CURRÍCULUM VÍTAE NORMALIZADO

Ferran Macià Bros

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GOBIERNO DE ESPAÑA
MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

FECYT FUNDACIÓN ESPAÑOLA PARA LA CIENCIA Y LA TECNOLOGÍA

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.

I am a research scientist with a background in mathematics and telecommunication engineering. My work experience and interests are magnetism and spin-dependence electron transport (spintronics) in mesoscopic systems, magnetic quantum tunneling and coherence in low dimensional magnetism, and perturbations and dynamical systems involving magnetism. I follow an interdisciplinary research approach--contributing mostly with experimental work but also with theoretical and computational studies. I believe science and technology must connect with society; I have thus pursued my goal collaborating with companies, teaching at universities and schools, and participating in social and cooperation projects.

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.

h=21 (scholargoogle)
h=17 (SCOPUS)

Ferran Macià Bros

Surname(s):	**Macià Bros**
Name:	**Ferran**
ORCID:	**0000-0001-5972-4810**
ScopusID:	**ID: 9843562000**
ResearcherID:	**B-6457-2014**
Nationality:	**Spain**
Aut. region/reg. of birth:	**Catalonia**
Email:	**ferran.macia@gmail.com**
Personal web page:	**http://ffn.ub.edu/~fmacia/index.html**

Current professional situation

Employing entity: University of Barcelona
Type of entity: University Department
Professional category: Ramon y Cajal
Start date: 15/11/2018
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 221100 - Solid state physics
Performed tasks: Ramon y Cajal Contract

Employing entity: Institut de ciencia de Materiales de Barcelona
Type of entity: R&D Centre
Department: ICMAB-CSIC
Professional category: Research Scholar
Start date: 15/11/2018
Type of contract: Temporary employment contract
Dedication regime: Part time
Primary (UNESCO code): 221100 - Solid state physics

Previous positions and activities

	Employing entity	Professional category	Start date
1	Institut de ciencia de Materiales de Barcelona	Ramón y Cajal	01/02/2016
2	Universitat de Barcelona	Research Scholar	01/06/2014
3	New York University and University of Barcelona	Research Scholar	01/04/2011
4	New York University	Postdoctoral Fellow	01/09/2010
5	New York University	Postdoctoral Fellow	01/09/2009
6	Universitat de Barcelona	Graduate Student (FPU-governement fellowship)	01/05/2006
7	Universitat de Barcelona	Graduate Student	01/01/2005

1 **Employing entity:** Institut de ciencia de Materiales de Barcelona
Professional category: Ramón y Cajal
Start-End date: 01/02/2016 - 14/11/2018

2 **Employing entity:** Universitat de Barcelona **Type of entity:** University
Professional category: Research Scholar
Start-End date: 01/06/2014 - 31/01/2016 **Duration:** 1 year - 7 months

3 **Employing entity:** New York University and University of Barcelona
Department: Physics Department, Faculty of Arts and Science at New York University
City employing entity: New York, United States of America
Professional category: Research Scholar **Educational Management (Yes/No):** Yes
Phone: (001) 2129987603
Start-End date: 01/04/2011 - 31/05/2014 **Duration:** 3 years - 2 months
Type of contract: Temporary employment contract
Dedication regime: Full time
Performed tasks: I stayed from April 1st 2012 to may 31st 2013 based in New York and from 1st July 2013 to 31st of May 2014 in Barcelona
Field of management activity: University

4 **Employing entity:** New York University **Type of entity:** University
Department: Physics Department, Faculty of Arts and Science at New York University
City employing entity: New York, United States of America
Professional category: Postdoctoral Fellow **Educational Management (Yes/No):** No
Phone: (001) 2129987603
Start-End date: 01/09/2010 - 31/03/2011 **Duration:** 7 months
Type of contract: Contratado con beca Beatriu de Pinos
Dedication regime: Full time

5 **Employing entity:** New York University **Type of entity:** University
Department: Physics Department and COURANT Institue for Mathemathical Science, New York University
Professional category: Postdoctoral Fellow
Start-End date: 01/09/2009 - 01/09/2010 **Duration:** 1 year
Type of contract: Temporary employment contract
Performed tasks: Join position between physics department and Courant Institute at New York University

6 **Employing entity:** Universitat de Barcelona **Type of entity:** University
Department: Department of Fundamental Physics, Physcis Faculty
Professional category: Graduate Student (FPU-governement fellowship)
Start-End date: 01/05/2006 - 01/09/2009 **Duration:** 3 years - 4 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)

7 **Employing entity:** Universitat de Barcelona **Type of entity:** University
Department: Department of Fundamental Physics, Physcis Faculty
Professional category: Graduate Student
Start-End date: 01/01/2005 - 01/05/2006 **Duration:** 1 year - 4 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)

Education

University education

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

1 **University degree:** Higher degree
Name of qualification: Degree in Telecomunication Engineering
Degree awarding entity: Universitat Politècnica de Catalunya **Type of entity:** University
Date of qualification: 08/04/2005

2 **University degree:** Higher degree
Name of qualification: Mathematics degree
Degree awarding entity: Universitat Politècnica de Catalunya **Type of entity:** University
Date of qualification: 30/06/2004

Doctorates

Doctorate programme: Applied Physics and Optics
Degree awarding entity: Universitat de Barcelona **Type of entity:** University
Date of degree: 29/05/2009
Thesis title: Experiments with acoustic waves and microwaves in Magnetic Materials
Thesis director: Javier Tejada Palacios
Thesis co-director: Joan Manel Hernández Farras
Obtained qualification: Excellent with Cum Laude
Recognition of quality: Yes

Other postgraduate university studies

Postgraduate qualification: Certificado aptitud pedagógica
Degree awarding entity: Universitat Politècnica de Catalunya **Type of entity:** University
Date of qualification: 31/05/2005

Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare studies)

1 **Training title:** El científic davant els mitjans de comunicació
Awarding entity: RTVE de Sant Cugat
End date: 02/2018
Duration in hours: 40 hours

2 **Training title:** Public speach
Awarding entity: American language Institute, New York University
Type of entity: University Centres and Structures and Associated Bodies
End date: 20/12/2010
Duration in hours: 40 hours

3 **Training title:** Writing and editing seminar
Awarding entity: American language Institute, New York University
Type of entity: University Centres and Structures and Associated Bodies
End date: 01/06/2010
Duration in hours: 60 hours

4 **Training title:** Hacia una museologia total: La concepción de museos a través de conversaciones entre científicos, museólogos, diseñadores y artistas
Awarding entity: Cosmocaixa
Type of entity: Museo
End date: 24/04/2009
Duration in hours: 40 hours

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Catalan		C1	C1	C1	C1
Spanish		C1	C1	C1	C1
French		C1	C1	C1	C1
English		C1	C1	C1	C1

Teaching experience

General teaching experience

1 **Type of teaching:** Official teaching
Name of the course: Magnetism and Superconductivity
Type of programme: Diploma
Type of subject: Optional
University degree: Licenciado en Ciencias
Start date: 01/02/2018
End date: 31/12/2019
End date: 31/12/2019
Entity: Universitat de Barcelona
Type of entity: University
Faculty, institute or centre: Facultad de Física

2 **Type of teaching:** Official teaching
Name of the course: Lab. of modern physics
Type of programme: Diploma
Type of subject: Obligatory
University degree: Licenciado en Ciencias
Start date: 09/09/2013 **End date:** 30/06/2015
End date: 20/01/2015
Entity: Universitat de Barcelona **Type of entity:** University
Faculty, institute or centre: Facultad de Física

3 **Type of teaching:** Official teaching
Name of the course: Advanced solid state physics
Type of programme: Diploma
Type of subject: Optional
University degree: Licenciado en Ciencias
Start date: 09/09/2014 **End date:** 2014
End date: 30/06/2015
Entity: Universitat de Barcelona **Type of entity:** University
Faculty, institute or centre: Facultad de Física

4 **Type of teaching:** Official teaching
Name of the course: Advanced solid state physics
Type of programme: Diploma
Type of subject: Optional
University degree: Licenciado en Ciencias
Start date: 2008 **End date:** 2009
End date: 2009
Entity: Universitat de Barcelona **Type of entity:** University
Faculty, institute or centre: Facultad de Física

5 **Type of teaching:** Official teaching
Name of the course: Quantum Mechanics Lab.
Type of programme: Diploma
Type of subject: Obligatory
University degree: Licenciado en Ciencias
Start date: 2007 **End date:** 2009
End date: 2009
Entity: Universitat de Barcelona **Type of entity:** University
Faculty, institute or centre: Facultad de Física

6 **Name of the course:** Technologies for development;
University degree: Master on International Developing
Start date: 2004 **End date:** 2009
End date: 2009
Entity: SETEM-Universitat Oberta de Catalunya

7 **Type of teaching:** Official teaching
Name of the course: Lab of modern physics
Type of programme: Diploma
Type of subject: Obligatory
University degree: Licenciado en Ciencias

Start date: 01/02/2018
End date: 31/12/2019
Entity: Universitat de Barcelona **Type of entity:** University
Faculty, institute or centre: Facultad de Física

Experience supervising doctoral thesis and/or final year projects

1 **Project title:** Brain inspired computation with nanoscale magnetic oscillators
Type of project: End of course project
Entity: Universita de Barcelona **Type of entity:** University
Student: Sergi Cruz Desentre
Date of reading: 12/2019

2 **Project title:** Spin-wave logics for computing
Type of project: End of course project
Entity: Universita de Barcelona **Type of entity:** University
Student: Ignacio Tarrats Dura
Date of reading: 12/2019

3 **Project title:** Magnetic excitations induced by surface acoustic waves and spin polarized currents
Type of project: Doctoral thesis
Co-director of thesis: Joan Manel Hernàndez Ferràs
Entity: Universitat de Barcelona
Student: Nahuel Statuto
Obtained qualification: Cum Laude
Date of reading: 22/07/2019
European doctorate: Yes
Quality recognition: Yes

4 **Project title:** Computing with spin waves
Type of project: End of course project
Entity: Universita de Barcelona **Type of entity:** University
Student: Guillermo Camps Pons
Date of reading: 06/2019

5 **Project title:** Magnetization modication through magnetoelastic effect in a thin Nickel film
Type of project: End of course project
Entity: Universita de Barcelona **Type of entity:** University
Student: Miquel Ortells
Date of reading: 06/2019

6 **Project title:** DAAD Internship (2 months)
Type of project: Internship
Entity: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Student: Peter Manshaussen
Date of reading: 2018

7 **Project title:** Internship (Bojos per la ciència) 1 month
Type of project: Internship
Entity: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Student: Anastasia zhuchkova
Date of reading: 2018

8 **Project title:** Internship (Bojos per la ciència) 1 month
Type of project: Internship
Entity: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Student: Roger Castellanos
Date of reading: 2018

9 **Project title:** Study of Magnonic Nanostructures
Type of project: 3 month Pre-doc stay
Co-director of thesis: Erik Whalstrom
Entity: Universita de Barcelona **Type of entity:** University
Student: Vegard Flovick
Date of reading: 2017

10 **Project title:** Internship (Bojos per la ciència) 1 month
Type of project: Internship
Entity: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Student: Gerard Sala
Date of reading: 2017

11 **Project title:** Magnetization Dynamics at the Nanoscale in Nanoparticles and Thin Films
Type of project: Doctoral thesis
Co-director of thesis: Javier Tejada
Entity: Universita de Barcelona **Type of entity:** University
Student: Sergi Lendínez
Obtained qualification: Cum Laude
Date of reading: 21/01/2016

12 **Project title:** Stable solitons in spin torque oscilators
Type of project: End of course project
Co-director of thesis: Javier Tejada
Entity: Universita de Barcelona **Type of entity:** University
Student: Raimon Luna
Date of reading: 2015

13 **Project title:** Síntesis y caracterización magnética de ferritas y perovskitas
Type of project: Colaboración en tesina de Máster
Entity: Universitat Rovira i Virgili **Type of entity:** University
Student: Vanessa Fibla Moreno
Date of reading: 12/2013

14 **Project title:** Damping and Coupling in Normal Metal(NM)-Ferromagnetic Metal(FM) Multilayers
Type of project: Materials Research Science Engineering Centers
Co-director of thesis: Andrew D. Kent
Entity: Xavier University of Louisiana
City of entity: New york, United States of America
Student: Kamirah Demouchet
Date of reading: 12/11/2012

15 **Project title:** Transport measurements in Ferromagnetic thin films: Anisotropic MagnetoResistance, FerroMagnetic Resonance and spin pumping.
Type of project: Internship (6 months) +Master thesis
Co-director of thesis: Andrew D. Kent
Entity: Ecole des Mines de Nancy **Type of entity:** University
City of entity: New york, United States of America
Student: Stephane Garagnani
Date of reading: 17/09/2012

16 **Project title:** Theoretical and experimental study of Ferromagnetic domains in multilayered structures
Type of project: Internship (1.5 years)
Co-director of thesis: Andrew D. Kent
Entity: The Bronx High School of Science and New York University **Type of entity:** University
City of entity: New york, United States of America
Student: Steve Chen
Date of reading: 31/01/2012

17 **Project title:** Experimental studies of magnetic materials with spin-orbit interaction
Type of project: Internship (3 months)
Co-director of thesis: Andrew D. Kent
Entity: Ecole des Mines de Nancy **Type of entity:** University
City of entity: New york, United States of America
Student: Charles Pépin
Date of reading: 05/09/2011

Student tutorials

1 **Name of the programme:** Estudiantes de doctorado con Becas FPU en estancias breves
Entity: New York University **Type of entity:** University
Number of tutored students: 1

2 **Name of the programme:** Physics Undergraduate Program
Entity: New York University **Type of entity:** University
City of entity: New York, United States of America
Number of tutored students: 4

Educational or pedagogical publications, books, articles, etc.

Eugene Chudnovsky; Javier Tejada; Carlos Calero; Ferran Macià. Problem solutions to Lectures on Magnetism. Rinton Press,
Name of the materials: Book of problems and solutions
Date of drafting: 2006
Format: Book

Other activities/achievements not included above

1 **Description of the activity:** Member of the evaluating commitee of a PhD thesis (Carolyna Hepburn)
Organising entity: Université Pierre et Marie Curie **Type of entity:** University
End date: 2017

2 **Description of the activity:** Member of the evaluating commitee of a PhD thesis (Ricardo Zarzuela)
Organising entity: Universitat de Barcelona **Type of entity:** University
End date: 2014

3 **Description of the activity:** I co-run a blog on scinece outreach and education dissemination (http://www.colored-glasses.com/)
End date: 2013

4 **Description of the activity:** Member of the communication group in the Marie Curie alumni (Editorial board in the newsletter)
Organising entity: Marie Curie Alumni Association
End date: 2013

5 **Description of the activity:** Afterschool STEM Mentoring Program,
City of activity: New York, United States of America
Organising entity: New York Academy of science **Type of entity:** Foundation
End date: 2011

6 **Description of the activity:** High school Teaching of Experimental Science 2006, 2007 and 2009
City of activity: Koudougou, Burkina Fasso
Organising entity: Lycée Municipal de Koudougou **Type of entity:** Public High School
End date: 2009

7 **Description of the activity:** Beca de col.laboració de suport a la docència
Organising entity: Universitat Politècnica de Catalunya **Type of entity:** University
End date: 2004

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:** Respuestas de oxidos inspirados en la naturaleza. Funding body: Ministerio de economia industria y competitividad (MAT2017-85232-R).
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** Public Research Body
Name principal investigator (PI, Co-PI....): Gervasi Herranz
Nº of researchers: 8
Start-End date: 01/01/2018 - 31/12/2021
Total amount: 242.000 €

2 **Name of the project:** Control magneto-mecánico de la magnetización en sistemas nanométricos mediante ondas acústicas (MAT2015-69144- P)
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Joan Manel Hernàndez
Nº of researchers: 4
Start-End date: 01/01/2016 - 30/06/2020
Total amount: 98.000 €

3 **Name of the project:** Detection of structural faults in coronary artery-implanted stents through non-invasive techniques of microwave radiation
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Javier Tejada
Nº of researchers: 6
Start-End date: 01/01/2016 - 31/12/2018
Total amount: 300.000 €

4 **Name of the project:** Functional Magnonic Crystals: Manipulating Dynamical Magnetic States in Nanostructures with Surface Acoustic Waves
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** Public Research Body
Name principal investigator (PI, Co-PI....): Ferran Macià
Nº of researchers: 1
Start-End date: 01/01/2016 - 31/12/2018
Total amount: 70.000 €

5 **Name of the project:** MATHEROES: Supermateriales, los héroes del futuro (FCT-17-12030)
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** Public Research Body
Nº of researchers: 6
Start-End date: 01/01/2016 - 31/12/2018

Total amount: 11.300 €

6 **Name of the project:** DETECCION DE DEFECTOS ESTRUCTURALES POR DETERIORO DE STENTS CORONARIOS IMPLANTADOS EN ARTERIAS MEDIANTE TECNICAS NO INVASIVAS DE MICROONDAS
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Ferran Macià Bros; Javier Tejada Palacios
Nº of researchers: 4
Name of the programme: EXPLORA
Code according to the funding entity: TEC2013-49465-EXP
Start-End date: 09/2014 - 08/2015
Total amount: 91.960 €
Applicant's contribution: I lead this project. The PI is listed Javier Tejada because the University where I work (UB) did not allow to list me as a PI because I had a contract that was not lasting the whole duration of the project.

7 **Name of the project:** Fenómenos a escala nanométrica en materiales magnéticos y superconductores a bajas temperaturas, bajo la acción de microondas de alta frecuencia y campos magnéticos rotatorios
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Joan Manel Hernandez Ferras
Nº of researchers: 4
Start-End date: 2012 - 2015 **Duration:** 3 years
Total amount: 214.876 €

8 **Name of the project:** Spin torque oscilladors with applications in non digital computing science & communications (IOF-253214)
Entity where project took place: New York University / Universitat de Barcelona
Name principal investigator (PI, Co-PI....): Ferran Macia Bros
Nº of researchers: 3
Start-End date: 2011 - 2014
Total amount: 254.100 €

9 **Name of the project:** Room-temperature spin-mediated coupling in hybrid magnetic, organic, and oxide structures and devices ARO-MURI (W911NF-08-1-0317)
Type of project: Demonstration, pilot projects, conceptual formulations and design of processes and services **Geographical area:** Non EU International
Degree of contribution: Researcher
Entity where project took place: New York University, The University of Iowa, University of Pittsburg, University of California Berkeley, Michigan University **Type of entity:** University
City of entity: United States of America
Funding entity or bodies:
Army Research Office **Type of entity:** State agency
City funding entity: United States of America

Start-End date: 2008 - 2013
Total amount: 1.000.000 €

10 **Name of the project:** Biologically Assembled Quantum Electronic Arrays, ARO-MURI (W911NF-08-1-0364)
Degree of contribution: Researcher
Entity where project took place: New York University, The University of Iowa, University of Pittsburg, University of California Berkeley, Michigan University
City of entity: United States of America
Name principal investigator (PI, Co-PI....): Richard Kiehl
Funding entity or bodies:
Army Research Office **Type of entity:** State agency
City funding entity: United States of America

Start-End date: 2009 - 2012
Total amount: 700.000 €

11 **Name of the project:** Experimentos a bajas temperaturas con ondas acústicas superficiales, microondas y campos magnéticos giratorios en sistemas magnéticos y superconductores (MAT 2002-03144)
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Javier Tejada Palacios
Start-End date: 2009 - 2011 **Duration:** 3 years
Total amount: 375.100 €

12 **Name of the project:** Functional Architectonics.
Entity where project took place: New York University
Funding entity or bodies:
SemiConductor Research Corporation via FENA/FCRP Grant No. 0160-G-FD211
City funding entity: United States of America

Start-End date: 2001 - 2009
Total amount: 300.000 €

13 **Name of the project:** Experimentos de alta frecuencia (1 GHz a 110 GHz) en sistemas nanométricos de naturaleza magnética, ferroeléctrica, piezoeléctrica y superconductora ((MEC MAT2005-06162))
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Javier Tejada Palacios
Start-End date: 2005 - 2008 **Duration:** 3 years
Total amount: 211.000 €

14 **Name of the project:** Fenómenos de emisión electromagnética coherente y de coherencia cuántica de espín en agregados moleculares y superconductores de alta temperatura crítica (MCyT MAT2002-03144)
Entity where project took place: Universitat de Barcelona **Type of entity:** University
Name principal investigator (PI, Co-PI....): Javier Tejada Palacios
Start-End date: 2002 - 2005 **Duration:** 3 years
Total amount: 144.000 €

Results

Industrial and intellectual property

1 **Title registered industrial property:** Stent monitoring
Nº of application: EO17382621.5
Country of inscription: Spain
Date of register: 20/09/2017

2 **Title registered industrial property:** ORGANIC MAGNETOELECTROLUMINESCENCE FOR TRANSDUCTION BETWEEN MAGNETIC AND OPTICAL INFORMATION
Type of industrial property: Patent of invention
Inventors/authors/obtainers: Fujian Wang; Markus Wohlgenannt; Ferran Macià Bros; Michael Flatté; Andrew D. Kent; Nicholars Harmon
Entity holder of rights: University of IOWA
Nº of application: US 13/187,724
Country of inscription: United States of America
Date of register: 28/08/2014
PCT patent: No

3 **Title registered industrial property:** AGGREGATED SPIN-TORQUE NANO-OSCILLATORS
Type of industrial property: Patent of invention
Inventors/authors/obtainers: Ferran Macià Bros; Frank C. Hoppensteadt; Andrew D. Kent
Entity holder of rights: New York University
Nº of application: US 13/187,724
Country of inscription: United States of America
Date of register: 21/07/2011
Conferral date: 14/01/2014
Nº of patent: US8629729
PCT patent: Yes

4 **Title registered industrial property:** AGGREGATED SPIN-TORQUE NANO-OSCILLATORS (Continuation)
Inventors/authors/obtainers: Ferran Macià Bros; Frank C. Hoppensteadt; Andrew D. Kent
Entity holder of rights: New York University
Nº of application: 14140878
Country of inscription: United States of America
Date of register: 26/12/2013

Scientific and technological activities

Scientific production

H index: 20
Date of application: 14/11/2019

Publications, scientific and technical documents

1 M. Foerster*; F. Macià*; N.Statuto; A. Hernández-Mínguez; S. Lendínez; S.Finizio; P.V.Santos; J. Fontcuberta; J.M Heràndez; M. Klaui; L. Aballe. Direct imaging of delayed magneto-dynamic modes induced by surface acoustic waves. Nature Communications. 8 - 1, pp. 407 - 407. 2017. Available on-line at: <https://doi.org/10.1038/s41467-017-00456-0>. ISSN 2041-1723

Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
Source of citations: Scholar Google
Citations: 33

Relevant publication: Yes

2 Ferran Macià; Andrew D. Kent; Nahuel Statuto; Sergi Landinez. Observation of droplet soliton drift resonances in a spin-transfer-torque nanocontact to a ferromagnetic thin lm. Physical Review B. 92, pp. 174426. 2015.

Type of production: Scientific paper
Corresponding author: Yes
Source of citations: Scholar google
Citations: 31

Relevant publication: Yes

3 Ferran Macià; Dirk Backes; Andrew D Kent. Stable magnetic droplet solitons in spin-transfer nanocontacts. Nature Nanotechnology. 9 - 992, Nature Publishing group, 2014.

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Corresponding author: Yes

Impact source: ISI
Category: NANOSCIENCE & NANOTECHNOLOGY
Impact index in year of publication: 33.265
Journal in the top 25%: Yes
Position of publication: 1
No. of journals in the cat.: 73

Source of citations: Scholar Google
Citations: 83

Relevant publication: Yes

4 F. Macià; F. Wang; N. J. Harmon; A. D. Kent; M. Wohlgenannt; M. E. Flatté. Organic Magnetoelectroluminescence for Room Temperature Transduction between Magnetic and Optical Information. Nature Communications. 05 - 3609, Nature Publishing group, 2014.

Type of production: Scientific paper
Format: Journal
Position of signature: 1
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee

Impact source: ISI
Category: MULTIDISCIPLINARY SCIENCES
Impact index in year of publication: 10.74
Journal in the top 25%: Yes

Position of publication: 3 **No. of journals in the cat.:** 55

Source of citations: Scholar Google **Citations:** 42

Relevant publication: Yes

5 F. Macià; F. C. Hoppensteadt; A. D. Kent. Spin-wave interference patterns created by spin-torque nano-oscillators for memory and computation. Nanotechnology. 22 - 9, pp. 095301. IOP science, 2011.

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

Corresponding author: Yes

Impact source: ISI **Category:** Science Edition - PHYSICS, APPLIED

Impact index in year of publication: 3.842 **Journal in the top 25%:** Yes

Position of publication: 18 **No. of journals in the cat.:** 128

Source of citations: Google Scholar **Citations:** 64

Relevant results: The article was included in the yearly journal highlight and a summary was published in the nanotechology highlights review. Also featured in nanotech (http://nanotechweb.org/cws/article/lab/45073)

Relevant publication: Yes

6 Nahuel Statuto; Christian Hahn; Joan Manel Hernàndez; Andrew D. Kent; Ferran Macià. Multiple magnetic droplet soliton modes. Phys. Rev. B. 99, pp. 174436 - 174436. American Physical Society, 05/2019. Available on-line at: <https://link.aps.org/doi/10.1103/PhysRevB.99.174436>.

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

Corresponding author: Yes

7 Michael Foerster; Ferran Macià. Preface to Special Issue on Magneto-Elastic Effects. Journal of Physics: Condensed Matter. 31 - 19, pp. 190301 - 190301. {IOP} Publishing, 03/2019. Available on-line at: <https://doi.org/10.1088%2F1361-648x%2Fab067c>.

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

Corresponding author: Yes

8 Michael Foerster; Nahuel Statuto; Blai Casals; Alberto Hernández-Mínguez; Simone Finizio; Ania Mandziak; Lucia Aballe; Joan Manel Hernàndez; Ferran Macià. Quantification of propagating and standing surface acoustic waves by stroboscopic X-ray photoemission electron microscopy. Journal of Synchrotron Radiation. 26 - 1, pp. 184 - 193. 01/2019. Available on-line at: <https://doi.org/10.1107/S1600577518015370>.

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

Corresponding author: Yes

9 Nahuel Statuto; Joan Manel Hernàndez; Andrew D Kent; Ferran Macià. Generation and stability of dynamical skyrmions and droplet solitons. Nanotechnology. 29 - 32, pp. 325302 - 325302. IOP Publishing, 06/2018. Available on-line at: <https://doi.org/10.1088%2F1361-6528%2Faac411>.

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

Corresponding author: Yes

10 C. Gálvez-Montón; G. Arauz-Garofalo; O. Rodriguez-Leor; C. Soler-Botija; S. Amorós García de Valdecasas; F.D Gerez-Britos; A. Bayes-Genis; J.M. O'Callaghan; F Macià; J Tejada. Ex vivo assessment and in vivo validation of non-invasive stent monitoring techniques based on microwave spectrometry. Scientific Reports. 8 - 1, pp. 14808 - 14808. 2018. Available on-line at: <https://doi.org/10.1038/s41598-018-33254-9>. ISSN 2045-2322

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

11 Jinting Hang; Christian Hahn; Nahuel Statuto; Ferran Macià; A.D. Kent. Generation and annihilation time of magnetic droplet solitons. Scientific Reports. 8 - 1, pp. 6847 - 6847. 2018. Available on-line at: <https://doi.org/10.1038/s41598-018-25134-z>. ISSN 2045-2322

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

12 Michael Foerster; Lucia Aballe; Joan Manel Hernàndez; Ferran Macià. Subnanosecond magnetization dynamics driven by strain waves. MRS Bulletin. 43 - 11, pp. 854–859 - 854–859. Cambridge University Press, 2018.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

13 H. B. Vasili; B. Casals; R. Cichelero; F. Macià; J. Geshev; P. Gargiani; M. Valvidares; J. Herrero-Martin; E. Pellegrin; J. Fontcuberta; G. Herranz. Direct observation of multivalent states and 4f-3d charge transfer in Ce-doped yttrium iron garnet thin films. Phys. Rev. B. 96, pp. 014433 - 014433. American Physical Society, 07/2017. Available on-line at: <https://link.aps.org/doi/10.1103/PhysRevB.96.014433>.
Type of production: Scientific paper **Format:** Journal

14 Erik Wahlström; Ferran Macià; Jos E Boschker; Asmund Monsen; Per Nordblad; Roland Mathieu; Andrew D Kent; Thomas Tybell. Twinned-domain-induced magnonic modes in epitaxial LSMO/STO films. New Journal of Physics. 19 - 6, pp. 063002 - 063002. {IOP} Publishing, 06/2017. Available on-line at: <https://doi.org/10.1088%2F1367-2630%2Faa70af>.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

15 Sergi Lendínez; Jinting Hang; Saül Vélez; Joan Manel Hernàndez; Dirk Backes; Andrew D. Kent; Ferran Maci\`a. Effect of Temperature on Magnetic Solitons Induced by Spin-Transfer Torque. Phys. Rev. Applied. 7, pp. 054027 - 054027. American Physical Society, 05/2017. Available on-line at: <https://link.aps.org/doi/10.1103/PhysRevApplied.7.054027>.
Type of production: Scientific paper **Format:** Journal
Corresponding author: Yes

16 Ignasi Fina; Alberto Quintana; Jessica Padilla-Pantoja; Xavier Martí; Ferran Macià; Florencio Sánchez; Michael Foerster; Lucia Aballe; Josep Fontcuberta; Jordi Sort. Electric-Field-Adjustable Time-Dependent Magnetoelectric Response in Martensitic FeRh Alloy. ACS Applied Materials & Interfaces. 9 - 18, pp. 15577 - 15582. 2017. Available on-line at: <https://doi.org/10.1021/acsami.7b00476>.
Type of production: Scientific paper **Format:** Journal

17 Vegard Flovik; Ferran Macià; Erik Wahlstrom. Describing synchronization and topological excitations in arrays of magnetic spin torque oscillators through the Kuramoto model. Scientific Reports. 6 - 1, pp. 32528 - 32528. 2016. Available on-line at: <https://doi.org/10.1038/srep32528>. ISSN 2045-2322
Type of production: Scientific paper **Format:** Journal

18 Vegard Flovik; Ferran Macià; Sergi Lendínez; Joan Manel Hernàndez; Ingrid Hallsteinsen; Thomas Tybell; Erik Wahlström. Thickness and temperature dependence of the magnetodynamic damping of pulsed laser deposited La0.7Sr0.3MnO3 on (111)-oriented SrTiO3. Journal of Magnetism and Magnetic Materials. 420, pp. 280 - 284. 2016. Available on-line at: <http://www.sciencedirect.com/science/article/pii/S0304885316308411>. ISSN 0304-8853
Type of production: Scientific paper **Format:** Journal

19 Andrew D. Kent; Hendrik Ohldag; Roopali Kukreja; Stefano Bonetti; Ferran Macià; Dirk Backes. Direct Observation of a Localized Magnetic Soliton in a Spin-Transfer Nanocontact. Physical Review Letters. 115, pp. 127205. 2015.
Type of production: Scientific paper

20 Z. Chen; Anders Eklund; J Frich; Gunnar Malm; J Katine; S Urazhdin; J Sthor; HA Durr; Andrew D. Kent; Hendrik Ohldag; Roopali Kukreja; Stefano Bonetti; Ferran Macià; Dirk Backes. Direct observation and imaging of a spinwave soliton with p-like symmetry. Nature Communications. 6, pp. 8889. 2015.
Type of production: Scientific paper

21 Erik Wahlstrom; Ferran Macià; Vegard Flovik. Eddy current interactions in a ferromagnet-normal metal bilayer structure, and its impact on ferromagnetic resonance lineshapes nanocontacts. Journal of Applied Physics. 117, pp. 143902. 2015.
Type of production: Scientific paper **Format:** Journal

22 M. Wohlgenannt; M. E. Flatté; N. J. Harmon; F. Wang; A. D. Kent; F. Macià. Singlet-to-triplet interconversion using hyperne as well as ferromagnetic fringe elds. Phil. Trans. Royal Society. A. 373, pp. 20140326. 2015.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee

23 Ferran Macià; J Tejada; L.F. Chibotaru; V.V Mochalkov; J Vanaken; Saul Velez; Narayana Jammalamadaka. Spin reversal in Fe8 under fast pulsed magnetic elds. New Journal of Physics. 17, pp. 073006. 2015.
Type of production: Scientific paper
Corresponding author: Yes

24 Erik Wahlstrom; Maj Hanson; Rimantas brucas; Joan Manel Hernandez; Ferran Macià; Vegard Flovik. Tailoring the magnetodynamic properties of nanomagnets using magnetocrystalline and shape anisotropies. Physcal Review B. 92, pp. 104406. 2015.
Type of production: Scientific paper

25 P Subedi; S. Velez; F. Macià; J Tejada; S. Li; M. P. Sarachik; S. Mukherjee; A.D. Kent. Partial spin reversal in magnetic deflagration. Physics review B. 89, pp. 144408. APS, 2014.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal without external admissions assessment committee
Impact source: ISI **Category:** PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.664 **Journal in the top 25%:** Yes
Position of publication: 14 **No. of journals in the cat.:** 67

26 F. Macià; F. C. Hoppensteadt; A. D. Kent. Spin wave excitation patterns generated by spin torque oscillators. Nanotechnology. 25 - 4, pp. 045303. IOP science, 2014.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, APPLIED
Impact index in year of publication: 3.842 **Journal in the top 25%:** Yes
Position of publication: 18 **No. of journals in the cat.:** 128

27 Åsmund Monsen; Jos E Boschker; F. Macià; Justin W. Wells; Per Nordblad; L. H. He; F. W. Wang; Andrew D. Kent; Roland Mathieu; Thomas Tybell; Erik Wahlström. Thickness dependence of dynamic and static magnetic properties of pulsed laser deposited La0.7Sr0.3MnO3 films on SrTiO3(001). Journal of Magnetism and Magnetic Materials. 369, pp. 197. ELSEVIER, 2014.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

28 Elies Molins; Martí Gich; J. Tejada; J.M. Greneche; Ferran Macià. Zero-field quantum tunneling relaxation of the molecular spin in Fe8 observed by 57Fe Mössbauer spectrometry. Europhysics Letters. 82 - 108, pp. 47004. IOP science, 2014.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI

Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 2.269
Journal in the top 25%: Yes
Position of publication: 17
No. of journals in the cat.: 78

29 M. Wohlgenannt; M. E. Flatté; N. J. Harmon; F. Wang; A. D. Kent; F. Macià; M-Y Im; P. Fischer. A new twist on organic spintronics; controlling transport in organic sandwich devices using fringe fields from ferromagnetic films. Proceedings of SPIE. 8813, pp. 88130O. 2013.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Relevant results: This is an invited manuscript of a Conference Proceedings (peer reviewed)

30 F. Macià; F. Wang; N. J. Harmon; M. Wohlgenannt; A. D. Kent; M. E. Flatté. Hysteretic control of organic conductance due to remanent magnetic fringe fields. Applied Physics Letters. 102, pp. 042408. APS, 2013.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI
Category: Science Edition - PHYSICS, APPLIED
Impact index in year of publication: 3.794
Journal in the top 25%: Yes
Position of publication: 20
No. of journals in the cat.: 128
Source of citations: Google scholar
Citations: 2
Relevant results: The manuscript was highlighted for the journal and selected as a free content for everyone.

31 N. J. Harmon; F. Macià; F. Wang; M. Wohlgenannt; A. D. Kent; M. E. Flatté. Including fringe fields from a nearby ferromagnet in a percolation theory of organic magnetoresistance. Physical review B. 87, pp. 121203(R). APS, 2013.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: SCOPUS
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.767
Journal in the top 25%: Yes
Position of publication: 15
No. of journals in the cat.: 68
Source of citations: scholar google
Citations: 5

32 P Subedi; S. Velez; F. Macià; J Tejada; S. Li; M. P. Sarachik; S. Mukherjee; A.D. Kent. Onset of a Propagating Self-Sustained Spin Reversal Front in a Magnetic System. Physical review Letters. 110, pp. 207203. APS, 2013.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.943
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 83
Relevant results: This article has been chosen and highlighted in several media. The journal Physics has written a viewpoint about it: Je-Geun Park and Carl Paulsen, Fire in a Quantum Mechanical Forest, Physics 6, 55 (2013). Also several media covered this publication as Scientific American (http://blogs.scientificamerican.com/cocktail-party-physics/2013/05/17/cmon-baby-light-my-magnetic-fire/)

33 F. Wang; F. Macià; M. Wohlgenannt; A. D. Kent; M. E. Flatté. Magnetic Fringe-Field Control of Electronic Transport in an Organic Film. Physical Review X. 2, pp. 021013. APS, 2012.
Type of production: Scientific paper
Format: Journal

Degree of contribution: Author or co-author of article in journal with external admissions assessment committee

Impact source: SCOPUS
Category: PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 6.711
Journal in the top 25%: Yes
Position of publication: 7
No. of journals in the cat.: 83

34 F. Macià; P. Warnicke; D. Bedau; M.-Y Im; P. Ficher; D. A. Arena; A. D. Kent. Perpendicular magnetic anisotropy in ultrathin Co|Ni multilayer films studied with ferromagnetic resonance and magnetic x-ray microspectroscopy. Journal of Magnetism and Magnetic Materials. 324 - 22, pp. 3629. ELSEVIER, 2012.

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

Impact source: ISI
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 1.826
Journal in the top 25%: No
Position of publication: 77
No. of journals in the cat.: 241

35 F. Macià; F. C. Hoppensteadt; A. D. Kent. Anisotropic spin-wave patterns generated by spin-torque nano-oscillators. Journal of Applied Physics. 109 - 7, pp. 07C733. AIP, 2011.

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

Impact source: ISI
Category: Science Edition - PHYSICS, APPLIED
Impact index in year of publication: 2.210
Journal in the top 25%: No
Position of publication: 32
No. of journals in the cat.: 128

Source of citations: scholar google
Citations: 2

36 S. Vélez; J. M. Hernandez; A. Fernandez; F. Macià; C. Magen; P. A. Algarabel; J. Tejada; E. M. Chudnovsky. Magnetic deflagration in Ga5Ge4. Physics Review B. 81, pp. 064437. APS, 2010.

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

Impact source: ISI
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.691
Journal in the top 25%: Yes
Position of publication: 13
No. of journals in the cat.: 69

37 F. Macià; J. M. Hernandez; J. Tejada; S. Datta; S. Hill; C. Lampropoulos; G. Christou. Effects of quantum mechanics on the deflagration threshold on the molecular magnet Mn12 acetate. Physics Review B. 79, pp. 092403. APS, 2009.

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

Impact source: ISI
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.691
Journal in the top 25%: Yes
Position of publication: 13
No. of journals in the cat.: 69

38 L. Q. Yan; W. Yin; F. Macià; J. Shen; J. R. Zhang; L. H. He; F. W. Wang. Magnetic-field-induced transition from metastable spin glass to possible antiferromagnetic-ferromagnetic phase separation in Cd0.5Cu0.5Cr2O4. Journal of Magnetism and Magnetic Materials. 321, pp. 2102. ELSEVIER, 2009.

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

Impact source: ISI
Category: Science Edition - MATERIALS SCIENCE, MULTIDISCIPLINARY
Impact index in year of publication: 1.78
Journal in the top 25%: No
Position of publication: 75
No. of journals in the cat.: 232

39 W. Decelle; J. Vanacken; V. V. Moshchalkov; J. Tejada; J. M. Hernández; F. Macià. Propagation of Magnetic Avalanches in Mn12-Ac at High Field Sweep Rates. Physics Review Letters. 102, pp. 027203. APS, 2009.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI
Category: Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.37
Journal in the top 25%: Yes
Position of publication: 5
No. of journals in the cat.: 83

40 F. Macià; G. Abril; J. M. Hernández; J. Tejada. The role of thermal coupling on avalanches in manganites. Journal of Physics. Condensed Matter. 21 - 40, pp. 406005. IOP science, 2009.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 2.546
Journal in the top 25%: No
Position of publication: 18
No. of journals in the cat.: 69
Source of citations: scholar google
Citations: 3

41 L. Q. Yan; F. Macià; Z.W. Jiang; J. L. Shen; L.H. He; F. W. Wang. Glassy magnetic behavior induced by Cu2+ substitution in the frustrated antiferromagnet ZnCr2O4. Journal of Physics. Condensed Matter. 20, pp. 255203. IOP science, 2008.
Type of production: Scientific paper
Format: Journal
Impact source: ISI
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 2.546
Journal in the top 25%: No
Position of publication: 18
No. of journals in the cat.: 69
Source of citations: ISI
Citations: 9

42 F. Macià; G. Abril; J. M. Hernandez; J. Tejada; F. Parisi. Magnetic fingerprints of the very fast jumps of colossal magneto-resistance in the phase-separated La0.225Pr0.40Ca0.375MnO3 manganite. Physics Review B. 77, pp. 012403. APS, 2008.
Type of production: Scientific paper
Format: Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI
Category: Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.691
Journal in the top 25%: Yes
Position of publication: 13
No. of journals in the cat.: 69
Source of citations: google scholar
Citations: 11

43 D. Villuendas; D. Gheorghe; A. Hernández-Mínguez; F. Macià; J. M. Hernandez; J. Tejada; J. Wijngaarden. Magneto-optical imaging of magnetic deflagration in Mn12 Acetate. Europhysics Letters. 84, pp. 6701. IOP science, 2008.

Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 2.171 **Journal in the top 25%:** Yes
Position of publication: 16 **No. of journals in the cat.:** 84

44 F. Macià; G. Abril; N. Domingo; J. M. Hernandez; J. Tejada; S. Hill. Microwave detection of magnetic phase avalanches in La0.225Pr0.4Ca0.375MnO3 manganites. Europhysics Letters. 82, pp. 370050. IOP science, 2008.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 2.171 **Journal in the top 25%:** Yes
Position of publication: 16 **No. of journals in the cat.:** 84

45 A. Hernánde-Mínguez; F. Macià; J. M. Hernandez; J. Tejada; P.V. Santos. Phonon-induced quantum magnetic deflagration in Mn12. Journal of Magnetism and Magnetic Materials. 320, pp. 1457 - 1463. ELSEVIER, 2008.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - MATERIALS SCIENCE, MULTIDISCIPLINARY
Impact index in year of publication: 1.78 **Journal in the top 25%:** No
Position of publication: 75 **No. of journals in the cat.:** 232

46 F. Macià; J. Lawrence; S. Hill; J. M. Hernandez; J. Tejada; P.V. Santos; C. Lampropoulos; G. Christou. Spin dynamics in single-molecule magnets combining surface acoustic waves and high frequency electron paramagnetic resonance. Physics Review B. 77, pp. 020403. APS, 2008.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.691 **Journal in the top 25%:** Yes
Position of publication: 13 **No. of journals in the cat.:** 69

47 Control de les correlacions en freqüència de la llum. Revista de Física. 4 - 2, Institut d'Estudis Catalans, 2007.
Type of production: Scientific paper **Format:** Journal

48 F. Macià; A. Hernández-Mínguez; G. Abril; J. M. Hernandez; A Garcia-Santiago; J. Tejada; P.V. Santos. Observation of Phonon-induced Magnetic Deflagration in manganites. Physics Review B. 76, pp. 174424. APS, 2007.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, CONDENSED MATTER
Impact index in year of publication: 3.691 **Journal in the top 25%:** Yes
Position of publication: 13 **No. of journals in the cat.:** 69

49 J. M. Hernandez; P.V. Santos; F. Macià; A. Garcia-Santiago; J. Tejada. Acoustomagnetic pulse experiments in LiNbO3/Mn12 hybrids. Applied Physics Letters. 88, pp. 012503. IEEE, 2006.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, APPLIED
Impact index in year of publication: 3.844 **Journal in the top 25%:** Yes
Position of publication: 17 **No. of journals in the cat.:** 125

50 A. Hernández-Mínguez; F. Macià; J. M. Hernandez; J. Tejada; L. L. He; F. W. Wang. Deterministic spontaneous avalanches in MnCr molecular magnets. Europhysics Letters. 75, pp. 811 - 817. IOP Science, 2006.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 2.171 **Journal in the top 25%:** Yes
Position of publication: 16 **No. of journals in the cat.:** 84

51 Juan P. Torres; Ferran Macià; Silvia Carrasco; Lluis Torner. Engineering the Frequency Correlation of Entangled Two-Photon States by Achromatic Phase-Matching. Optics Letters. 30 - 3, pp. 314. 2005.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - OPTICS
Impact index in year of publication: 3.399 **Journal in the top 25%:** Yes
Position of publication: 7 **No. of journals in the cat.:** 79
Source of citations: scholar google **Citations:** 54

52 A. Hernández-Mínguez; J. M. Hernandez; F. Macià; A Garcia-Santiago; J. Tejada; P.V. Santos. Quantum Magnetic Deflagration in Mn12 Acetate. Physics Review Letters. 95, pp. 217205. APS, 2005.
Type of production: Scientific paper **Format:** Journal
Degree of contribution: Author or co-author of article in journal with external admissions assessment committee
Impact source: ISI **Category:** Science Edition - PHYSICS, MULTIDISCIPLINARY
Impact index in year of publication: 7.37 **Journal in the top 25%:** Yes
Position of publication: 5 **No. of journals in the cat.:** 83

53 Eugene M. Chudnovsky; Javier Tejada; Carlos Calero; Ferran Macià. Problem solutions to Lectures on Magnetism. Ed. Rinton Press, 2006. ISBN 1-58949-056-8
Type of production: Scientific book or monograph **Format:** Book
Relevant publication: No

54 F. Macià; A.D. Kent. Perpendicular magnetic anisotropy in Ultrthin Co|Ni multilayer films studied with ferromagnetic resonance and magnetic XRM. Cornell nanoscale science and technology facility: Research accomplishments. Cornell, 2012.
Type of production: Scientific-technical report **Format:** Journal
Degree of contribution: Author or co-author of scientific or technical document for the general public

55 F. Macià; A.D. Kent. Magnetic fringe fields control of electronic tranport in organic thin films: Organic semi spin valves. Cornell nanoscale science and technology facility: Research accomplishments. Cornell, 2011.
Type of production: Scientific-technical report **Format:** Journal

Degree of contribution: Author or co-author of scientific or technical document for the general public

Works submitted to national or international conferences

1 **Title of the work:** Strain spin waves
Name of the conference: IX AUSE Conference and 4th ALBA User's Meeting
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Cerdanyola, Spain
Date of event: 10/2019
Organising entity: AUSE (the Spanish Synchrotron User Association) and ALBA Synchrotron

2 **Title of the work:** Acoustic spin waves
Name of the conference: 15th International Workshop on Nanomagnetism
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Comaruga, Spain
Date of event: 07/2019
Organising entity: Universitat de Barcelona **Type of entity:** University

3 **Title of the work:** Computing with spin-wave solitons
Name of the conference: SPICE: Spintronics meets Neuromorphics.
Type of event: Workshop
Type of participation: Participatory - invited/keynote talk
City of event: Mainz, Germany
Date of event: 10/2018
Organising entity: SPICE

4 **Title of the work:** Large angle spin waves induced by strain waves in ferromagnetic films
Name of the conference: 14th International Workshop on Nanomagnetism
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Comaruga, Spain
Date of event: 07/2018
Organising entity: Universitat de Barcelona **Type of entity:** University

5 **Title of the work:** Direct imaging of delayed magneto dynamic modes induced by surface acoustic waves
Name of the conference: APS March Meeting
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Los Angeles, United States of America
Date of event: 03/2018
Organising entity: American Physical Society

6 **Title of the work:** Spin currents generated with oxide magnetic insulators
Name of the conference: Nanoselect
Type of event: Workshop
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Sant Feliu de Guixols, Spain
Date of event: 08/2017
Organising entity: ICMAB-CSIC

7 **Title of the work:** Manipulating magnetic states in nanostructures with Surface Acoustic Waves
Name of the conference: Nanoselect
Type of event: Workshop
Type of participation: Participatory - invited/keynote talk
Corresponding author: Yes
City of event: Sant Feliu de Guixols, Spain
Date of event: 07/2016
Organising entity: ICMAB-CSIC

8 **Title of the work:** Stability and dynamical properties of magnetic droplet solitons in spin transfer nanocontacts
Name of the conference: Joint MMM/Intermag Conference
Type of event: Conference
Type of participation: Participatory - invited/keynote talk
City of event: San Diego, United States of America
Date of event: 01/2016
End date: 01/2016
Organising entity: AIP & IEEE **Type of entity:** Physics association
1; F. Macià.

9 **Title of the work:** Spin-transfer-torque excitations in ferromagnetic nanostructures
Name of the conference: Reunion del Grupo Español de Fsica del Estado solido (GEFES) 2016
Type of participation: Participatory - invited/keynote talk
City of event: Cuenca,
Date of event: 01/2016
End date: 01/2016
Organising entity: Grupo Español de Fsica del Estado solido (GEFES)
Ferran Macià.

10 **Title of the work:** Solitons in Spin-Transfer-Torque Nanocontacts to Ferromagnetic Thin Films
Name of the conference: 10th International Workshop on Nanomagnetism
Type of participation: Participatory - invited/keynote talk
City of event: Comaruga, Spain
Date of event: 07/2015
End date: 07/2015
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
N Statuto; S Lendinez; F. Macià; D Backes; A.D Kent.

11 **Title of the work:** Excitations in Nanomagnetism 2014
Name of the conference: Excitations in Nanomagnetism 2014
Type of event: Workshop

Type of participation: Participatory - invited/keynote talk
City of event: Barcelona, Spain
Date of event: 12/2014
End date: 12/2014
Organising entity: Universitat de Barcelona **Type of entity:** University
City organizing entity: Spain
F. Macià.

12 **Title of the work:** TITLE: XMCD Imaging of Large Angle Spin-Excitations in Spin Transfer Nanocontacts with Perpendicular Anisotropy
Name of the conference: 59th annual conference in magnetism and magnetic materials
Type of event: Conference
City of event: Honolulu, United States of America
Date of event: 03/11/2014
End date: 07/11/2014
Organising entity: AIP & IEEE
Ferran Macia; D. Backes; A.D. Kent; Stefano Boneti; Roopali Kukreja; Hendrik Ohldag.

13 **Title of the work:** Time-resolved x-ray imaging of spin wave dynamics at the nanoscale
Name of the conference: 59th annual conference in magnetism and magnetic materials
Type of event: Conference
City of event: Honolulu, United States of America
Date of event: 03/11/2014
End date: 07/11/2014
Organising entity: AIP & IEEE
Stefano Boneti; Roopali Kukreja; Hendrik Ohldag; Chen Zhao; Sergei Urazhdin; Ferran Macià; et al.

14 **Title of the work:** Study of Magnetic Droplet Solitons in Spin Transfer Nanocontacts with perpendicular magnetic anisotropy
Name of the conference: 59th annual conference in magnetism and magnetic materials
City of event: Honolulu, United States of America
Date of event: 03/11/2014
End date: 07/11/2014
Organising entity: AIP & IEEE
Sergi Lendínez; F. Macià; D. Backes; A.D. Kent.

15 **Title of the work:** Stable Magnetic Droplet Solitons in Spin Transfer Nanocontacts
Name of the conference: 10th International Workshop on Nanomagnetism
Type of participation: Participatory - invited/keynote talk
City of event: Comaruga, Spain
Date of event: 07/2014
End date: 07/2014
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
F. Macià; D Backes; A.D Kent.

16 **Title of the work:** Stable magnetic droplet solitons.
Name of the conference: Spin Torque and Magnetic Solitons worshop
Type of event: Workshop
Type of participation: Participatory - invited/keynote talk
City of event: Goteborg, Sweden

Date of event: 06/2014
End date: 06/2014
Organising entity: Goteborg University
F. Macià.

17 **Title of the work:** Magnetic Droplets in Spin Torque Nano-Oscillators with Perpendicular Magnetized Free Layers
Name of the conference: Intermag Conference
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Dresden, Germany
Date of event: 04/05/2014
End date: 08/05/2014
Organising entity: IEEE
F. Macià; D Backes; A.D Kent.

18 **Title of the work:** Onset and annihilation of dissipative magnetic solitons in Spin Torque Nano-Oscillators with perpendicular magnetized free layers
Name of the conference: APS March Meeting
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Denver, United States of America
Date of event: 03/2014
End date: 03/2014
Organising entity: American Physical Society **Type of entity:** Associations and Groups
F. Macià; D. Backes; A.D. Kent.

19 **Title of the work:** Electrical Characterization of Spin Torque Nano-oscillators with a Perpendicular Free Layer and In-plane Polarizing Layer.
Name of the conference: 58TH ANNUAL CONFERENCE ON MAGNETISM AND MAGNETIC MATERIALS
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Denver, United States of America
Date of event: 04/11/2013
End date: 08/11/2013
Organising entity: AIP & IEEE **Type of entity:** Physics association
D Backes; F. Macià; A.D. Kent.

20 **Title of the work:** Spin torque nanooscillators: new applications in information processing
Name of the conference: APS March Meeting
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Baltimore, United States of America
Date of event: 03/2013
End date: 03/2013
Organising entity: American Physical Society **Type of entity:** Associations and Groups
F. Macià; F. Hoppensteadt; A.D. Kent.

21 **Title of the work:** Exchange bias control of magnetization dynamics - directional damping and temperature effects in the Py/IrMn system
Name of the conference: 12th Joint MMM/Intermag Conference

Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Chicago, United States of America
Date of event: 14/01/2013
End date: 18/01/2013
Organising entity: AIP & IEEE **Type of entity:** Physics association
F. Macià; E Whasltrom; A.D Kent.

22 **Title of the work:** Thickness dependence of dynamic and static magnetic properties of La0.7Sr0.3MnO3 films on SrTiO3(001)..
Name of the conference: 12th Joint MMM/Intermag Conference
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Chicago, United States of America
Date of event: 14/01/2013
End date: 18/01/2013
Organising entity: AIP & IEEE **Type of entity:** Physics association
Monsen; J.E. Boshker; F. Macià; J. Wells; P. Nordblad; A.D Kent; R. Mathiew; T. Tybell; E Whasltrom.

23 **Title of the work:** Quantum Deflagration in Mn12-acetate in the Presence of a Transverse Field
Name of the conference: International conference on molecule-based magnets (ICMM)
City of event: Orlando, United States of America
Date of event: 07/10/2012
End date: 11/10/2012
Organising entity: University of Central Florida **Type of entity:** University
P. Subedi; S. Velez; F. Macià; S Li; J. Tejada; A.D. kent; M.P. Sarachik; G. Christou.

24 **Title of the work:** Magnetic fringe field control of electronic transport in an organic film
Name of the conference: 8th International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2012
End date: 07/2012
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
F. Macià; F. Wang; M. Wohlgenannt; A.D Kent; M.E. Flatté.

25 **Title of the work:** Spin-orbit driven ferromagnetic resonance and torques in single ferromagnetic layers
Name of the conference: APS March Meeting
City of event: Boston, United States of America
Date of event: 03/2012
End date: 03/2012
Organising entity: American Physical Society **Type of entity:** Associations and Groups
F. Macià; C. Pépin; A.D. Kent.

26 **Title of the work:** Magnetic fringe field control of electronic transport in an organic film
Name of the conference: 56th annual conference in magnetism and magnetic materials
City of event: Scottsdale, United States of America
Date of event: 30/10/2011
End date: 03/11/2011
Organising entity: AIP & IEEE **Type of entity:** Physics association
F. Macià; F. Wang; M. Wohlgenannt; A.D Kent; M.E Flatté.

27 **Title of the work:** Magnetic x-ray microspectroscopy and characterization of magnetic structures in ultrathin Co|Ni multilayer with perpendicular magnetic anisotropy
Name of the conference: 56th annual conference in magnetism and magnetic materials
City of event: Scottsdale, United States of America
Date of event: 30/10/2011
End date: 03/11/2011
Organising entity: AIP & IEEE **Type of entity:** Physics association
F. Macià; P. Warnicke; M.Y. Im; P. Ficher; D.A. Arena; A.D. Kent.

28 **Title of the work:** Memory and computation with spin waves –Spin-torque nano-oscillators
Name of the conference: 7th International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 03/07/2011
End date: 07/07/2011
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
F. Macià; A.D. Kent; F.C. Hoppensteadt.

29 **Title of the work:** Deflagration in Magnetism
Name of the conference: APS March Meeting
City of event: Dallas, United States of America
Date of event: 21/03/2011
End date: 23/03/2011
Organising entity: American Physical Society **Type of entity:** Associations and Groups
F. Macià; J. Tejada.

30 **Title of the work:** Ultrafast spin -transfer driven magnetization reversal and exciting spin-waves
Name of the conference: New Opportunities in magnetism at Ultra-low emmitance storage rings: a JoinNSLS-II and MaxLAb workshop
City of event: Port Jefferson, United States of America
Date of event: 21/11/2010
End date: 23/11/2010
Organising entity: Brookhaven National Lab, **Type of entity:** University
A.D. Kent; H.L. Liu; D Bedau; F. Macià; F.C. Hoppensteadt.

31 **Title of the work:** Spin-wave interference patterns created by spin-torque nano-oscillators for memory and computation.
Name of the conference: 55th annual conference in magnetism and magnetic materials
City of event: Atlanta, United States of America
Date of event: 14/11/2010
End date: 18/11/2010
Organising entity: AIP & IEEE **Type of entity:** Physics association
F. Macià; A.D. Kent; F.C. Hoppensteadt.

32 **Title of the work:** Computing with spin-waves
Name of the conference: Gotham-Metro Condensed Matter Meeting
City of event: New York, United States of America
Date of event: 12/11/2010
End date: 12/11/2010
Type of entity: Associations and Groups

Organising entity: The New York Academy of Sciences
F. Macià; A.D. Kent; F.C. Hoppensteadt.

33 **Title of the work:** Spin-wave interference patterns created by spin-torque nano-oscillators for memory and computation
Name of the conference: Center for Nanofabrication Annual Meeting
City of event: Ithaca, United States of America
Date of event: 16/09/2010
End date: 16/09/2010
Organising entity: Cornell University
F. Macià; A.D. Kent; F.C. Hoppensteadt.

34 **Title of the work:** Deflagration in mangnetism
Name of the conference: 5th International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2009
End date: 07/2009
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
J. Tejada; F. Macià; J.M. Hernandez; S. Velez; A Fernandez; W. Decelle; V. Moschalkov; J. Vanacken.

35 **Title of the work:** Quantum ignition of magnetic avalanches: beyond the Stoner-Wohlfarth model
Name of the conference: International conference on molecule-based magnets (ICMM)
City of event: Firenze, Italy
Date of event: 21/09/2008
End date: 24/09/2008
Organising entity: University if Firenze and University of Modena
F. Macià; C. Carbonell; A Hernández-Mínguez; R. Amigó; J.M. Hernandez; J. Tejada.

36 **Title of the work:** Spin dynamics in molecule magnets. Fast detecting of spin populations within fixed energy levels.
Name of the conference: International conference on molecule-based magnets (ICMM)
City of event: Firenze, Italy
Date of event: 21/09/2008
End date: 24/09/2008
Organising entity: University if Firenze and University of Modena
F. Macià; S. Datta; S. Hill; J.M. Hernandez; J. Tejada.

37 **Title of the work:** Measurement of the quantum irreversibility astroid in Mn12-acetate
Name of the conference: Joint European Magnetic Symposia
City of event: Dublin,
Date of event: 14/09/2008
End date: 19/09/2008
Organising entity: Imperal College, dublin, Ireland
A Hernández-Mínguez; F. Macià; C. Carbonell; R. Amigó; J.M. Hernandez; J. Tejada.

38 **Title of the work:** Phonon-induced magnetic deflagration in manganites
Name of the conference: Joint European Magnetic Symposia
City of event: Dublin,
Date of event: 14/09/2008

End date: 19/09/2008
Organising entity: Imperal College, dublin, Ireland
F. Macià; A Hernández-Mínguez; G. Abril; J.M. Hernandez; J. Tejada.

39 **Title of the work:** A novel experiment using rotating magnetic fields to study the pumping of spin status in molecular magnets
Name of the conference: 4th International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2008
End date: 07/2008
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
F. Macià; C. Carbonell; A Hernández-Mínguez; J.M. Hernandez; R. Amigó; J. Tejada.

40 **Title of the work:** A novel experiment using rotating magnetic fields to study the pumping spin status in molecular magnets
Name of the conference: APS March Meeting
City of event: New Orleand, United States of America
Date of event: 03/2008
End date: 03/2008
Organising entity: American Physical Society **Type of entity:** Associations and Groups
A. Hernandez-Mínguez; F. Macià; C. Carbonell; R. Amigó; J.M. Hernandez; J. Tejada; P.V. Santos; F. Parisi.

41 **Title of the work:** Phonon induced magnetic deflagration and detection of the very fast jumps of CMR
Name of the conference: APS March Meeting
City of event: New Orleand, United States of America
Date of event: 03/2008
End date: 03/2008
Organising entity: American Physical Society **Type of entity:** Associations and Groups
F. Macià; A. Hernandez-Mínguez; G. Abril; J.M. Hernandez; J. Tejada; P.V. Santos; F. Parisi.

42 **Title of the work:** Spin dynamics in single molecule magnets combining SAW and HFEPR
Name of the conference: APS March Meeting
City of event: New Orleand, United States of America
Date of event: 03/2008
End date: 03/2008
Organising entity: American Physical Society **Type of entity:** Associations and Groups
S Hill; J. Lawrence; F. Macià; J.M. Hernandez; J. Tejada; P.V. Santos; G. Christou.

43 **Title of the work:** Two novel experiments using rotating magnets and surface acoustic waves combined with high frequency paramagnetic resonance to study the pumping spin states
Name of the conference: V Reunión Nacional de Física del Estado Sólido
City of event: Santiago de Compostela, Spain
Date of event: 06/02/2008
End date: 08/02/2008
Organising entity: GEFES
J. Tejada; A. Hernandez-Mínguez; F. Macià; C. Carbonell; R. Amigó; J.M. Hernandez.

44 **Title of the work:** Fenómenos cuánticos en magnetismo
Name of the conference: University of Zaragoza
City of event: Jaca, Spain
Date of event: 02/07/2007
End date: 07/07/2007
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
A. Hernandez-Mínguez; F. Macià; J.M. Hernandez; J. Tejada.

45 **Title of the work:** Fast EPR experiments on single molecule magnets
Name of the conference: 3rd International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2007
End date: 07/2007
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
F. Macià; J.M. Hernandez; J. Tejada; S. Hill; J. Lawrence.

46 **Title of the work:** Magnetic and resistivity deflagration in manganites
Name of the conference: 3rd International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2007
End date: 07/2007
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
J.M. Hernandez; F. Macià; A. Hernandez-Mínguez; G. Abril; J. Tejada.

47 **Title of the work:** New developments in quantum magnetic deflagration
Name of the conference: 2nd International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2006
End date: 07/2006
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
J. Tejada; J.M. Hernandez; F. Macià; A. Hernandez-Mínguez.

48 **Title of the work:** Acoustomagnetic pulse experiments in molecular magnets
Name of the conference: 3rd Joint European Magnetic Symposia
City of event: San Sebastian, Spain
Date of event: 06/2006
End date: 06/2006
Organising entity: JEMS
F. Macià; J. Tejada; J.M. Hernandez; A. Hernandez-Mínguez; A Garcia-Santiago; P.V. Santos.

49 **Title of the work:** New developments in quantum magnetic deflagration
Name of the conference: 3rd Joint European Magnetic Symposia
City of event: San Sebastian, Spain
Date of event: 06/2006
End date: 06/2006
Organising entity: JEMS
J. Tejada; J.M. Hernandez; F. Macià; A. Hernandez-Mínguez.

50 **Title of the work:** Control of quantum magnetic deflagration in Mn12-acetate
Name of the conference: APS March Meeting
City of event: Baltimore, United States of America
Date of event: 03/2006
End date: 03/2006
Organising entity: American Physical Society **Type of entity:** Associations and Groups
A. Hernández-Mínguez; F. Macià; J.M. Hernandez; A. Garcia-Santiago; J. Tejada; P.V. Santos.

51 **Title of the work:** Simulations and SAW experiments on Mn12
Name of the conference: APS March Meeting
City of event: Baltimore, United States of America
Date of event: 03/2006
End date: 03/2006
Organising entity: American Physical Society **Type of entity:** Associations and Groups
F. Macià; J.M. Hernandez; A. Hernández-Mínguez; A. Garcia-Santiago; J. Tejada; P.V. Santos.

52 **Title of the work:** Quantum magnetic deflagration
Name of the conference: Current trends in nanoscopic and mesoscopic magnetism
City of event: Santorini, Greece
Date of event: 09/09/2005
End date: 09/09/2006
Organising entity: IMS-NCSR Demokritos and University of Patras, Greece. University of Florida, U.S.A. University of Manchester, U. K.
J. Tejada; J.M. Hernandez; F. Macià; A. Hernandez-Mínguez.

53 **Title of the work:** Fast relaxation experiments in molecular magnets (SAW and magnetic avalanches)
Name of the conference: Conference on Single Molecule Magnets and Hybrid Magnetic Nanostructures
City of event: Trieste, Italy
Date of event: 09/2005
End date: 07/2005
Organising entity: National Science Foundation (NSF)
J. Tejada; J.M. Hernandez; F. Macià; A. Hernandez-Mínguez; P.V Santos; A. Garcia-Santiago.

54 **Title of the work:** Magnetic Deflagration: Simulations of SAW
Name of the conference: 1st International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2005
End date: 07/2005
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
J.M. Hernandez; F. Macià; A. Hernandez-Mínguez; J. Tejada.

55 **Title of the work:** Surface Acoustic waves and magnetic avalanches in molecular clusters
Name of the conference: 1st International Workshop on Nanomagnetism
City of event: Comaruga, Spain
Date of event: 07/2005
End date: 07/2005
Organising entity: Grup de Magnetisme Universitat de Barcelona **Type of entity:** University
J. Tejada; J.M. Hernandez; F. Macià; A. Hernandez-Mínguez; P.V Santos; A. Garcia-Santiago.

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

1 **Title of the work:** Magnetization dynamics iduced by Surface acustic waves
Name of the event: condensed matter seminar
City of event: New York City,
Date of event: 05/2019
Organising entity: New York University

2 **Title of the work:** Simultaneous imaging of strain waves and induced magnetization dynamics at the nanometer scale
Name of the event: Periodical Seminar
Type of event: Seminar
City of event: Tronheim, Norway
Date of event: 12/2016
Organising entity: NTNU

3 **Title of the work:** Spin-transfer-torque excitations in ferromagnetic nanostructures: Spin Torque Oscillators
Name of the event: Periodical lectures.
Type of event: Seminar
Corresponding author: Yes
Date of event: 11/2016
Organising entity: ICMAB-CSIC

4 **Title of the work:** Spin-transfer-torque excitations in ferromagnetic nanostructures: spin torque oscillators "
Name of the event: CIC Nanogune seminar
Type of event: Seminar
Reasons for participation: Upon invitation
City of event: San Sebastian, Spain
Date of event: 22/09/2014
End date: 22/09/2014
Organising entity: Nanogune

5 **Title of the work:** Spin-Transfer torque in Magnetic Nanostructures
Name of the event: 2013 SSRL/LCLS Users' Meeting; Scientific Opportunities using High Repetition Rate X-ray Sources with 1-10 ps Bunch Length
Type of event: Workshop
Reasons for participation: Upon invitation
City of event: Stanford, United States of America
Date of event: 01/10/2013
End date: 04/10/2013
Organising entity: Standord / SLAC

6 **Title of the work:** Sin-Wave interference patterns for memory and computation
Name of the event: Nanoscience discussion group at New York University
Type of event: Seminar
Reasons for participation: Upon invitation
City of event: New York City, United States of America
Date of event: 08/02/2011
End date: 08/02/2011

Organising entity: NYU

7 **Title of the work:** Spin-wave interference patterns for memory and computation
Name of the event: Applied mathematics seminar
Type of event: Seminar
Reasons for participation: Upon invitation
City of event: New York City, United States of America
Date of event: 12/2010
End date: 12/2010
Organising entity: Courant institute of Mathematical sciences

8 **Title of the work:** Spin-wave interference patterns created by spin-torque oscillators
Name of the event: ALS User's Meeting Workshop: Advanced Soft X-Ray Microscopy for Nanomaterials
Type of event: Workshop
Reasons for participation: Upon invitation
City of event: Berkeley, United States of America
Date of event: 14/10/2010
End date: 14/10/2010
Organising entity: Lawrence Berkeley National Laboratory **Type of entity:** Public Research Body

9 **Title of the work:** Eects of Quantum Mechanics on the De agration Threshold in Molecule Magnets
Name of the event: Hard condensed matter seminar
Type of event: Seminar
Reasons for participation: Upon invitation
City of event: New York City, United States of America
Date of event: 12/2008
End date: 12/2008
Organising entity: New York University

10 **Title of the work:** Quantum Phenomena in Molecules Magnets
Name of the event: Condensed Matter seminar
Type of event: Seminar
Reasons for participation: Upon invitation
City of event: Berlin, Germany
Date of event: 12/2008
End date: 12/2008
Organising entity: Paul Drude Institute

11 **Title of the work:** Magnetization dynamics in magnetic materials
Name of the event: Physics seminar
Type of event: Seminar
Reasons for participation: Upon invitation
City of event: Hong Kong, China
Date of event: 12/2007
End date: 12/2007
Organising entity: Hong Kong University of Science and Technology

Other dissemination activities

1 **Title of the work:** Articulo en 'Apuntes científicos des del MIT' del diario el País
Name of the event: Media interviews
Date of event: 09/05/2012
""http://blogs.elpais.com/apuntes-cientificos-mit/2012/05/neuronas-codificando-tiempo-y-memorias-deordenador- infinitas.html".".

2 **Title of the work:** Of Ghosts & Scientists
Organising entity: The story collider Magazine
"http://magazine.storycollider.org/2012/features/of-ghosts-scientists/view-all/".

R&D management and participation in scientific committees

Scientific, technical and/or assessment committees

1 **Committee title:** Guest Editor of Special Issue of Journal of Physics: Condensed Matter on Magneto-Elastic Effects
Start-End date: 01/2018 - 01/2019

2 **Committee title:** Member of the Program Committee
Primary (UNESCO code): 220000 - Physics
Secondary (UNESCO code): 221100 - Solid state physics
Tertiary (UNESCO code): 221117 - Magnetic properties; 221190 - Solid state Physics. Foil
Affiliation entity: 2018 International Conference on Magnetism, ICM2018, USA
Start-End date: 2017 - 2018

3 **Committee title:** Member of the organizing committee
Primary (UNESCO code): 220000 - Physics
Secondary (UNESCO code): 221100 - Solid state physics
Tertiary (UNESCO code): 221117 - Magnetic properties; 221190 - Solid state Physics. Foil
Affiliation entity: nternational workshop on magnetism and superconductivity, Comaruga, Spain
Start-End date: 05/07/2015 - 10/07/2015

4 **Committee title:** Chairperson of the seesion: GP. Vortices and rings, at the 56th annual confernce on Magnetism and Magnetic Materials held in Denver
Primary (UNESCO code): 220000 - Physics
Secondary (UNESCO code): 221100 - Solid state physics
Tertiary (UNESCO code): 221117 - Magnetic properties; 221190 - Solid state Physics. Foil
Affiliation entity: American Institute of Physics (AIP)
Start-End date: 01/01/2014 - 20/11/2013

5 **Committee title:** Chairperson of the seesion AU: Exchange Bias I at the 12th Joint MMM/InterMag Conference in Chicago
Primary (UNESCO code): 220000 - Physics
Secondary (UNESCO code): 221100 - Solid state physics
Tertiary (UNESCO code): 221117 - Magnetic properties; 221190 - Solid state Physics. Foil
Affiliation entity: IEEE

Start-End date: 01/09/2012 - 15/01/2013

R&D management

1 **Name of the activity:** Experiments at the synchrotron
Type of management: Group management
Performed tasks: Main proposer of ALBA synchrotron beamtime (>5)
Entity: CONSORCIO PARA CONSTRUCCION, EQUIP. Y EXPL. LABORATORIO LUZ SINCROTON
Start date: 2016

2 **Name of the activity:** MAGNETIZATION REVERSAL IN MAGNETIC TUNNEL JUNCTION ELEMENTS WITH PERPENDICULAR ALIGNMENT
Type of management: Management of R&D&I actions and projects
Performed tasks: Proposal for synchrotron use
Entity: NYU-SLAC Stanford synchrotron **Type of entity:** R&D Centre
Start date: 01/04/2013 **Duration:** 1 year

3 **Name of the activity:** MAGNETIZATION REVERSAL IN MAGNETIC TUNNEL JUNCTION ELEMENTS WITH PERPENDICULAR ALIGNMENT
Type of management: Management of R&D&I actions and projects
Performed tasks: Proposal for synchrotron use
Entity: NYU-SLAC Stanford synchrotron **Type of entity:** R&D Centre
Start date: 01/04/2013 **Duration:** 1 year

4 **Name of the activity:** MAGNETIZATION REVERSAL IN MAGNETIC TUNNEL JUNCTION ELEMENTS WITH PERPENDICULAR ALIGNMENT
Type of management: Management of R&D&I actions and projects
Performed tasks: Proposal for synchrotron use
Entity: NYU-SLAC Stanford synchrotron **Type of entity:** R&D Centre
Start date: 01/04/2013 **Duration:** 1 year

5 **Name of the activity:** Imaging Magnetic Excitations in Spin-Torque Nanooscillators
Type of management: Management of R&D&I actions and projects
Performed tasks: Research Scientist
Entity: Brookhaven National Lab. Nanoscale facility
Start date: 01/01/2013 **Duration:** 1 year

6 **Name of the activity:** Management of the project Marie Curie IOF-252314
Type of management: Group management
Performed tasks: Research Scientist
Entity: New York University, Fundació Bosch i Gimepra, Universitat de Barcelona
Start date: 01/04/2011 **Duration:** 1 year - 7 months

7 **Name of the activity:** Imaging of Spin Waves Emitted by Spin Torque Oscillators
Type of management: Management of R&D&I actions and projects
Performed tasks: Proposal for synchrotron use
Entity: NYU-Advanced Light source Berkeley National Lab **Type of entity:** R&D Centre
Start date: 01/11/2009 **Duration:** 2 years

8 **Name of the activity:** Nanofabrication of ferromagnetic structures CNF #1673-08
Type of management: Group management
Performed tasks: Research Scientist
Entity: Cornell Nanofabrication facility
Start date: 01/09/2009 **Duration:** 2 years - 2 months

Evaluation and revision of R&D projects and articles

1 **Name of the activity:** Evaluator of synchrotron proposals at SLAC (standford)
Performed tasks: Proposal reviewer
Entity where activity was carried out: synchroton light source SLAC (Standford) **Type of entity:** Public Research Body
City of entity: Palo Alto, United States of America
Start date: 2014

2 **Name of the activity:** Reviewer for Nature Comunications
Performed tasks: Journal Reviewer
Entity where activity was carried out: Nature Publishing Group
Start date: 2013

3 **Name of the activity:** Reviewer for Physica B (Condensed Matter)
Performed tasks: Journal Reviewer
Entity where activity was carried out: Elsevier
Start date: 2013

4 **Name of the activity:** Reviewer for Physics Review Letters
Performed tasks: Journal Reviewer
Entity where activity was carried out: American Physical Society (APS)
Start date: 2013

5 **Name of the activity:** Reviewer for Recent Patents on Electrical and Electronic Engineering
Performed tasks: Journal Reviewer
Entity where activity was carried out: Bentham Science Publishers
Start date: 2013

6 **Name of the activity:** Reviewer for Journal of Applied physics
Performed tasks: Journal Reviewer
Entity where activity was carried out: American Institute of Physics
Start date: 2011

7 **Name of the activity:** Reviewer of IEEE Transactions on Magnetism
Performed tasks: Journal Reviewer
Entity where activity was carried out: IEEE
Start date: 2011

8 **Name of the activity:** Reviewer for Physics Review B
Performed tasks: Journal Reviewer
Entity where activity was carried out: American Physical Society (APS)
Start date: 2009

Other achievements

Stays in public or private R&D centres

1 **Entity:** Stanford **Type of entity:** R&D Centre
Faculty, institute or centre: SLAC (synchrotron)
City of entity: Menlo Park, United States of America
Start-End date: 2013 - 2015 **Duration:** 1 month - 15 days
Goals of the stay: Experimentos
Provable tasks: Synchroton Experiments

2 **Entity:** ASOCIACION CIC NANOGUNE
City of entity: San Sebastian, Spain
Start-End date: 17/09/2014 - 22/09/2014 **Duration:** 5 days
Goals of the stay: Guest
Provable tasks: Experiments and seminars

3 **Entity:** New York University **Type of entity:** University
City of entity: New York, United States of America
Start-End date: 13/01/2014 - 28/01/2014 **Duration:** 15 days
Goals of the stay: Guest
Provable tasks: Experiments

4 **Entity:** Bookhaven National Lab **Type of entity:** Public Research Body
City of entity: Upton, United States of America
Start-End date: 2009 - 2013 **Duration:** 2 months
Goals of the stay: Nanofabrication
Provable tasks: Nanofabrication and synchroton experiments

5 **Entity:** New York University
Faculty, institute or centre: Physics department
City of entity: New York, United States of America
Start-End date: 01/04/2011 - 31/03/2012 **Duration:** 1 year - 8 months
Funding entity: Eurpean Union. Marie Curie Actions **Type of entity:** Public Research Body
Goals of the stay: Post-doctoral

6 **Entity:** Cornell University **Type of entity:** University
City of entity: Ithaca, United States of America
Start-End date: 2009 - 2012 **Duration:** 3 months
Goals of the stay: Nanofabrication
Provable tasks: Nanofabrication

7 **Entity:** New York University **Type of entity:** University
Faculty, institute or centre: Physics Department
City of entity: New York, United States of America
Start-End date: 01/09/2010 - 31/03/2011 **Duration:** 7 months
Funding entity: Catalan Government. Beatriu de Pinós
Goals of the stay: Post-doctoral

8 **Entity:** Courant Institue for Mathematical science, New York University **Type of entity:** University
City of entity: New York, United States of America
Start-End date: 01/09/2009 - 01/09/2010 **Duration:** 1 year
Funding entity: New York University
Goals of the stay: Post-doctoral

9 **Entity:** University of Florida **Type of entity:** University
Faculty, institute or centre: Physics department
City of entity: Gainesville, United States of America
Start-End date: 01/03/2008 - 03/04/2008 **Duration:** 1 month
Goals of the stay: Doctorate
Provable tasks: Research

10 **Entity:** State Key Lab (Chinese Academy of science)
City of entity: Beijing, China
Start-End date: 01/10/2007 - 18/12/2007 **Duration:** 3 months
Goals of the stay: Doctorate
Provable tasks: Research

11 **Entity:** Hong Kong University of Science and Technology (HKUST) **Type of entity:** University
City of entity: Hong Kong, China
Start-End date: 12/2007 - 12/2007 **Duration:** 15 days
Goals of the stay: Guest
Provable tasks: Research

12 **Entity:** University of Florida **Type of entity:** University
Faculty, institute or centre: Physics department
City of entity: Gainesville, United States of America
Start-End date: 10/04/2007 - 11/05/2007 **Duration:** 1 month
Goals of the stay: Doctorate
Provable tasks: Research

13 **Entity:** New York University **Type of entity:** University
Faculty, institute or centre: Physics department
City of entity: New York, United States of America
Start date: 12/05/2019 **Duration:** 20 days
Goals of the stay: Guest
Provable tasks: Experiments & meeting with scientists

Obtained grants and scholarships

1 **Name of the grant:** BP-B COFUND
Aims: Post-doctoral
Awarding entity: Generalitat de Catalunya and European Comission
Conferral date: 01/06/2014 **Duration:** 2 years
End date: 30/05/2016

2 **Name of the grant:** Beatriu de Pinós
Aims: Post-doctoral
Awarding entity: Generalitat de Catalunya **Type of entity:** public
Conferral date: 01/09/2010 **Duration:** 7 months
End date: 31/03/2011

3 **Name of the grant:** Beca predoctoral para formación del profesorado universitario (FPU)
Aims: Pre-doctoral
Awarding entity: Ministerio de Ciencia e Innovación. Investigación **Type of entity:** Ministerio
Conferral date: 01/05/2006 **Duration:** 3 years - 4 months
End date: 01/09/2009

4 **Name of the grant:** Beca predoctoral de la Universitat de Barcelona
Aims: Pre-doctoral
Awarding entity: Universitat de Barcelona **Type of entity:** University
Conferral date: 01/01/2005 **Duration:** 1 year - 4 months
End date: 01/05/2006

5 **Name of the grant:** Master thesis scholarship
Aims: Pre-doctoral
Awarding entity: Universitat Politècnica de Catalunya **Type of entity:** University
Conferral date: 2004 **Duration:** 1 year
End date: 2005

6 **Name of the grant:** Marie Curie IOF
Aims: Post-doctoral
Awarding entity: European Comission **Type of entity:** Public Research Body
Conferral date: 01/04/2011 **Duration:** 1 year - 6 months

Co-operation networks

1 **Name of the network:** Marie Curie Alumni Association
Start date: 2014 **Duration:** 1 year

2 **Name of the network:** American physical society
Start date: 2007 **Duration:** 7 years

Prizes, mentions and distinctions

1 **Description:** Acreditación Profesor "Agregat"
Awarding entity: AGENCIA PER A LA QUALITAT DEL SISTEMA UNIVERSITARI DE CATALUNYA
City awarding entity: Barcelona
Conferral date: 12/02/2014

2 **Description:** Premio Jordi Porta i Jue
Awarding entity: Sociedad Catalana de Física **Type of entity:** Associations and Groups
Conferral date: 05/2006

Summary of other achievements

1 **Description of the achievement:** I have guided the science expositionand Exponano (http://www.pcb.ub.es/homePCB/live/en/p2177.asp) in Barcelona
Conferral date: 2007

2 **Description of the achievement:** I have guided the science exposition Superlife (http://www.superlife.info/) in Barcelona
Conferral date: 2006