

Part A. Personal Information

DATE	10/10/2024
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Surname(s)	BLANCO RODRIGUEZ	
Forename	JESUS ANGEL	
Researcher codes	WoS Researcher ID (*)	L-6508-2014
	SCOPUS Author ID(*)	7402723631
	Open Researcher and Contributor ID (ORCID)	0000-0002-8054-1442

(*) At least one of these is mandatory

A.1. Current position

Post/ Professional Category	Condensed Matter Physics Professor	
UNESCO Code	221118	
Key Words	Hard Condensed Matter, bulk magnetic materials and nanomagnetism, low temperature Physics	
Name of the University/Institution	Department/Centre	Physics
	Full Address	C/Calvo Sotelo s/n 33007
	Email Address	jabr@uniovi.es
	Phone Number	34 985102950
Start date	2009 (1992)	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1987	Cantabria	First degree	Physics
1990	Cantabria	Masters (if appropriate)	Licenciatura
1992	Cantabria	PhD	Physics

A.3. Indicators of Quality in Scientific Production (See the instructions)

6 positive evaluation periods of research activities
 9 Thesis supervised.
 4037 citations, around 250 citations/year last 5 years
 227 ISI-publications, over 185 papers in Q1 ranking, H-index=35 and I10=130

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

I graduated from the University of Cantabria in 1987 and presented my doctoral thesis in 1992. Currently, I am a professor of Condensed Matter Physics at the Physics Department of the University of Oviedo. Over the past 32 years, I have been actively involved in research and teaching, focusing on magnetic materials. My expertise extends to low-temperature physics, including work with liquid helium, PPMS, cryogenics, and Advanced Technology liquefiers. I have gained valuable experience as a visiting researcher at various laboratories, such as Louis Néel, LURE, ORNL, Birbeck College, and ISIS-RAL. With a track record of 250 papers, 227 of which most of them are indexed in JCR and have received over 4000 citations, and I have delivered numerous invited talks and oral presentations at international conferences. My involvement extends beyond research, as I served on the Scientific Council of the Institut Laue Langevin (ILL) from 2008 to 2012 and was a member of the National Commission of Neutron Users. I am the founder and secretary of the Spanish Magnetic Society Club. Furthermore, I have acted as an external evaluator for ANECA, ANEP, NSF, French, German, and Argentine evaluation agencies. I have also evaluated projects within the M-ERA net program for the EU.

Participating as a member of the evaluation panel representing Spain at ILL and Spline in the ESRF, I have been involved in international assessments at ILL, Leon Brillouin, ESRF, NIST, and APS. Additionally, I am a member of the Spanish Neutron Scattering Association. My administrative roles include serving as the coordinator of technical services at the University of Oviedo from 2014 to 2017 and as the coordinator of the PhD Program at the Department of Physics. In 2018-2019, I coordinated the Spanish panel in Physics and Space Science for mobility grants. Since 2021, I have been the deputy director of the Department of Physics. Over the years, I have delivered more than 5000 hours of teaching lectures.

Part C. Relevant accomplishments

C.1. Publications

E. M Jefremovas, M. de la Fuente Rodriguez, D. Alba Venero, C. Echevarria-Bonet, P. Bender, B. Fak, J. A. Blanco, and L. F. Barquin, "Magnetic super-structure and active surface role in the onset of magnetic excitons revealed in TbCu₂ nanoparticles", Comm. Mat. 56 (2023) 2023-08-25

(IF= 7.8)

M. Fadel, F. J. Martin-Jimeno, M. P. Fernandez-Garcia, F. Suarez-García, J. I. Paredes, J. H. Belo, J. P. Araujo, A. Adawy, D. Martinez-Blanco, P. Alvarez-Alonso, J. A. Blanco and P. Gorria; "Untangling the role of the carbon matrix in the magnetic coupling of Ni@C nanoparticles with mixed FCC/HCP crystal structures" J. Mat. Chem. C, 10 (2023) 1798.

(IF: 7.393)

N. Rinaldi-Montes, P. Gorria, A. B. Fuertes, D. Martínez-Blanco, Z. Amghouz, I. Puente Orench, L. Olivi, J. Herrero-Martín, M. P. Fernandez, J. Alonso, M.-H. Phan, H. Srikanth, X. Marti and J. A. Blanco, "Entangled core/shell magnetic structure driven by surface magnetic symmetry-breaking in Cr₂O₃ nanoparticles", J. Mater. Chem. C (2022)

(IF=7.393)

E. M Jefremovas, P. Svedlinch, F. Damay, D. Alba Venero, A. Michels, J. A. Blanco, and L. F. Barquin, "Magnetic order and disorder environments in superantiferromagnetic NdCu₂ nanoparticles", Scientific Reports 12 (2022) 9733

(IF= 4.6)

E. M Jefremovas, M. de la Fuente Rodriguez, F. Damay, B. Fak, A. Michels, J. A. Blanco, and L. F. Barquin, "Observation of surface magnons and crystalline electric field shifts in superantiferromagnetic NdCu₂ nanoparticles", Phys. Rev. B 104 (2021) 134404

(IF= 3.7)

E. M Jefremovas, M. D. Rodriguez, F. Damay, B. Fak, A. Michels, J. A. Blanco, L. F. Barquin, Phys. Rev. B 104 (2021) 134404.

(IF=3.86)

M. Salaheldeen, A.M. Abu-Dief, L. Martínez-Goyeneche, S.O. Alzahrani, F. Alkhatib, P. Álvarez-Alonso, J.A. Blanco, "Dependence of the magnetization process on the thickness of Fe₇₀Pd₃₀ nanostructured thin film", Materials 13, 5788 (2020)

(IF=3.623)

N. Rinaldi-Montes, P. Gorria, D. Martínez-Blanco, Z. Amghouz, A. B. Fuertes, L. Fernández Barquín, J. R. Fernández, L. Olivi, G. Aquilanti, J. A. Blanco; "Disentangling magnetic core/shell morphologies in Co-based nanoparticles"

J. Materials Chemistry C, 4 (2016) 2302-2311.

(IF: 5.066)

B. Vallina, J. D. Rodríguez-Blanco, A. P. Brown, J. A. Blanco, L. G. Benning; "The role of amorphous precursors in the crystallization of La and Nd carbonates" Nanoscale, 7 (2015) 12166-12179

(IF: 7.760)

N. Rinaldi-Montes, P. Gorria, D. Martínez-Blanco, A. B. Fuertes, L. Fernández Barquín, J. R. Fernández I. de Pedro, M. L. Fdez-Gubieda, J. Alonso, L. Olivi, G. Aquilanti, J. A. Blanco; "Interplay between microstructure and magnetism in NiO nanoparticles: breakdown of the antiferromagnetic order" *Nanoscale*, 6 (2014) 457-465. (IF: 7.760)

P. Álvarez-Alonso, P. Gorria, J. L. Sánchez Llamazares, G. J. Cuello, I. Puente-Orench, J. Sánchez Marcos, G. Garbarino, M. Reiffers, J. A. Blanco; "Exploring the magneto-volume anomalies in Dy₂Fe₁₇ with unconventional rhombohedral crystal structure" *Acta Materialia*, 61 (2013) 7931-7937. (IF: 5.058)

C.2. Research Projects and Grants

- PID2022-138256NB-C21

Title: Seeking improved magnetocaloric materials for hydrogen liquefaction

Financing entity: Ministerio de Ciencia, Innovación y Universidades

Inv. Principal: M. Rivas (Univ. Oviedo)

Duration, from: 01/01/2023 to: 31/12/2025

Budget: 126 k€

Type of participation: Investigator

- AYUD/2021/51822

Title: Advanced magnetic nanomaterials for energy and health (MAGNES).

Financing entity: Conserjería de Economía y Empleo (Principado de Asturias)

Inv. Principal: M. Rivas (Univ. Oviedo)

Duration, from: 01/01/2021 to: 31/12/2023

Budget: 210 k€

Type of participation: Investigator

- RTI2018-094683-B-C52

Title: New Generation Multifunctional Martensitic Materials for Energy and Performance Applications.

Financing entity: Ministerio de Ciencia, Innovación y Universidades

Inv. Principal: Pedro Gorria & J. A. Blanco (Univ. Oviedo)

Duration, from: 01/01/2019 to: 31/12/2021

Budget: 84.7 k€

Type of participation: Principal Investigator

- IDI/2018/000185

Title: Advanced functional nanomaterials.

Financing entity: Conserjería de Economía y Empleo (Principado de Asturias)

Inv. Principal: J. A. Blanco (Univ. Oviedo)

Duration, from: 01/01/2018 to: 31/12/2020

Budget: 166 k€

Type of participation: Principal Investigator

C.3. Contracts

Title: Planta de producción y recuperación de Helio.

Financing entity: Empresa Integración y Control, S. L. Inv. Principal: Jesús A. Blanco

Duration, from: 01/01/2013 to: 31/12/2014

Budget: 96 k€

Type of participation: Principal Investigator

Title: Evaluación de las condiciones de trabajo de una planta de recuperación y licuefacción de Helio.

Financing entity: Air Liquide España, S. A. Inv. Principal: Jesús A. Blanco

Duration, from: 01/01/2013 to: 31/12/2014

Budget: 16.9 k€

Type of participation: Principal Investigator

C5 Editor

- P. Gorria, J. A. Blanco, "Proceedings of the 5th Meeting of the Spanish Neutron Scattering Association (2010)", *Journal of Physics: Conference Series*, 325 (2011) 012001-012026.

- P. Gorria, J. A. Blanco, "Proceedings 18th ISMANAM (2011)", Journal of Alloys and Compounds, 536 (Suppl 1) (2012) S1-S585.

C.7 Invited talks:

-Title: Invar properties observed in x-ray and neutron scattering

Event: 8th Meeting of the Spanish Neutron User Society (SETN-2016), UPV/EHU, 26 - 29 Junio, 2016.

- Title: Core/Shell morphology in antiferromagnetic (AFM)/Spin Glass (SG) nanostructured NiO. Event: 22th International Symposium on metastable, amorphous and nanostructured materials (ISMANAM-2015), Paris (Francia), 13 - 17 Julio, 2015.

- Title: Chiral properties of α -Fe₂O₃

Event: International Conference on Strongly Correlated Electron Systems (SCES-2014), Grenoble (Francia), 7 - 11 Julio, 2014.

- Title: Chiral state of BiFeO₃ studied by resonant x-ray Bragg diffraction

Event: Resonant Elastic X-ray scattering (REXS2013). Oxford (Inglaterra), 15 - 19 Julio, 2013.

- Title: Circular polarized resonant x-ray scattering on Hematite single crystal.

Event: Meeting of the Italian, Spanish and Swiss Crystallographic associations (MISCA2013), Como (Italia), 9 - 12 Septiembre, 2013.

C.8. Management of scientific activity

-Title: 18th International symposium on metastable, amorphous and nanostructured materials, ISMANAM (2011)

Activity type: Symposium, Role: (Co-Chair)

Character: International

Dates: 26/ Junio-1 Julio/2011, Gijón

-Title: 2nd WORKSHOP ON McPHASE- 2012

Activity type: Workshop, Role: (Organizing committee)

Character: International

Dates: 11-14 Septiembre 2012, ILL, Grenoble (Francia)

- Title: 3rd WORKSHOP ON McPHASE- 2013

Activity type: Workshop, Role: Organizing committee

Character: International

Dates: 4-9 Agosto 2013, HMI, Berlin (Alemania)

Tipo de actividad: CONGRESO ICFCM19 (Comité organizador)

Character: Internacioanl

Dates: 28-31 Mayo 2019, Gijón