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|  CURRICULUM VITAE |  |

Dr. Emilio Nogales Díaz

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Position: Profesor Titular de Universidad (Permanent Lecturer)

Current research lines: Nanomaterials, electron microscopy, electronic properties, confocal Raman microscopy and micro-photoluminescence, cathodoluminescence, photoluminescence, semiconductor oxides, nanowires, waveguides, doping, transition metals, rare earths.

Co-author of 1 book chapter and more than 55 scientific papers (more than 50 in journals included in ISI Web of Knowledge). Some of the most relevant publications within the last years:

- “Cathodoluminescence from β-Ga2O3 nanowires”, E. Nogales, B. Méndez, J. Piqueras, Applied Physics Letters 86, 113112 (2005)

- “Selectively excited photoluminescence from Eu-implanted GaN”, K. Wang, R.W. Martin, K.P. O'Donnell, V. Katchkanov, E. Nogales, K. Lorenz, E. Alves, S. Ruffenach, O. Briot, Applied Physics Letters 87, 112107 (2005)

- “Failure mechanism of AlN nanocaps used to protect RE-implanted GaN during high temperature annealing”, E. Nogales, R.W. Martin, K.P. O´Donnell, K. Lorenz, E. Alves, S. Ruffenach and O. Briot, Applied Physics Letters 88, 031902 (2006)

- “Cathodoluminescence of rare earth implanted AlInN”, K. Wang, R.W. Martin, E. Nogales, P.R. Edwards, K.P. O’Donnell, K. Lorenz, E. Alves, I.M. Watson, Applied Physics Letters 89, 131912 (2006)

- “Red luminescence of Cr in β-Ga2O3 nanowires”, E. Nogales, J.A. García, B. Méndez, J. Piqueras, Journal of Applied Physics 101, 033517 (2007)

- “Doped gallium oxide nanowires with waveguiding behavior”, E. Nogales, J.A. García, B. Méndez, J. Piqueras, Applied Physics Letters 91, 133108 (2007)

- “Europium doped gallium oxide nanostructures for room temperature luminescent photonic devices”, E. Nogales, B. Méndez, J. Piqueras, J.A. García, Nanotechnology 20, 115201 (2009)

- “Assessment of waveguiding properties of gallium oxide nanostructures by angle resolved cathodoluminescence in a scanning electron microscope”, E. Nogales, B. Méndez, J. Piqueras, Ultramicroscopy 111, 1037 (2011)

- “Synthesis and characterization of silicon-doped gallium oxide nanowires for optoelectronic UV applications”, J. Díaz, I. López, E. Nogales, B. Méndez, J. Piqueras, J. Nanopart. Res. 13, 1833 (2011)

- “Cathodoluminescence of rare earth implanted Ga2O3 and GeO2 nanostructures”, E. Nogales, P. Hidalgo, K. Lorenz, B. Méndez, J. Piqueras, E. Alves, Nanotechnology 22, 285706 (2011)

- “In-Doped Gallium Oxide Micro- and Nanostructures: Morphology, Structure, and Luminescence Properties”, I. López, A. D. Utrilla, E. Nogales, B. Méndez, J. Piqueras , A. Peche, J. Ramírez-Castellanos and J. M. González-Calbet, J. Phys. Chem. C, 116, 3935 (2012)

- “Influence of Sn and Cr Doping on Morphology and Luminescence of Thermally Grown Ga2O3 Nanowires”, I. López, E. Nogales, B. Méndez, J. Piqueras, A. Peche, J. Ramírez-Castellanos and J. González-Calbet, Journal of Physical Chemistry C 117, 3036 (2013)

- “Enhanced red emission from Praseodymium doped GaN nanowires by defect engineering”, K. Lorenz, E. Nogales, S. M. C. Miranda, N. Franco, B. Méndez, E. Alves, G. Tourbot, B. Daudin, Acta Materialia 61, 3278 (2013)

- “Crossed Ga2O3/SnO2 Multiwire Architecture: A Local Structure Study with Nanometer Resolution”, G. Martinez-Criado, J. Segura-Ruiz, M.-H. Chu, R. Tucoulou, I. López, E. Nogales, B. Méndez and J. Piqueras, Nano Letters 14, 5479 (2014)

Principal Investigator in 3 research projects for measurements in the Sincrotrone Elettra, Trieste (Italy). Member of 17 research projects: 12 national (among them, one CONSOLIDER Ingenio of the MICINN) and 5 international (among them 3 RTN within the 5th Framwork Programme of the EU).

Coauthor of more than 80 contributions to conferences. Among them, 8 invited and more than 40 oral presentations.

Member of the Local Organizing Committee, International Workshop Beam Injection Assessment of Microstructures in Semiconductors 2008 (BIAMS2008).

Chairman of the session “New trends and developments in optical spectroscopy and luminescence techniques I” in the Conference on Micro-Raman and luminescence in Earth and Space Sciences CORALS 2011 (Madrid, Spain)