

# José Pedro Valdés Herrera

## Curriculum Vitae

### EDUCATION AND ACADEMIC EXPERIENCE

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since 5.2014	PhD Candidate working at the German Center for Neurodegenerative Diseases (DZNE), Aging & Cognition Research Group, Magdeburg, Germany.
2.2014 – 5.2014	Research helper, German Center for Neurodegenerative Diseases (DZNE), Magdeburg, Germany.
10.2003 – 9.2007	PhD Candidate at the Materials Science Department of the University of Cambridge, Cambridge, England, Thesis title: “Fabrication of a large number of functional nanoparticles” (Not completed).
9.2004	Certificate of Postgraduate Studies, University of Cambridge, Cambridge, England.
9.2001 – 6.2003	MPhys Physics with Lasers and Photonics, University of Hull, Final Year project: “Polymer Networks for Photovoltaic Devices”, Hull, England. Finished with Honours in the First Class
9.1996 – 6.2001	Bachelor of Physics, University of Sevilla, Sevilla, Spain.

### RESEARCH EXPERIENCE

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Experimental techniques	Solid state based fabrication and chemical synthesis focused on nanostructures and nanoparticles with knowledge of several techniques: optical lithography, scanning electron microscopy (SEM), focused ion beam microscopy (FIB), vibration sample magnetometer (VSM), atomic force microscopy (AFM), X-ray powder diffraction (XRD), superconductor quantum interference device magnetometer (SQUID), sputtering deposition, determination of properties by light scattering (DLS), natural lithography, and reactive ion etching among others.
Research and development	Applied Physics, Vacuum technology, Nanotechnology, Photonics, Materials Science, Programming, conception, performance and evaluation of experiments.

### TEACHING EXPERIENCE

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2004 – 2006	Demonstrator for the patterning of oxide nanowires using the Focused Ion Beam (FIB), “Master’s in Micro- and Nanotechnology Enterprise”, University of Cambridge, England.
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### PRESENTATIONS

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7.2004	Conference “First Japan-UK Nanotechnology Students’ Summer School”, NIMS (National Institute for Materials Science), Tsukuba, Japan.
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### SCIENTIFIC PUBLICATIONS

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Hueso, L. E., Pruneda, J. M., Ferrari, V., Burnell, G., Valdés-Herrera, J. P., Simons, B. D., Littlewood, P. B., Artacho, E., Fert, A., Mathur, N. D., *Transformation of spin information into large electrical signals using carbon nanotubes*.  
Nature 445, 410–413 (2007)

## FURTHER KNOWLEDGE

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### Languages

- Spanish: Native
- English: Fluent both written and spoken
- German: Intermediate, able to have daily conversations (B2 Certificate)

### Computing

- Windows (7, 8), Linux (Ubuntu, OpenSUSE, RedHat)
- MS-Office: Word, Excel, PowerPoint
- Matlab, Scipy, Numpy, Matplotlib
- Python, C, C++, Bash scripting