



Centro Singular de Investigación  
en Química Biolóxica e  
Materiais Moleculares

## Conferencia: Molecular Spintronic Devices



Luis Hueso

Ikerbasque Research  
Professor - CIC nanoGUNE -  
San Sebastian

22/11/17

Aula de Seminarios  
do CiQUS  
12:15 h

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XUNTA DE GALICIA

CONSELLERÍA DE CULTURA, EDUCACIÓN  
E ORDENACIÓN UNIVERSITARIA



Dr. LUIS HUESO

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Nanodevices  
Group Leader  
Ikerbasque Research Professor

Luis E. Hueso is currently an Ikerbasque Research Professor and leader of the Nanodevices Group at CIC nanoGUNE, position that took in late 2008. Prior to this, he was a Lecturer at the University of Leeds (UK) and had postdoctoral position at CNR (Italy) with Alek Dedić and at the University of Cambridge (UK) with Neil Mathur. He was awarded a PhD in Physics by the University of Santiago (Spain) in 2002. He has published more than 100 research articles and has been invited to deliver talks at large research conferences in diverse places from Finland, the USA, the UK, France and Canada.

He is currently an Associate Editor for Journal of Materials Chemistry C, edited by the Royal Society of Chemistry

**Background:**

2002 PhD in Physics. University of Santiago de Compostela (Spain)  
2002-2005 Marie Curie Fellow. University of Cambridge (UK)  
2005-2007 Postdoctoral Researcher. ISMN-CNR (Italy)  
2008 Lecturer. University of Leeds (UK)

**Research interests:**

Spin transport in carbon-based materials  
Resistive memory devices  
Multifunctional organic/inorganic devices

**Selected publications (before nanoGUNE):**

V. Dedić, L.E. Hueso, I. Bergenti, A. Riminucci, F. Borgatti, C. Graziosi, P. Newby, F. Casoli, M.P. de Jong, C. Taliani, Y.Q. Zhan

“Room temperature spintronics effects in Alq<sub>3</sub>-based hybrid devices”  
Physical Review B 78, 115203 (2008)

L.E. Hueso, A. Riminucci, I. Bergenti, Y. Zhan, V. Dedić  
“Multipurpose magnetic/organic hybrid devices”  
Advanced Materials 19, 2639 (2007)

D. Niebieskikwiat, L.E. Hueso, J.A. Borchers, N.D. Mathur, M.B. Salamon  
“Thickness-dependent magnetic structure in ferromagnetic/antiferromagnetic all-manganite multilayers”  
Physical Review Letters 99, 247207 (2007)

L.E. Hueso, M.A. Pruneda, V. Ferrari, G. Burnell, J. Valdés, B. Simons, P.B. Littlewood, A. Fert, N.D. Mathur

"Transformation of spin information into large electrical signals via carbon nanotubes"  
Nature 445, 410 (2007)

P. Sande, L.E. Hueso, D.R. Miguens, J. Rivas, F. Rivadulla, M.A. López-Quintela  
"Large magnetocaloric effect in manganites with charge order"  
Applied Physics Letters 79, 2040 (2001)

L.E. Hueso, J. Rivas, F. Rivadulla, M.A. López-Quintela  
"Magnetoresistance in manganite/alumina nanocrystalline composites"  
Journal of Applied Physics 89, 1746 (2001)

L.E. Hueso, J. Rivas, F. Rivadulla, M.A. López-Quintela.  
"Tuning of colossal magnetoresistance via grain size change in La<sub>0.67</sub>Ca<sub>0.33</sub>MnO<sub>3</sub>"  
Journal of Applied Physics 86, 3881 (1999)

L.E. Hueso, F. Rivadulla, R.D. Sánchez, D. Caeiro, C. Vázquez-Vázquez, J. Rivas, M.A. López-Quintela  
"Influence of the grain-size and oxygen stoichiometry on magnetic and transport properties of polycrystalline La<sub>0.67</sub>Ca<sub>0.33</sub>MnO<sub>3±δ</sub> perovskites"  
Journal of Magnetism and Magnetic Materials 189, 321 (1998)