



Bernat Bozzo Closas

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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.

En febrero de 2003 empiezo el Doctorado en Ciencia de Materiales por la UAB desarrollando y estudiando una técnica para soldar cerámicas superconductoras de $\text{YBa}_2\text{Cu}_3\text{O}_7$ mediante una lámina de plata. El objetivo de dicha técnica era la obtención de una unión en la que sus propiedades superconductoras fueran idénticas a las propiedades de las cerámicas a unir. Dicho desarrollo incluía:

- La optimización del tratamiento térmico y posterior recocido en atmósfera de oxígeno
- La caracterización de la microestructura para detectar posibles defectos que pudiesen afectar a la calidad final de la soldadura
- Determinación de las densidades de corriente crítica intragranular e intergranular mediante microscopía de efecto Hall. Dicha técnica permitía la obtención de la magnetización local de la muestra en función de la posición en su superficie. Mediante un cálculo realizado por un software especializado y un posterior análisis de los resultados devueltos por dicho software, se extraían los valores de densidad de corriente intragranular e intergranular.

Posteriormente, en el año 2007 empecé a desarrollar tareas de apoyo técnico al Departamento de Materiales Superconductores y Nanoestructuras a Larga Escala del ICMAB. Dichas tareas incluyeron:

- Renovación y mejora de un sistema de medidas de resistividad eléctrica mediante la técnica de Van-der-Pauw, donde la muestra era sometida a un enfriamiento. El objetivo del montaje experimental era la determinación de la temperatura crítica de capas delgadas de $\text{YBa}_2\text{Cu}_3\text{O}_7$
- Automatización del control de temperatura y proceso de calibración de hornos tubulares de alta temperatura. Dichos hornos se usan en el departamento para la obtención de capas delgadas de $\text{YBa}_2\text{Cu}_3\text{O}_7$. Es un proceso delicado en el que un conocimiento exacto del historial térmico durante dicho proceso era crucial para la optimización de ese.
- Desarrollo de un sistema de medición in-situ de la resistencia eléctrica de una capa delgada de $\text{YBa}_2\text{Cu}_3\text{O}_7$ durante el proceso de tratamiento térmico a alta temperatura.

Finalmente en noviembre del año 2007 me incorporo al Laboratorio de Bajas Temperaturas y Magnetometría del ICMAB. Dicho laboratorio funciona como parte de los Servicios Científico-Técnicos del ICMAB y tiene como misión la caracterización de los materiales obtenidos por parte de las distintas líneas de investigación, desde su punto de vista de propiedades magnéticas y eléctricas.

El laboratorio consta de:

- Dos magnetómetros MPMS-XL de QuantumDesign, basados en un sensor SQUID.
- Dos sistemas PPMS de QuantumDesign, con las siguientes opciones de medida:
 - o Resistividad DC y AC
 - o Susceptibilidad AC



- o Magnetómetro de extracción
- o Magnetómetro VSM
- o Sistema de medida de par de fuerza magnética

A menudo las medidas realizadas en dicho servicio requieren una mayor implicación a las tareas de investigación relacionadas con la medida. Por ese motivo compagino las tareas propias del Servicio con colaboraciones en dos grupos de investigación adscritos al Departamento de Materiales Magnéticos y Óxidos Funcionales del Instituto de Ciencia de Materiales de Barcelona.



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.

Índice h: 5

Artículos publicados: 33

Número de citas: 80

Citas por año últimos 5 años: 3

**Bernat Bozzo Closas**

Surname(s): Bozzo Closas
Name: Bernat
DNI: 39369280L
ResearcherID: R-5603-2019
Date of birth: 29/04/1976
Gender: Male
Land line phone: (+34) 935801853 - 211
Fax: (+34) 935805729
Email: bbozzo@icmab.es

Current professional situation

Employing entity: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Department: Servicio de Bajas Temperaturas y Magnetometría, ICMAB-CSIC
Professional category: Titulado Superior Especializado
Start date: 18/05/2011
Type of contract: Civil servant **Dedication regime:** Full time
Primary (UNESCO code): 221111 - Electron transport properties; 221117 - Magnetic properties; 221306 - Low temperaturas

Previous positions and activities

	Employing entity	Professional category	Start date
1	Instituto de Ciencia de los Materiales de Barcelona	Titulado Superior de Actividades Técnicas y Profesionales	01/03/2008
2	Instituto de Ciencia de los Materiales de Barcelona	Titulado Superior de Actividades Técnicas y Profesionales	01/01/2007
3	Instituto de Ciencia de los Materiales de Barcelona	Becario	06/02/2003

1 **Employing entity:** Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Professional category: Titulado Superior de Actividades Técnicas y Profesionales **Educational Management (Yes/No):** No
Start-End date: 01/03/2008 - 28/02/2011
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 220208 - Magnetism; 220306 - Electron transport; 221306 - Low temperaturas
Field of management activity: Public Research Body



- 2** **Employing entity:** Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Department: Servicio de bajas temperaturas y magnetometría / Departamento de Materiales Superconductores, Instituto de Ciencia de los Materiales de Barcelona
Professional category: Titulado Superior de Actividades Técnicas y Profesionales **Educational Management (Yes/No):** No
Start-End date: 01/01/2007 - 28/02/2008
Type of contract: Temporary employment contract
Dedication regime: Full time
Primary (UNESCO code): 220208 - Magnetism; 220306 - Electron transport; 221127 - Superconductors; 221306 - Low temperaturas
Field of management activity: Public Research Body
- 3** **Employing entity:** Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
Department: Departamento de Materiales Superconductores, Instituto de Ciencia de los Materiales de Barcelona
Professional category: Becario **Educational Management (Yes/No):** No
Start-End date: 06/02/2003 - 31/12/2006
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time
Primary (UNESCO code): 221127 - Superconductors
Field of management activity: Public Research Body



Education

University education

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

University degree: Higher degree

Name of qualification: Licenciado en Ciencias Físicas

Degree awarding entity: Universitat Autònoma de Barcelona **Type of entity:** University

Date of qualification: 11/03/2002

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Ciencia de Materiales

Degree awarding entity: Universitat Autònoma de Barcelona **Type of entity:** University

Date of degree: 03/02/2016

Language skills

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



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:** HETEROESTRUCTURAS DE OXIDOS COMPLEJOS PARA ELECTRONICA DE ESPIN
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona
Type of entity: State agency
City of entity: Bellaterra, Catalonia, Spain
Name principal investigator (PI, Co-PI....): Benjamín Martínez Perea; Lluís Balcells Argemí
Nº of researchers: 7
Funding entity or bodies:
Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
City funding entity: Cerdanyola del Vallés, Catalonia, Spain
Start-End date: 01/01/2016 - 31/12/2018
- 2** **Name of the project:** INVESTIGACION DEL ORDEN INTERNO, CRISTALOGRAFIA Y MAGNETISMO DE MATERIALES MULTIFERROICOS Y MAGNETOELECTRICOS
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona
Type of entity: State agency
City of entity: Bellaterra, Catalonia, Spain
Name principal investigator (PI, Co-PI....): José Luís García Muñoz
Nº of researchers: 6
Funding entity or bodies:
Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency
City funding entity: Cerdanyola del Vallés, Catalonia, Spain
Start-End date: 01/01/2016 - 31/12/2018
- 3** **Name of the project:** Caracterización magnética avanzada y cristalografía de óxidos magnetoeléctricos monofásicos
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona
Type of entity: State agency
City of entity: Bellaterra, Catalonia, Spain
Name principal investigator (PI, Co-PI....): José Luís García Muñoz
Start-End date: 01/01/2013 - 31/12/2015
- 4** **Name of the project:** Efectos de interfase en capas delgadas de óxidos complejos y nanopartículas
Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona
Type of entity: State agency
City of entity: Bellaterra, Catalonia, Spain
Name principal investigator (PI, Co-PI....): Benjamín Martínez Perea
Start-End date: 01/01/2013 - 31/12/2015



- 5** **Name of the project:** Capas finas nanoestructuradas y nanopartículas: preparación caracterización y perspectivas de aplicaciones tecnológicas
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Benjamín Martínez Perea
Start-End date: 2008 - 2012
- 6** **Name of the project:** Perovskitas, cobaltitas y óxidos magnéticos fuertemente acoplados para aplicaciones electrónicas y de energía: preparación y caracterización avanzada
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
City of entity: Bellaterra, Catalonia, Spain
Name principal investigator (PI, Co-PI....): Jose Luís García Muñoz
Start-End date: 2008 - 2012
- 7** **Name of the project:** "Super Coated Conductor Cable" – SUPER3C
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Xavier Obradors Berenguer
Start-End date: 01/06/2004 - 30/06/2007
- 8** **Name of the project:** European Forum for Processors of Large Grain (Re)BCO – EFFORT
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Xavier Obradors Berenguer; David Cardwell
Start-End date: 2000 - 2007
- 9** **Name of the project:** Novel Sol-Gel technology for long length superconducting coated tapes" – SOLSULET
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Xavier Obradors Berenguer
Start-End date: 01/01/2003 - 31/03/2006
- 10** **Name of the project:** "Cintas superconductoras epitaxiales de YBCO: crecimiento mediante técnicas sol-gel, nanoestructura y transporte eléctrico, SUPERNANOCEL"
- Entity where project took place:** Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Teresa Puig Molina
Start-End date: 01/01/2003 - 31/03/2006
- 11** **Name of the project:** "Nuevas estrategias de nanoestructuración de defectos en superconductores de alta temperatura crítica para aplicaciones de corrientes críticas elevadas"
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Felip Sandiumenge Ortiz
Start-End date: 01/01/2002 - 31/12/2005
- 12** **Name of the project:** Ayuda de soporte a grupo de investigación de Catalunya 2001
Entity where project took place: Instituto de Ciencia **Type of entity:** State agency de los Materiales de Barcelona
Name principal investigator (PI, Co-PI....): Xavier Obradors Berenguer



Start-End date: 2001 - 2004

13 Name of the project: "Advanced Rotating Machines Exploiting High Temperatura Superconductors - SUPERMACHINES"

Entity where project took place: Instituto de Ciencia de los Materiales de Barcelona **Type of entity:** State agency

Name principal investigator (PI, Co-PI....): Xavier Obradors Berenguer; David Dew-Hughes

Start-End date: 01/04/2000 - 31/03/2003

14 Name of the project: Centre de Referència de Materiales Avanzados para la Energía - CeRMAE

Name principal investigator (PI, Co-PI....): Xavier Obradors Berenguer

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** Lopez-Mir, L.; Frontera, C.; Aramberri, H.; Bouzehouane, K.; Cisneros-Fernandez, J.; Bozzo, B.; Balcells, L.; Martinez, B. Anisotropic sensor and memory device with a ferromagnetic tunnel barrier as the only magnetic element. SCIENTIFIC REPORTS. 8, NATURE PUBLISHING GROUP, 16/01/2018. ISSN 2045-2322

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

Source of citations: WOS **Citations:** 0
- 2** Lopez-Mir, Laura; Galceran, Regina; Herrero-Martin, Javier; Bozzo, Bernat; Cisneros-Fernandez, Jose; Pannunzio Miner, Elisa V.; Pomar, Alberto; Balcells, Lluís; Martinez, Benjamin; Frontera, Carlos. Magnetic anisotropy and valence states in La₂Co_{1-x}Mn_{1+x}O₆ (x approximate to 0.23) thin films studied by x-ray absorption spectroscopy techniques. PHYSICAL REVIEW B. 95 - 22, AMER PHYSICAL SOC, 28/06/2017. ISSN 2469-9950, ISSN 2469-9969

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

Source of citations: WOS **Citations:** 2
- 3** E. Bartolomé; B. Bozzo; P. Sevilla; O. Martínez-Pasarell; T. Puig; X. Granados. ABS 3D printed solutions for cryogenic applications. Cryogenics. 82, pp. 30 - 37. 2017. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85011290444&doi=10.1016%2fj.cryogenics.2017.01.005&partnerID=40&md5=7d57a37cf63a0da22f14556b284d>>

Type of production: Scientific paper **Format:** Journal
- 4** 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
- 5** J.L. García-Muñoz; J. Padilla-Pantoja; X. Torrelles; J. Blasco; J. Herrero-Martín; B. Bozzo; J.A. Rodríguez-Velamazán. Magnetostructural coupling, magnetic ordering, and cobalt spin reorientation in metallic P_{r0.5}S_{r0.5}CoO₃ cobaltite. Physical Review B - Condensed Matter and Materials



Physics. 94 - 1, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84978388503&doi=10.1103%2fPhysRevB.94.014411&partnerID=40&md5=17dacf887352f6bf07db6757a8731c0b>>

Type of production: Scientific paper

Format: Journal

- 6 A.P. Black; H.E. Johnston; J. Oró-Solé; B. Bozzo; C. Ritter; C. Frontera; J.P. Atfield; A. Fuertes. Nitride tuning of lanthanide chromites. *Chemical Communications*. 52 - 23, pp. 4317 - 4320. 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84960904113&doi=10.1039%2fc6cc00744a&partnerID=40&md5=ef7f4b3607f5d08fda6f2eaa5c9a2a97>>.

Type of production: Scientific paper

Format: Journal

- 7 L. Balcells; C. Martínez-Boubeta; J. Cisneros-Fernández; K. Simeonidis; B. Bozzo; J. Oró-Sole; N. Bagués; J. Arbiol; N. Mestres; B. Martínez. One-Step Route to Iron Oxide Hollow Nanocuboids by Cluster Condensation: Implementation in Water Remediation Technology. *ACS Applied Materials and Interfaces*. 8 - 42, pp. 28599 - 28606. 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84994013335&doi=10.1021%2facsam.6b08709&partnerID=40&md5=c5a7abfcad963dedd89ddf4375086fe>>.

Type of production: Scientific paper

Format: Journal

- 8 R. Galceran; L. López-Mir; B. Bozzo; J. Cisneros-Fernández; J. Santiso; L. Balcells; C. Frontera; B. Martínez. Strain-induced perpendicular magnetic anisotropy in $\text{La}_2\text{CoMnO}_6$ thin films and its dependence on film thickness. *Physical Review B - Condensed Matter and Materials Physics*. 93 - 14, 2016. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84964317879&doi=10.1103%2fPhysRevB.93.144417&partnerID=40&md5=089f6dd000720ee743ab2dd22a0b92c>>.

Type of production: Scientific paper

Format: Journal

- 9 J. Padilla-Pantoja; J.L. García-Muñoz; B. Bozzo; Z. Jiráč; J. Herrero-Martín. Erratum: Structural Properties and Singular Phase Transitions of Metallic $\text{Pr}_{0.50}\text{Sr}_{0.50}\text{CoO}_3$ Cobaltite (*Inorganic Chemistry* (2014) 53:23 (12297-12304) DOI: 10.1021/ic501371d). *Inorganic Chemistry*. 54 - 12, pp. 6062 - 6062. 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84935923990&doi=10.1021%2facinorgchem.5b01028&partnerID=40&md5=247c1c2cc5471fb8efbef18f0eb8d1b>>.

Type of production: Scientific paper

Format: Journal

- 10 R. Galceran; L. Balcells; C. Martínez-Boubeta; B. Bozzo; J. Cisneros-Fernández; M. De La Mata; C. Magén; J. Arbiol; J. Tornos; F.A. Cuellar; Z. Sefrioui; A. Cebollada; F. Golmar; L.E. Hueso; F. Casanova; J. Santamaría; B. Martínez. Interfacial effects on the tunneling magnetoresistance in $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3/\text{MgO}/\text{Fe}$ tunneling junctions. *Physical Review B - Condensed Matter and Materials Physics*. 92 - 9, 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84942474367&doi=10.1103%2fPhysRevB.92.094428&partnerID=40&md5=9d295213b336edb0374116490a262f>>.

Type of production: Scientific paper

Format: Journal

- 11 J. Roqueta; A. Pomar; L. Balcells; C. Frontera; S. Valencia; R. Abrudan; B. Bozzo; Z. Konstantinovič; J. Santiso; B. Martínez. Strain-Engineered Ferromagnetism in LaMnO_3 Thin Films. *Crystal Growth and Design*. 15 - 11, pp. 5332 - 5337. 2015. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84946564662&doi=10.1021%2facscgd.5b00884&partnerID=40&md5=bd50f3d6157f682e0ddb910e9300060d>>.

Type of production: Scientific paper

Format: Journal

- 12 R. Galceran; C. Frontera; L. Balcells; J. Cisneros-Fernández; L. López-Mir; J. Roqueta; J. Santiso; N. Bagués; B. Bozzo; A. Pomar; F. Sandiumenge; B. Martínez. Engineering the microstructure and magnetism of $\text{La}_{2-x}\text{CoMnO}_{6-x}$ thin films by tailoring oxygen stoichiometry. *Applied Physics Letters*. 105 - 24, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84918767477&doi=10.1063%2f1.4904410&partnerID=40&md5=82e8955261ad384b4a9c76970d01ca88>>.

Type of production: Scientific paper

Format: Journal



- 13** A. Pomar; J. Santiso; F. Sandiumenge; J. Oqueta; B. Bozzo; C. Frontera; L. Balcells; B. Martínez; Z. Konstantinovi?. Growth kinetics engineered magnetoresistance response in $\text{La}_{2/3}\text{Sr}_{1/3}\text{MnO}_3$ thin films. *Applied Physics Letters*. 104 - 15, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84899639746&doi=10.1063%2f1.4871984&partnerID=40&md5=946b58615d83977a441821e7f608a65e>>.
Type of production: Scientific paper **Format:** Journal
- 14** L. Peña; L. Garzón; R. Galceran; A. Pomar; B. Bozzo; Z. Konstantinovic; F. Sandiumenge; L. Balcells; C. Ocal; B. Martinez. Macroscopic evidence of nanoscale resistive switching in $\text{La}_{2/3}\text{Sr}_{1/3}\text{MnO}_3$ micro-fabricated bridges. *Journal of Physics Condensed Matter*. 26 - 39, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84907200603&doi=10.1088%2f0953-8984%2f26%2f39%2f395010&partnerID=40&md5=85bfc5eedae1bf2fa3a69>>.
Type of production: Scientific paper **Format:** Journal
- 15** J. Padilla-Pantoja; A.J. Barón-González; B. Bozzo; J. Blasco; C. Ritter; J. Herrero-Martín; J.L. García-Muñoz. Role of Pr cations and the low temperature transition in $\text{Pr}_{0.50}\text{Sr}_{0.50}\text{CoO}_3$: A comparison to $\text{Pr}_{0.50}\text{Ca}_{0.50}\text{CoO}_3$. *Physica B: Condensed Matter*. 455, pp. 56 - 59. 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84908279137&doi=10.1016%2fj.physb.2014.07.045&partnerID=40&md5=e6b80be13eb7eab14c080e357b6ebb1>>.
Type of production: Scientific paper **Format:** Journal
- 16** J. Padilla-Pantoja; J.L. García-Muñoz; B. Bozzo; Z. Jiráč; J. Herrero-Martín. Structural properties and singular phase transitions of metallic $\text{Pr}_{0.50}\text{Sr}_{0.50}\text{CoO}_3$ cobaltite. *Inorganic Chemistry*. 53 - 23, pp. 12297 - 12304. 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84914169010&doi=10.1021%2fc501371d&partnerID=40&md5=d1aa4c97bb7347f6da2cfe2d80fdf2c6>>.
Type of production: Scientific paper **Format:** Journal
- 17** J. Padilla-Pantoja; J. Herrero-Martín; X. Torrelles; B. Bozzo; J. Blasco; C. Ritter; J.L. García-Muñoz. The low temperature magnetostructural transition in $\text{Pr}_{0.50}\text{Sr}_{0.50}\text{CoO}_3$: Bulk versus thin film behavior. *Journal of Applied Physics*. 115 - 17, 2014. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84903905775&doi=10.1063%2f1.4865465&partnerID=40&md5=3aa18e176eccc38b4426a7c5e1f155b>>.
Type of production: Scientific paper **Format:** Journal
- 18** L. Balcells; L. Peña; R. Galceran; A. Pomar; B. Bozzo; Z. Konstantinovic; F. Sandiumenge; B. Martinez. Electroresistance and Joule heating effects in manganite thin films. *Journal of Applied Physics*. 113 - 7, 2013. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84874624685&doi=10.1063%2f1.4792222&partnerID=40&md5=976407725bf858f62494cd1a59016367>>.
Type of production: Scientific paper **Format:** Journal
- 19** D. Volochova; P. Diko; S. Piovarci; M. Kalmanova; K. Iida; B. Holzapfel; A.E. Carrillo; B. Bozzo; X. Granados. Microstructure and trapped field of Al-doped GdBCO-Ag bulk superconductors. *Superconductor Science and Technology*. 25 - 2, 2012. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-84856153425&doi=10.1088%2f0953-2048%2f25%2f2%2f025023&partnerID=40&md5=64feadb94657337bc8b8d>>.
Type of production: Scientific paper **Format:** Journal
- 20** D.-X. Chen; V. Skumryev; B. Bozzo. Calibration of ac and dc magnetometers with a Dy_2O_3 standard. *Review of Scientific Instruments*. 82 - 4, 2011. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-79955632710&doi=10.1063%2f1.3581224&partnerID=40&md5=f5761d0469b9a6081c76634c888e1458>>.
Type of production: Scientific paper **Format:** Journal



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E. Bartolomé; J.J. Roa; B. Bozzo; M. Segarra; X. Granados. Effective silver-assisted welding of YBCO blocks: Mechanical versus electrical properties. *Superconductor Science and Technology*. 23 - 4, 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-77949906483&doi=10.1088%2f0953-2048%2f23%2f4%2f045013&partnerID=40&md5=0be64d1833ec5ffb90c004>>

Type of production: Scientific paper

Format: Journal

22

J.J. Roa; E. Bartolomé; B. Bozzo; G. Capdevila; X. Granados; M. Segarra. Nano-mechanical properties of silver-welded YBCO bulks. *Journal of Physics: Conference Series*. 234 - PART 1, 2010. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-78650912397&doi=10.1088%2f1742-6596%2f234%2f1%2f012034&partnerID=40&md5=55cf23397e9a9283b8c2>>

Type of production: Scientific paper

Format: Journal

23

M. Šefřiková; P. Diko; B. Bozzo; X. Granados; X. Obradors. Influence of crystal plane on the welding quality of YBCO bulk superconductor. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*. 151 - 1, pp. 107 - 110. 2008. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-47649091815&doi=10.1016%2fj.mseb.2008.03.006&partnerID=40&md5=152f35c937b437a578a5647a33fbaf0d>>

Type of production: Scientific paper

Format: Journal

24

E. Bartolomé; X. Granados; B. Bozzo; C. Navau; T. Puig; X. Obradors. Simulation of dc magnetic effects due to geometrically defined grain boundaries in type-II superconductors. *Physica C: Superconductivity and its Applications*. 468 - 6, pp. 492 - 497. 2008. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-41849114845&doi=10.1016%2fj.physc.2008.02.003&partnerID=40&md5=5e859a13870733c4710a5edb39849d4>>

Type of production: Scientific paper

Format: Journal

25

E. Bartolomé; B. Bozzo; X. Granados; F. Sandiumenge; T. Puig; X. Obradors. Vortex pinning regimes in YBa₂Cu₃O_{7-x} bulk boundaries investigated by quantitative magnetic hall microscopy. *Superconductor Science and Technology*. 21 - 12, 2008. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-58249109864&doi=10.1088%2f0953-2048%2f21%2f12%2f125002&partnerID=40&md5=7b3a0ea6f6edda2f175a9>>

Type of production: Scientific paper

Format: Journal

26

D.-X. Chen; E. Bartolomé; E. Pardo; A. Sanchez; B. Bozzo; X. Granados; T. Puig; X. Obradors; H. Claus. AC susceptibility of half-half jointed melt-textured YBCO rings. *Physica C: Superconductivity and its Applications*. 460-462 II - SPEC. ISS., pp. 770 - 771. 2007. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-34548191546&doi=10.1016%2fj.physc.2007.03.118&partnerID=40&md5=3fa122c6b3985cee2e9d20702b4a81aa>>

Type of production: Scientific paper

Format: Journal

27

P. Diko; X. Granados; B. Bozzo; P. Kulík. Oxygenation thermogravimetry of TSMG YBCO bulk superconductor. *IEEE Transactions on Applied Superconductivity*. 17 - 2, pp. 2961 - 2964. 2007. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-34547462176&doi=10.1109%2fTASC.2007.898219&partnerID=40&md5=0d038ec99b6bc3f08f31a7911cb5b15e>>

Type of production: Scientific paper

Format: Journal

28

J. Amorós; M. Carrera; X. Granados; S. Iliescu; E. Moreno; B. Bozzo; X. Obradors. Computation limits of current distribution in thick superconducting bulks from magnetic field measurements. *Journal of Physics: Conference Series*. 43 - 1, pp. 518 - 521. 2006. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-33746305275&doi=10.1088%2f1742-6596%2f43%2f1%2f128&partnerID=40&md5=526af5c24a476bef89a55d503>>

Type of production: Scientific paper

Format: Journal

29

E. Bartolomé; X. Granados; B. Bozzo; S. Iliescu; T. Puig; X. Obradors. In-field magnetic Hall probe microscopy studies of YBa₂Cu₃O₇ based superconductors. *Journal of Physics and Chemistry of Solids*. 67 - 1-3, pp. 403 - 406. 2006. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-33645033591&doi=10.1016%2fj.jpccs.2005.10.146&partnerID=40&md5=2a4849bf8fe0a27f3c7bdd87ae32562>>

Type of production: Scientific paper

Format: Journal



30

B. Bozzo; E. Bartolomé; X. Granados; T. Puig; X. Obradors. Obtention and characterization of YBCO/Ag/YBCO welds at different misorientation angles. *Journal of Physics: Conference Series*. 43 - 1, pp. 401 - 404. 2006. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-33746297070&doi=10.1088%2f1742-6596%2f43%2f1%2f100&partnerID=40&md5=5544e15240363f0763bc24a3>>

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

31

X. Granados; B. Bozzo; S. Iliescu; E. Bartolomé; T. Puig; X. Obradors; J. Amorós; M. Carrera. Critical current determination of artificially welded HTS samples by In-Field Hall Mapping technique. *IEEE Transactions on Applied Superconductivity*. 15 - 2 PART III, pp. 3632 - 3635. 2005. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-22044452699&doi=10.1109%2fTASC.2005.849377&partnerID=40&md5=7938e1f499104e71908d8300e6353cbe>>

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

32

B. Bozzo; S. Iliescu; E. Bartolomé; A. Palau; X. Granados; T. Puig; X. Obradors; J. Amorós; M. Carrera. Determination of the inter- and intra-granular critical currents in superconducting $YBa_{2}Cu_{3}O_{7}$ welds. *Superconductor Science and Technology*. 18 - 9, pp. 1227 - 1232. 2005. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-23844534483&doi=10.1088%2f0953-2048%2f18%2f9%2f015&partnerID=40&md5=08e87356181147a8b70b7ff3e>>

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

33

S. Iliescu; A.E. Carrillo; E. Bartolomé; X. Granados; B. Bozzo; T. Puig; X. Obradors; I. García; H. Walter. Melting of Ag- $YBa_{2}Cu_{3}O_{7}$ interfaces: The path to large area high critical current welds. *Superconductor Science and Technology*. 18 - 2, 2005. Available on-line at: <<https://www.scopus.com/inward/record.uri?eid=2-s2.0-23844525424&doi=10.1088%2f0953-2048%2f18%2f2%2f034&partnerID=40&md5=f348575a76f68ff20e7f7bddfa>>

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

Works submitted to national or international conferences

1 Title of the work: Functional oxides at ICMAB

Name of the conference: Nanoelement Integration in Oxide thin films, DAFNEOX Mid-Term Topic Meeting

City of event: Belgrado, Serbia

Date of event: 24/10/2016

Ll. Balcells; Z. Konstantinovi?; L. López-Mir; V. Fuentes; M. Bernal; J. Flores; A. Alagh; B. Bozzo; C. Frontera; A. Pomar; F. Sandiumenge; B. Martínez. "Functional oxides at ICMAB".

2 Title of the work: Strain effects on $La_{2}CoMnO_{6}$ thin films: tuning magnetic anisotropy

Name of the conference: TOBE2016, Cost TO-BE (Towards Oxide Based Electronics) Fall Meeting 2016

City of event: Ljubljana, Slovenija, Slovenia

Date of event: 28/09/2016

L. López-Mir; R. Galceran; Ll. Balcells; J. Cisneros-Fernández; J. Roqueta; B. Bozzo; C. Frontera; B. Martínez. "Strain effects on $La_{2}CoMnO_{6}$ thin films: tuning magnetic anisotropy".

3 Title of the work: Strategies for guided self-assembly in oxide thin films

Name of the conference: SELF2016

Corresponding author: No

City of event: Bellaterra, Catalonia, Spain

Date of event: 21/06/2016

A. Pomar; Z. Konstantinovi?; Ll. Balcells; C. Frontera; B. Bozzo; L. López-Mir; N. Bagués; J. Santiso; F. Sandiumenge; B. Martínez. "Strategies for guided self-assembly in oxide thin films".



- 4** **Title of the work:** Strain effects on La₂CoMnO₆ thin films: tuning magnetic anisotropy and transport properties
Name of the conference: Nanoselect NOE- Annual Meeting
Corresponding author: No
City of event: Sant Feliu de Guíxols, Catalonia, Spain
Date of event: 08/06/2016
End date: 10/06/2016
L. López-Mir; R. Galceran; LI. Balcells; J. Cisneros-Fernández; J. Roqueta; B. Bozzo; C. Frontera; B. Martínez. "Strain effects on La₂CoMnO₆ thin films: tuning magnetic anisotropy and transport properties".
- 5** **Title of the work:** Pressure induced insulator to metal transition in La₂CoMnO₆ thin films
Name of the conference: GEFES 2016
Corresponding author: No
City of event: Cuenca, Castile-La Mancha, Spain
Date of event: 13/01/2016
End date: 15/01/2016
R. Galceran; J. Cisneros; LI. Balcells; B. Bozzo; A. Pomar; Z. Konstantinovi?; F. Sandiumenge; B. Martínez. "Tunneling Anisotropic Magnetoresistance in LSMO/LAO/Pt Heterostructure".
- 6** **Title of the work:** Strain Engineered Ferromagnetism in LaMnO₃ Thin Films
Name of the conference: GEFES 2016
Corresponding author: No
City of event: Cuenca, Castile-La Mancha, Spain
Date of event: 13/01/2016
End date: 15/01/2016
A. Pomar; J. Roqueta; J. Santiso; C. Frontera; LI Balcells; B. Bozzo; Z. Konstantinovic; S. Valencia; R. Abrudan; B. Martínez. "Strain Engineered Ferromagnetism in LaMnO₃ Thin Films".
- 7** **Title of the work:** Tuning magnetic anisotropy by structural strain in La₂CoMnO₆ thin films
Name of the conference: GEFES 2016
City of event: Cuenca, Castile-La Mancha, Spain
Date of event: 13/01/2016
End date: 15/01/2016
R. Galceran; L. López-Mir; L. Balcells; J. Cisneros-Fernández; J. Roqueta; B. Bozzo; C. Frontera; B. Martínez. "Tuning magnetic anisotropy by structural strain in La₂CoMnO₆ thin films".
- 8** **Title of the work:** Electroresistance versus joule heating effects in manganite thin films
Name of the conference: Nanoselect – Consolider Anual Meeting 2012
City of event: Sant Feliu de Guíxols, Catalonia, Spain
Date of event: 07/2012
End date: 07/2012
Lluís Balcells; Alberto Pomar; Regina Galcarán; Zorica Konstantinovic; Luís Peña; Bernat Bozzo; Felip Sandiumenge; Benjamín Martínez.
- 9** **Title of the work:** Micro-structural analysis of YBCO/Ag/YBCO welds
Name of the conference: 8th European Conference on Applied Superconductivity EUCAS 2007
City of event: Bruselas, Belgium
Date of event: 09/2007
End date: 09/2007
Bernat Bozzo; Xavier Granados; Teresa Puig; Xavier Obradors; Katerina Zmorayova; Martina Sefcikova; Pabel Diko.



- 10** **Title of the work:** Silver-induced melting as a welding methodology: Quick review and present status
Name of the conference: European Forum of Processors of Large Grain (RE)BCO
City of event: Birmingham, United Kingdom
Date of event: 28/04/2007
End date: 29/04/2007
Bernat Bozzo; Simona Iliescu; Elena Bartolomé; Xavier Granados; Teresa Puig; Xavier Obradors; Miquel Carrera; Jaume Amorós; Katerina Zmorayova; Martina Sefcikova; Pabel Diko.
- 11** **Title of the work:** Microstructural analysis of YBCO/Ag/YBCO welds
Name of the conference: European Forum of Processors of Large Grain (RE)BCO
City of event: Viena, Austria
Date of event: 05/10/2006
End date: 05/10/2006
Bernat Bozzo; Xavier Granados; Teresa Puig; Xavier Obradors; Katerina Zmorayova; Martina Sefcikova; Pabel Diko.
- 12** **Title of the work:** Sample joining: a way to enlarge YBCO tiles
Name of the conference: European Forum for Processors of large grain (Re)BaCuO, EFFORT
City of event: Londres, Inner London, United Kingdom
Date of event: 04/2006
End date: 04/2006
Xavier Granados; Bernat Bozzo; Simona Iliescu; Elena Bartolomé; Teresa Puig; Xavier Obradors.
- 13** **Title of the work:** Magnetic granularity análisis of YBCO superconductors by Hall probe imaging
Name of the conference: 4ª Reunión Nacional de Física del Estado Sólido, Grupo Especializado de Física del Estado Sólido (GEFES)
City of event: Alicante, Valencian Community, Spain
Date of event: 02/2006
End date: 02/2006
Elena Bartolomé; Bernat Bozzo; Alberto Pomar; Anna Palau; Xavier Granados; Teresa Puig; Xavier Obradors; J Solty; Vladimir Cambel; Du-Xing Chen; Álgvar Sánchez.
- 14** **Title of the work:** Obtención y caracterización de soldaduras superconductoras de YBCO/Ag/YBCO con desorientación cristalina
Name of the conference: 4ª Reunión Grupo Español de Física de Estado Sólido GEFES 2006
City of event: Alicante, Valencian Community, Spain
Date of event: 02/2006
End date: 02/2006
Bernat Bozzo; Elena Bartolomé; Xavier Granados; Teresa Puig; Xavier Obradors.
- 15** **Title of the work:** Obtention and characterization of YBCO/Ag/YBCO welds
Name of the conference: Reunión del CERMAE (Centro de Referencia de Materiales Avanzados para la Energía)
City of event: Sant Feliu de Guíxols, Catalonia, Spain
Date of event: 03/12/2005
End date: 03/12/2005
Bernat Bozzo; Simona Iliescu; Elena Bartolomé; Xavier Granados; Teresa Puig; Xavier Obradors.



- 16** **Title of the work:** Hall probe magnetic imaging studies of YBCO based superconductors
Name of the conference: Reunión del CERMAE (Centro de Referencia de Materiales Avanzados para la Energía)
City of event: Sant Feliu de Guíxols, Catalonia, Spain
Date of event: 12/2005
End date: 12/2005
Elena Bartolomé; Xavier Granados; Bernat Bozzo; Teresa Puig; Xavier Obradors; Vladimir Cambel.
- 17** **Title of the work:** Obtention and characterization of YBCO/Ag/YBCO welds at different misorientation angles
Name of the conference: 7th European Conference on Applied Superconductivity EUCAS 2005
City of event: Viena, Austria
Date of event: 09/2005
End date: 09/2005
Bernat Bozzo; Elena Bartolomé; Xavier Granados; Teresa Puig; Xavier Obradors.
- 18** **Title of the work:** Critical Current Density in SC-Welding boundaries by Hall Mapping
Name of the conference: European Forum of Processors of Large Grain (RE)BCO
City of event: Stará Lesná, Slovakia
Date of event: 11/09/2004
End date: 12/09/2004
Bernat Bozzo; Simona Iliescu; Anna Palau; Xavier Granados; Elena Bartolomé; Teresa Puig; Xavier Obradors; Jaume Amorós; Miquel Carrera.
- 19** **Title of the work:** Magnetic imaging of YBCO superconductors with artificially patterned holes
Name of the conference: European Forum for Processors of large grain (Re)BaCuO. EFFORT
City of event: Stará Lesná, Slovakia
Date of event: 11/09/2004
End date: 11/09/2004
Elena Bartolomé; Xavier Granados; Bernat Bozzo; Xavier Obradors; E Sudhakar Reddy; Jaques Noudem.
- 20** **Title of the work:** Critical Current Density Determination of Welded Samples from Hall Mapping
Name of the conference: 6th Supermachines Meeting
City of event: Costa da Caparica, Portugal
Date of event: 07/2004
Bernat Bozzo; Simona Iliescu; Xavier Granados; Elena Bartolomé; Teresa Puig; Xavier Obradors.
- 21** **Title of the work:** In-field magnetic Hall probe microscopy studies of YBCO based superconductors
Name of the conference: Conference on Spectroscopies in Novel Superconductors (SNS'2004)
City of event: Sitges, Catalonia, Spain
Date of event: 07/2004
End date: 07/2004
Elena Bartolomé; Xavier Granados; Bernat Bozzo; Simona Iliescu; Teresa Puig; Xavier Obradors.
- 22** **Title of the work:** Supermachines motor: fabrication and characterization of the YBCO ring elements
Name of the conference: 6ª Reunión Proyecto SUPERMACHINES
City of event: Costa de Caparica, Portugal
Date of event: 07/2004
End date: 07/2004
Elena Bartolomé; Xavier Granados; Bernat Bozzo; Xavier Obradors.



- 23** **Title of the work:** Corriente crítica en soldaduras superconductoras artificiales: Estudio mediante microscopía magnética Hall
Name of the conference: Reunión Grupo Español de Física de Estado Sólido GEFES 2004
City of event: San Sebastián, Basque Country, Spain
Date of event: 06/2004
End date: 06/2004
Bernat Bozzo; Simona Iliescu; Xavier Granados; Anna Palau; Teresa Puig; Xavier Obradors.
- 24** **Title of the work:** Critical current determination of artificially welded HTS samples by In field Hall Mapping Technique
Name of the conference: Applied Superconductivity Conference, ASC'04
City of event: Jacksonville, United States of America
Date of event: 06/2004
End date: 06/2004
Xavier Granados; Bernat Bozzo; Simona Iliescu; Elena Bartolomé; Teresa Puig; Xavier Obradors; Jaume Amorós; Miquel Carrera.
- 25** **Title of the work:** In-situ optical imaging of the welding process of bulk YBCO superconductors
Name of the conference: 5^a Reunión Proyecto Supermachines
City of event: Cambridge, United Kingdom
Date of event: 03/01/2004
End date: 04/01/2004
Bernat Bozzo; Irene García; Simona Iliescu; Xavier Granados; Teresa Puig; Xavier Obradors.
- 26** **Title of the work:** Melting of Ag-YBa₂Cu₃O₇ interfaces: the path to large area high critical current welds
Name of the conference: 4th Internacional Workshop on Processing and Applications of Superconducting (RE)BCO Large Grain Materials (PASREG 2003)
City of event: Jena, Thüringen, Germany
Date of event: 07/2003
End date: 07/2003
Simona Iliescu; Ana Esther Carrillo; Elena Bartolomé; Xavier Granados; Bernat Bozzo; Teresa Puig; Xavier Obradors; Irene García; Heribert Walter.
- 27** **Title of the work:** Magnetic characterization
Name of the conference: Reunión del proyecto SUPER3C
City of event: Hannover, Germany
Xavier Granados; Elena Bartolomé; Bernat Bozzo; Albero Pomar; Teresa Puig; Xavier Obradors.

Other achievements

Stays in public or private R&D centres

- 1** **Entity:** Universidad Técnica Federico Santamaría **Type of entity:** University
Faculty, institute or centre: Departamento de Física
City of entity: Valparaíso, Chile
Start-End date: 17/08/2016 - 16/09/2016 **Duration:** 1 month
Goals of the stay: Post-doctoral
Provable tasks: Formación en la realización de medidas de FMR
- 2** **Entity:** Académia Eslovaca de Ciências **Type of entity:** Public Research Body
Faculty, institute or centre: Institute of Experimental Physics
City of entity: Kosice, Slovakia
Start-End date: 05/09/2006 - 05/10/2006 **Duration:** 1 month
Goals of the stay: Doctorate
Provable tasks: Análisis de la microestructura de soldaduras de YBCO asistidas por láminas de plata
- 3** **Entity:** Nexans Superconductors GmbH **Type of entity:** Business
Faculty, institute or centre: -
City of entity: Hürth, Köln, Germany
Start-End date: 08/11/2004 - 21/11/2004 **Duration:** 13 days
Goals of the stay: Doctorate
Provable tasks: Transferencia de Tecnología a empresa privada
- 4** **Entity:** Nexans Superconductors GmbH **Type of entity:** Business
Faculty, institute or centre: -
City of entity: Hürth, Köln, Germany
Start-End date: 20/06/2004 - 16/07/2004 **Duration:** 26 days
Goals of the stay: Doctorate
Provable tasks: Transferencia de Tecnología a empresa privada