fontcuberta.
- 54** **Title of the work:** Low temperature characterization of ferroelectric LuMnO₃ single crystals
Name of the conference: Nanoselect 2010
Type of participation: 'Participatory - poster
City of event: Sant Feliu de Guíxols, Spain
Date of event: 08/2010
I. Fina; L. Fàbrega; V. Skumryev; V. Laukhin; M. Gospodinov; J. Fontcuberta.
- 55** **Title of the work:** Non-ferroelectric contributions to the hysteresis cycles in manganite thin films: a comparative study of measurement methods
Name of the conference: ISAF-ECAPD 2010
Type of participation: 'Participatory - poster
City of event: Edinburgh, United Kingdom
Date of event: 08/2010
I. Fina; L. Fàbrega; X. Martí; E. Langenberg; N. Dix; F. Sánchez; M. Varela; J. Fontcuberta.
- 56** **Title of the work:** Control of magnetic and dielectric properties by epitaxial strain in orthorhombic TbMnO₃ and YMnO₃
Name of the conference: Workshop on Oxide Electronics 16th
Type of participation: 'Participatory - poster
City of event: Tarragona, Spain
Date of event: 10/2009
X. Martí; I. Fina; F. Sánchez; L. Fàbrega; J. Fontcuberta.
- 57** **Title of the work:** Dielectric anomalies and impedance spectroscopy in multiferroic o-YMnO₃ thin films
Name of the conference: Nanoselect 2009
Type of participation: 'Participatory - poster
City of event: Manresa, Spain
Date of event: 07/2009
I. Fina; L. Fàbrega; V. Skumryev; V. Laukhin; M. Gospodinov; J. Fontcuberta.
- 58** **Title of the work:** Effects of morphology and strain on the dielectric permittivity of multiferroic CoFe₂O₄-BaTiO₃ nanocomposites
Name of the conference: Nanoselect 2009
Type of participation: 'Participatory - poster
City of event: Manresa, Spain
Date of event: 07/2009
N. Dix; V. Laukhin; L. Fàbrega; F. Sánchez; J. Fontcuberta.
- 59** **Title of the work:** Dielectric and magnetic characterization of multiferroic CoFe₂O₄-BaTiO₃ nanocomposites
Name of the conference: E-MRS 2009 Spring Meeting
Type of participation: Participatory - oral communication
City of event: Strasbourg, France



Date of event: 06/2009

I. Fina; N. Dix; L. Fàbrega; F. Sánchez; J. Fontcuberta.

60 Title of the work: Dielectric anomaly and magnetocapacitance in orthorhombic YMO3

Name of the conference: E-MRS 2009 Spring Meeting

Type of participation: 'Participatory - poster

City of event: Strasbourg, France

Date of event: 06/2009

I. Fina; X. Martí; L. Fàbrega; F. Sánchez; J. Fontcuberta.

61 Title of the work: Magnetic and electric properties of CoFe2O4-BaTiO3 nanocomposite thin films

Name of the conference: E-MRS 2008 Spring Meeting

Type of participation: 'Participatory - poster

City of event: Strasbourg, France

Date of event: 05/2008

I. Fina; N. Dix; L. Fàbrega; F. Sánchez; J. Fontcuberta.

Works submitted to national or international seminars, workshops and/or courses

1 Title of the work: Photoelectric effects in ferroelectric thin films

Name of the event: Internal seminar. Invited by: Prof. dr hab. Stefan Jurga

Reasons for participation: Upon invitation

City of event: Poznan, Poland

Date of event: 13/09/2017

Organising entity: NanoBioMedical Centre | Adam Mickiewicz University in Poznan

I. Fina.

2 Title of the work: Modulation of FeRh phase transition via interface mediated piezoelectric effects

Name of the event: Internal seminar. Invited by: Andreas Klein

Reasons for participation: Upon invitation

City of event: Darmstadt, Spain

Date of event: 18/11/2016

Organising entity: TU-Darmstadt

I. Fina.

3 Title of the work: Last advances on Antiferromagnetic Spintronics

Name of the event: Internal seminar. Invited by: Riccardo Bertacco

Reasons for participation: Upon invitation

City of event: Milano, Italy

Date of event: 09/09/2015

Organising entity: Politecnico di Milano

I. Fina.

4 Title of the work: Realizing science

Name of the event: Internal seminar. Invited by: Miguel Angel Garcia

Reasons for participation: Upon invitation

City of event: Madrid, Spain

Date of event: 21/01/2014

Organising entity: Instituto de Cerámica y Vidrio (ICV-CSIC)

I. Fina; X. Martí.



- 5** **Title of the work:** Looking for enhanced control of ferroelectric polarization by magnetic field.
Name of the event: Internal seminar. Invited by: Kathrin Doerr
Reasons for participation: Upon invitation
City of event: Halle (Saale), Germany
Date of event: 25/11/2013
Organising entity: Martin Luther University Halle-Wittenberg.
I. Fina.
- 6** **Title of the work:** Tres generacions. La força del Col·legi Major
Name of the event: Tres generacions. La força del Col·legi Major. Invited by: Montse Lavado
Reasons for participation: Upon invitation
City of event: Barcelona, Spain
Date of event: 25/11/2013
Organising entity: Col·legi Major Penyafort-Llull
I. Fina.
- 7** **Title of the work:** Epitaxial ferroelectric hafnium oxide at ICMA B
Name of the event: Internal seminar. Invited by: Dr. X. Moyà
Corresponding author: Yes
City of event: Cambridge, United Kingdom
Date of event: 2005
Organising entity: University of Cambridge

Other dissemination activities

- 1** **Title of the work:** Kids' Day
Name of the event: Kids' Day
Type of event: Fairs and exhibitions
City of event: Barcelona, Spain
Date of event: 08/09/2017
Organising entity: ICMA B
- 2** **Title of the work:** Els materials del Futur: Materials Antiferromagnètics (The future materials: antiferromagnetic materials)
Name of the event: Radio Interview
Type of event: Media interviews
Reasons for participation: Upon invitation
Corresponding author: Yes
City of event: Barcelona, Spain
Date of event: 17/05/2017
Organising entity: 'Tercer harmonic' at RKB radio
I. Fina.
- 3** **Title of the work:** Una nova memòria USB (A new USB memory)
Name of the event: Radio interview
Reasons for participation: Upon invitation
Corresponding author: Yes
City of event: Barcelona, Spain
Date of event: 28/04/2017



Organising entity: 'Pa ciencia la nostra' at Radio Sants,
I. Fina.

4 Title of the work: Realization of a demonstration kit based on piezoelectric effect.

Type of event: Demonstration device

Date of event: 2016

Organising entity: NANOEDUCA

5 Title of the work: Del laboratori a l'SmartCity (Realizing Science)

Name of the event: Radio Interview

Type of event: Media interviews

Reasons for participation: Upon invitation

Corresponding author: Yes

City of event: Barcelona, Spain

Date of event: 27/01/2015

Organising entity: 'El Matí' at Cadena Cope

I. Fina.

6 Title of the work: El CSIC consigue por primera vez crear memorias magnéticas que no se borran.

Type of event: Newspaper article

Date of event: 28/01/2014

Organising entity: La Vanguardia (Newspaper)

7 Title of the work: El CSIC logra crear por primera vez memorias magnéticas que no se borran.

Name of the event: Newspaper article

Type of event: Newspaper article

Date of event: 28/01/2014

Organising entity: El Confidencial (e-Newspaper)

8 Title of the work: Cervells fugats

Name of the event: Radio Interview

Type of event: Media interviews

Reasons for participation: Upon invitation

City of event: Barcelona, Spain

Date of event: 13/10/2012

Organising entity: 'El món a RAC1' at RAC1

I. Fina.

9 Title of the work: De la física elemental a les Smart Cities

Name of the event: Bojos per la Física

Type of event: Conferences given

Corresponding author: Yes

Organising entity: Bojos per la Física

I. Fina.

10 Title of the work: Editor of GEFES website

Type of event: Editor

I. Fina.



- 11 Title of the work:** Editor of MULFOX website
Type of event: Editor
- 12 Title of the work:** Scientific Blog at Google+ (English)
Name of the event: Blog
Type of event: Blog
Corresponding author: Yes
Organising entity: Google
I. Fina.
- 13 Title of the work:** Scientific Blog at MasScience
Name of the event: Blog
Type of event: Blog
Corresponding author: Yes
Organising entity: MasScience
I. Fina.
- 14 Title of the work:** Scientific Video Channel at YouTube
Name of the event: Video Channel
Type of event: Video Channel
Corresponding author: Yes
Organising entity: YouTube
I. Fina.
- 15 Title of the work:** Twitter timeline about Science @ignasifina
Name of the event: Blog
Type of event: Blog
Corresponding author: Yes
Organising entity: Twitter

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

- 1 Committee title:** External research consultant at IGS RESEARCH I+D+R.
Start-End date: 2013 - 2015
- 2 Committee title:** Seminars and Internal Training Commission
Affiliation entity: Institut de Ciència de Materials de Barcelona
City affiliation entity: Barcelona, Spain
Start-End date: 2011 - 2012
- 3 Committee title:** Technology Transfer Commission
Affiliation entity: Institut de Ciència de Materials de Barcelona
City affiliation entity: Barcelona, Spain
Start date: 01/09/2017



Organization of R&D activities

- 1** **Title of the activity:** Local organizer of Towards Oxides Applications: Opportunities and Challenges
City convening entity: Sant Feliu de Guixols, Spain
Start-End date: 15/03/2018 - 17/03/2018

- 2** **Title of the activity:** Organizer of Theoretical Approaches in Material Science
Type of activity: Workshop
Convening entity: Institut de Ciència de Materials de Barcelona
City convening entity: Barcelona, Spain
Type of participation: Organiser
Start-End date: 14/11/2011 - 14/11/2011

- 3** **Title of the activity:** Main organizer of 1st Scientific Meeting of ICMA B Students
Type of activity: Workshop
Convening entity: Institut de Ciència de Materials de Barcelona
City convening entity: Barcelona, Spain
Type of participation: Organiser
Start-End date: 25/05/2011 - 25/05/2011

- 4** **Title of the activity:** Local organizer of 2nd European School on Multiferroics 2008 (<http://oldintranet.lmgp.grenoble-inp.fr/spip.php?article333>)
City convening entity: Giron, Spain
Start-End date: 01/09/2008 - 05/09/2008

- 5** **Title of the activity:** Local organizer of 6. 5th Thin Film Oxide Meeting THIOX (<http://icmab.es/archive/icmab-past-events-archive/all/527-theoretical-approaches-in-material-science>)
City convening entity: Sant Feliu de Guixols, Spain
Start-End date: 28/03/2007 - 30/03/2007

- 6** **Title of the activity:** Main organizer of the Symposium on magnetoelectric coupling in antiferromagnetic at room temperature materials
Type of activity: Symposium
City convening entity: Gavà, Spain
Start date: 18/05/2018

- 7** **Title of the activity:** Local organizer of 16th International Workshop on Oxide Electronics (WOE-16)
Type of activity: Conference
City convening entity: Tarragona, Spain
Start date: 10/2009



R&D management

- 1** **Name of the activity:** Experiment grant at ALBA Synchrotron (main proposer, 4 days beamtime): Local imaging of thermally and electrically driven memory effects on FeRh nanostructures (2017092462-ifina)
Performed tasks: Main Proposer
Entity: ALBA
Start date: 08/02/2018 **Duration:** 5 days
- 2** **Name of the activity:** Experiment grant at ALBA Synchrotron (main proposer, 2 days beamtime): Local structural characterization of FeRh microindented structures (2017092412-ifina)
Performed tasks: Main Proposer
Entity: ALBA
Start date: 06/02/2018 **Duration:** 2 days
- 3** **Name of the activity:** Experiment grant at ALBA Synchrotron (Main proposer, 1 days beamtime): Magnetolectric coupling on BaTiO₃/CoFe₂O₄ structures grown on Silicon (Commissioning)
Performed tasks: Main responsible for the comissioning
Entity: ALBA
Start date: 01/11/2017 **Duration:** 1 day
- 4** **Name of the activity:** Experiment grant at ALBA Synchrotron (co-proposer, 3 days beamtime): Ferroelectric switching in PMNPT structures (In House + 2017072265 -mfoerster)
Performed tasks: Proposer
Entity: ALBA
Start date: 13/07/2017 **Duration:** 3 days
- 5** **Name of the activity:** Experiment grant at ALBA Synchrotron (co-proposer, 5 days beamtime): Magnetolectric coupling in PMA/PMNPT structures (Commissioning + 2016091817-mfoerster)
Performed tasks: Proposer
Entity: ALBA
Start date: 09/05/2017 **Duration:** 5 days
- 6** **Name of the activity:** Experiment grant at ALBA Synchrotron (Main proposer, 5 days beamtime): Imaging static and dynamic magnetolectric responses in PMN-PT/FeRh structures at room temperature (2016091875-ifina)
Performed tasks: Main Proposer
Entity: ALBA
Start date: 23/02/2017 **Duration:** 5 days
- 7** **Name of the activity:** Experiment grant at ALBA Synchrotron (Main Proposer, 4 days beamtime): Dependence of antiferromagnetic order on electric field in NiO/PMN-PT structures (2016091924-ifina)
Performed tasks: Main Proposer
Entity: ALBA
Start date: 17/02/2017 **Duration:** 4 days
- 8** **Name of the activity:** Experiment grant at ALBA Synchrotron (Main proposer, 4 days beamtime): Imaging anisotropic magnetolectric response in BiFeO₃/Co and BiFeO₃/Py multiferroic nanostructures (proposal ID: 2014071069-ifina)
Performed tasks: Main Proposer
Entity: ALBA

**Start date:** 01/06/2015**Duration:** 4 days

- 9 Name of the activity:** Head of Ferroelectric and Dielectric Characterization Laboratory (FEDE).
Performed tasks: Design and development of an experimental lab for ferroelectric and magnetoelectric characterization at ICMAB, including software realization (<http://departments.icmab.es/mulfox/dielectric-characterisation>).
Entity: Institut de Ciència de Materials de Barcelona (ICMAB-CSIC)

Evaluation and revision of R&D projects and articles

- 1 Name of the activity:** Postdoctoral Research International Mobility Experience (PRIME) 2016
Performed tasks: Evaluator
Entity where activity was carried out: PRIME 2016
City of entity: Germany
- 2 Name of the activity:** Agencia Nacional de Evaluación y Prospectiva (ANEP)
Performed tasks: Evaluator
Entity where activity was carried out: ANEP
City of entity: Spain
- 3 Performed tasks:** Reviewer
Entity where activity was carried out: Nature Physics, Nature Communications, Journal of Materials Chemistry C, Journal of Applied Physics, AIP Advances, Journal of Alloys and Compounds, RSC Advances, among others

Other achievements

Stays in public or private R&D centres

- 1 Entity:** Max Planck Institute of Microstructure Physics
City of entity: Halle, Germany
Start-End date: 02/2011 - 02/2011
Goals of the stay: Guest
- 2 Entity:** Departamento de Ingeniería de Materiales, Universidade Federal de Sao Carlos
City of entity: Sao Carlos, Brazil
Start-End date: 09/2004 - 12/2004
Goals of the stay: Guest

Obtained grants and scholarships

- 1 Name of the grant:** Juan de la Cierva Fellowship
Awarding entity: MINECO, Spanish Government
Amount of the grant: 58.000 €
Conferral date: 16/03/2016
End date: 01/02/2017
Duration: 2 years



- 2** **Name of the grant:** Beatriu de Pinós B fellowship
City awarding entity: Barcelona, Spain
Aims: Post-doctoral
Awarding entity: Agència de Gestió d'Ajuts Universitaris i de Recerca – Generalitat de Catalunya
Amount of the grant: 43.000 €
Conferral date: 04/03/2015 **Duration:** 1 year
End date: 04/03/2016
Entity where activity was carried out: Institut Català de Nanociència i Nanotecnologia
- 3** **Name of the grant:** Alexander Von Humboldt fellowship
City awarding entity: Halle (Saale), Germany
Aims: Post-doctoral
Awarding entity: Alexander Von Humboldt foundation
Amount of the grant: 63.600 €
Conferral date: 04/03/2013 **Duration:** 2 years
End date: 04/03/2015
Entity where activity was carried out: Max Planck Institute of Microstructure Physics
- 4** **Name of the grant:** Beatriu de Pinós A fellowship
City awarding entity: Halle (Saale), Germany
Aims: Post-doctoral
Awarding entity: Agència de Gestió d'Ajuts Universitaris i de Recerca – Generalitat de Catalunya
Amount of the grant: 86.000 €
Conferral date: 04/03/2013 **Duration:** 2 years
End date: 04/03/2015
Entity where activity was carried out: Max Planck Institute of Microstructure Physics and University of Warwick
- 5** **Name of the grant:** Awarded with an TO-BE Spring Meeting 2016 meeting grant (full-paid)
Awarding entity: TO-BE Spring Meeting 2016 organization
Conferral date: 04/2016
- 6** **Name of the grant:** Awarded with an TO-BE Spring Meeting 2015 meeting grant (full-paid)
Awarding entity: TO-BE Spring Meeting 2015 organization
Conferral date: 03/2015
- 7** **Name of the grant:** Awarded with an E-MRS fall 2013 meeting grant (full-paid)
Awarding entity: E-MRS fall 2013 meeting organization
Conferral date: 09/2013
- 8** **Name of the grant:** Granted with a student grant in ISAF-ECAPD-PFM 2012 conference
Awarding entity: ISAF-ECAPD-PFM 2012 organization
Conferral date: 11/06/2012



Scientific societies and professional associations

Name of the society: Real Sociedad Española de Física (RSEF): Grupo Especializado de Física del Estado Sólido.

City affiliation entity: Madrid, Spain

Start date: 2013

Prizes, mentions and distinctions

Description: First Young Researcher Prize of the XXXVI Biennial Meeting of the Spanish Physics Society for the excellent trajectory

Awarding entity: RSEF

City awarding entity: Santiago de Compostela, Spain

Conferral date: 07/2017

Summary of other achievements

- 1 Description of the achievement:** Realization of a precompetitive car detector device based on ferroelectric materials

Accrediting entity: IGSresearch

Conferral date: 04/03/2016
- 2 Description of the achievement:** CEO and cofounder of IGS JUMP: company focused on the development of non-academic ideas for their industrial applicability

City accrediting entity: Tarragona, Spain

Conferral date: 2014
- 3 Description of the achievement:** Consulor júnior SAP

Accrediting entity: T-Systems Iberia

City accrediting entity: Martorell, Spain

Conferral date: 01/06/2007
- 4 Description of the achievement:** CoDeveloper Spinwire Algorithm

Accrediting entity: IGSresearch

City accrediting entity: Tarragona, Spain
- 5 Description of the achievement:** CoDeveloper. USB antiferromagnetic memory device

Accrediting entity: IGSresearch

City accrediting entity: Tarragona, Spain