

DEPARTAMENTO DE FISICA

DEPARTAMENTO DE FISICA

Áreas de conocimiento:

- FISICA APLICADA

ÁREA DE CONOCIMIENTO: FISICA APLICADA

Actividades de investigación

Tesis Doctorales

- PRODUCCION, PROCESADO Y CARACTERIZACIÓN DE ALEACIONES DE Ti DE GRADO FINO
Autores: SALMI, G.J.
Director: MONGE, M. A. ; MUÑOZ, A.
Año: 2010
- Selección Guiada de Características y Búsqueda de Modelos Homogéneos en Datos de Alta Dimensionalidad. Un Enfoque Aplicado a Problemas de Teledetección
Autores: GARCIA, E.
Director: GALVAN, I. M. ; DE CASTRO GONZALEZ, A.J.
Año: 2010

Publicaciones y actividades de difusión de resultados

Publicaciones en revistas científicas internacionales

- ABENOJAR, J. ; COLERA, I. ; MARTINEZ, M. A. ; VELASCO, F.
Study by XPS of an atmospheric plasma-torch treated glass: influence on adhesion, *Journal of adhesion science and technology*, Vol. 24, 2010, pp. 1841-1854, HOLANDA.
- AGUIRREGABIRIA, V. M. ; PASTOR, J.Y.; LLORCA, M. J. ; MONGE, M. A. ; PAREJA, R.
Mechanical properties of Y2O3-doped W-Ti alloys, *Journal of nuclear materials*, Vol. 404, Núm. 3, 2010, pp. 203-209, HOLANDA.
- BALLESTEROS, C. I. ; MARTINEZ, G.; SALAVAGIONE, J.H.
Functionalization of Multi-Walled Carbon Nanotubes by Stereoselective Nucleophilic Substitution on PVC, *Macromolecules*, Vol. 43, Núm. 23, 2010, pp. 9754-9760, ESTADOS UNIDOS DE AMERICA.
- BUSL, M.; LOPEZ-MONIS, C.; SANCHEZ, R.; IÑARREA, J.; PLATERO, G.
Spin Dynamics in Double Quantum Dots in the Spin Blockade Regime , *Physica E: Low-dimensional Systems and Nanostructures*, Vol. 42, 2010, pp. 643-648, HOLANDA.
- CARRERAS, B.A.; GARCIA, L. ; LLERENA, I.
Tracer particle trapping times in pressure-gradient-driven turbulence in toroidal geometry and their connection to the dynamics of large-scale cycles, *Plasma physics and controlled fusion*, Vol. 52, 2010, pp. 1050051-10500514, REINO UNIDO.
- CASTRO, M. V. D. ; LOZANO-PEREZ, S.; JENKINS, M.L.
Stability of Nanoparticles in an Oxide Dispersion Strengthened Steel, *Journal of physics. Conference series*, Vol. 241, 2010, pp. 121071-121074, REINO UNIDO.

- CORRALES, T.; CATALINA LAPUENTE, F.; BALLESTEROS, C. I. ; PEINADO, C.; LUZON, M.; SAN MIGUEL, V.
Hierarchically Organized Micellization of Thermoresponsive Rod-Coil Copolymers Based on Poly[oligo(ethylene glycol) methacrylate] and Poly(epsilon-caprolactone), *JOURNAL OF POLYMER SCIENCE PART A-POLYMER CHEMISTRY*, Vol. 48, Núm. 22, 2010, pp. 4909-4921.
- GUZMAN, R.E.; ZAHR, J.A.; PEREZ, J. L. ; MELENDEZ, J.
Determination of the Constitutive Relation Parameters of a Metallic Material by Measurement of Temperature Increment in Compressive Dynamic Tests, *Experimental mechanics*, Vol. 50, Núm. 3, 2010, pp. 389-397, ESTADOS UNIDOS DE AMERICA.
- HERNANDEZ, J. C. ; ESTEVEZ, J.M.; PALOMAR, E.; ROMERO, J. A. ; ROMERO, A.
Blind Steganalysis of Mp3stego, *Journal of information science and engineering*, Vol. 26, Núm. 5, 2010, pp. 1787-1799, CHINA.
- HIRSCHMAN, S.P.; PERUMALA, K.P.; LYNCH, V.E.; SANCHEZ, R.
BCYCLIC:a parallel, block-tridiagonal matrix cyclic solver, *JOURNAL OF COMPUTATIONAL PHYSICS*, Núm. 229, 2010, pp. 6392-6404.
- IÑARREA, J.; MANI, R.
Sublinear Power dependence of microwave-induced resistance oscillations in two-dimensional electron systems., *Physical review. B. Condensed matter and materials physics*, Vol. 82, 2010, pp. 205321-, ESTADOS UNIDOS DE AMERICA.
- IÑARREA, J.; PLATERO, G.
Magnetotransport excited by linearly polarized radiation in Hall bars, *Journal of physics. Conference series*, Vol. 210, 2010, pp. 12042-, REINO UNIDO.
- IÑARREA, J.; PLATERO, G.
Microwave-induced resistance oscillations versus magnetoabsorption in two-dimensional electron systems: role of temperature, *Nanotechnology (Bristol.)*, Vol. 21, Núm. 31, 2010, REINO UNIDO.
- IÑARREA, J.; PLATERO, G.
Role of an in-plane field in 2D magnetotransport assisted by microwaves , *Physica E: Low-dimensional Systems and Nanostructures*, Vol. 42, 2010, pp. 1073-1074, HOLANDA.
- IÑARREA, J.; PLATERO, G.
Magnetoabsorption of radiation in two-dimensional electron systems: role of temperature , *Nanotechnology (Bristol.)*, Vol. 21, 2010, pp. 315401-, REINO UNIDO.
- LOPEZ-PAVON, L.; LOPEZ-CUELLAR, E.; BALLESTEROS, C. I. ; TORRES-CASTRO, A.; JOSE DE ARAUJO, C.
Effect of the deposition rate on thin films of CuZnAl obtained by thermal evaporation, *MRS Proceedings*, Vol. 1276, 2010, pp. 4-.
- MARTIN, J. R. ; ESPOSITO, B.; SANCHEZ, R.
Experimental Observation of Increased Threshold Electric Field for Runaway Generation due to Synchrotron Radiation Losses in the FTU Tokamak, *Physical review letters*, Vol. 105, Núm. 18, 2010, ESTADOS UNIDOS DE AMERICA.
- MCCARTHY, K.J.; TRIBALDOS, V.; AREVALO, J.; LINIERS, M.
The detection of fast oxygen ions in neutral beam-heated plasmas of the TJ-II stellarator using spectroscopy methods, *JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS*, Vol. 43, Núm. 14, 2010.

- MELENDEZ, J. ; FORONDA, A.; ARANDA, J. M. ; LOPEZ, F. ; MARTINEZ DEL, F.J.
Infrared thermography of solid surfaces in a fire, *MEASUREMENT SCIENCE & TECHNOLOGY*, Vol. 21, Núm. 10, 2010, REINO UNIDO.

- MUÑOZ SANTIUSTE, J. E. ; JAYASANKAR, C.K.; WORTMANN, G.; SIEVERS, W.; TROSTER, T.; LAVIN, V.; MARTIN, I.R.; BABU, P.; VENKATRAMU, V.
Role of the local structure and the energy trap centers in the quenching of luminescence of the Tb³⁺ ions in fluoroborate glasses: A high pressure study, *The Journal of chemical physics*, Vol. 132, Núm. 11, 2010, ESTADOS UNIDOS DE AMERICA.

- PARENTE, P.; ORTEGA, Y.; SAVOINI, B.; MONGE, M. A. ; TUCCI, A.; ESPOSITO, L.; SANCHEZ, A.J.
Microstructural characterization of alumina-zirconia layered ceramics using positron annihilation spectroscopy, *Acta Materialia*, Vol. 58, Núm. 8, 2010, pp. 3014-3021, HOLANDA.

- PARENTE, P.; SAVOINI, B.; ORTEGA, Y.; MONGE, M. A. ; TUCCI, A.; ESPOSITO, L.; SÁNCHEZ-HERENCIA, A.J.
Mechanical Behaviour of Al₂O₃ laminates produced by slip casting, *Acta Materialia*, Vol. 58, 2010, pp. 3014-3021, HOLANDA.

- PEREZ, J. L. ; GUZMAN, R.E.; RUSINEK, A.; MELENDEZ, J.
Temperature increment during quasi-static compression tests using Mg metallic alloys, *Materials & design*, Vol. 31, Núm. 7, 2010, pp. 3259-3269, REINO UNIDO.

- RETUERTO, M.; MARTINEZ, M.J.; GARCIA, M.J.; MUÑOZ, A.; FERNANDEZ, M.T.; ALONSO, J.A.
Crystal and magnetic study of the disordered perovskites Ca(Mn_{0.5}Sb_{0.5})O-3 and Ca(Fe_{0.5}Sb_{0.5})O-3, *MATERIALS RESEARCH BULLETIN*, Vol. 45, Núm. 10, 2010, pp. 1449-1454.

- RODRIGUEZ, A.; RODRIGUEZ, T.; PRIETO, A.C.; JIMENEZ, J.; KLING, A.; BALLESTEROS, C. I. ; SANGRADOR, J.
Crystallization of Amorphous Si_{0.6}Ge_{0.4} Nanoparticles Embedded in SiO₂: Crystallinity Versus Compositional Stability, *JOURNAL OF ELECTRONIC MATERIALS*, Vol. 39, Núm. 8, 2010, pp. 1194-1202, ESTADOS UNIDOS DE AMERICA.

- RODRIGUEZ, A.; RODRIGUEZ, T.; SANGRADOR, F.J.; MORANA, B.; KLING, A.; BALLESTEROS, C. I.
Ge nanocrystals embedded in a SiO₂ matrix obtained from SiGeO films deposited by LPCVD, *SEMICONDUCTOR SCIENCE AND TECHNOLOGY*, Vol. 25, Núm. 4, 2010, REINO UNIDO.

- SAMADDAR, D.; NEWMAN, D.E.; SANCHEZ, R.
Parallelization in time of numerical simulations of fully developed plasma turbulence using the parareal algorithm, *JOURNAL OF COMPUTATIONAL PHYSICS*, Vol. 229, 2010, pp. 6558-6573.

Documentos de trabajo

- AUGER, M.A.; CASTRO, M. V. D. ; EDDAHBI, M.O.; LEGUEY, T.; MONGE, M. A. ; MUÑOZ, A.; PAREJA, R.
Production, microstructure and mechanical properties of nano-grained ferritic and ODS ferritic steels, 2010.

Ponencias y Comunicaciones a congresos

- ARANDA, J. M. ; MELENDEZ, J. ; LOPEZ, F.
Real time fire front monitoring trough smoke with bi-spectral infrared imaging; en: Modelling, Monitoring and Management of Forest Fires II, 304pp , The WIT Press, 2010.
- AUGER, M.A.
Final Project Fulfilment as an Starting Point in Researchers Training , , 2010.
- AUGER, M.A.; LEGUEY, T.; CASTRO, M. V. D. ; MONGE, M. A. ; MUÑOZ, A.; PAREJA, R.
Developing the optimised generation of ODS nano-structured & nano-grained ferritic steels: Effect of selected parameters of consolidation High Speed and ECAP processes for ODS powders prepared by HEBM, DONOSTIA-SAN SEBASTIAN, ESPAÑA, 2010.
- BRIZ, S.; FERNANDEZ, I.; BARRANCOS, J.; SANTANA, G.; DIONIS, S.; PEREZ, N.
IR Imaging of a Masaya Volcano Incandescence , Cities on Volcanoes, 6, SANTA CRUZ DE TENERIFE, ESPAÑA, 2010.
- BRIZ, S.; UGARTE, M.
Sistema de Caracterización de Tráfico. Aplicación al Estudio de la Contaminación , 3er Congreso Nacional de Medio Ambiente en Carreteras, GIJON, ESPAÑA, 2010.
- CALVO, I.; CARRERAS, B.; GARCIA, L. ; PEDROSA, M.A.; HIDALGO, C.
Reynolds stress generation of poloidally asymmetric zonal flows and long-range correlations in fusion plasmas , 37th European Conference on Controlled Fusion and Plasma Physics , DUBLIN, IRLANDA, 2010.
- GARCIA, L. ; CARRERAS, B.; LLERENA, I.; CALVO, I.; MIER, J. A. ; SANCHEZ, R.
Topological characterization of flow structures in plasma turbulence, 37th European Conference on Controlled Fusion and Plasma Physics, DUBLIN, IRLANDA, 2010.
- GARCIA, L. ; CARRERAS, B.; LLERENA, I.; CALVO, I.; MIER, J. A. ; SANCHEZ, R.
Topological characterization of flow structures in plasma turbulence, Joint Varenna-Lausanne International Workshop on Theory of Fusion Plasmas, VARENA, ITALIA, 2010.
- HENDER, T.C.; ARNOUX, G.; DE VRIES, P.; GERASIMOV, S.; HUBER, A.; JOHNSON, M.F.; KOSLOWSKI, R.; LEHNEN, M.; LOARTE, A.; MARTIN, J. R. ; RICARDO, V.; EFDA, B.O.J.
JET Disruption Studies in Support of ITER; en: Proceedings of the 23rd International Conference on Fusion Energy, 2010.
- IÑARREA, J.; PLATERO, G.
Square root growth in the amplitude of microwave-induced resistance oscillations for increasing power in two-dimensional electron systems , ICPS 2010. 30 th International Conference on the Physics of Semiconductors , SEUL, REPUBLICA DE COREA, 2010.
- IÑARREA, J.; PLATERO, G.
Magnetoabsorption and radiation-induced resistance oscillations in two-dimensional electron systems , ICPS 2010. 30 th International Conference on the Physics of Semiconductors , SEUL, REPUBLICA DE COREA, 2010.
- MARTIN, J. R. ; FERNANDEZ, I.; SANCHEZ, R.
Runaway dynamics in high atomic number plasmas; en: Proceedings of the 37th EPS International Conference, 2010.
- MARTIN, J. R. ; ROMANELLI, F.; LAXABACK, M.; JET EFDA, B.O.
Overview of JET Results; en: Proceedings of the 23rd International Conference on Fusion Energy, 2010.

- MARTINEZ, J.; SAVOINI, B.; MONGE, M. A. ; MUÑOZ, A.; PAREJA, R.
Development of ODS W alloys produced by HIP, 26th Simposium on Fusion Technology (SOFT), OPORTO, PORTUGAL, 2010.
- MELENDEZ, J. ; FORONDA, A.; ARANDA, J. M. ; LOPEZ, F. ; LOPEZ DEL CERRO, J.
Infrared thermography of solid surfaces under fire; en: Proceedings of the 10th edition of the Quantitative InfraRed Thermography. Éditions du CAO, Canadá., 2010.
- MIER, J. A. ; SANCHEZ, R. ; PEDROSA, M.A.; HIDALGO, C.; GARCIA, L. ; VARELA, J.; NEWMAN, D.E.
Recurrence quantification analysis of experimental turbulent plasma data series, 37th European Conference on Controlled Fusion and Plasma Physics, DUBLIN, IRLANDA, 2010.
- MONASTERIO, M.; RODRIGUEZ, A.; SANGRADOR, J.; RODRIGUEZ, T.; HERNANDEZ, M.J.; BALLESTEROS, C. I.
SiGe Nanowires Grown by VLS method using Ga-Au catalysts, X International Conference on Nanostructured Materials.NANO 2010, Roma, ITALIA, 2010.
- PARENTE, P.; BURGOS, O.; AUGER, M.A.; MONGE, M. A. ; SANCHEZ, A.J.
Procesamiento coloidal de compuestos de hidroxapatita con Y2O3 para aplicaciones biomédicas, 50 Congreso de la Sociedad Española de Cerámica y Vidrio, MADRID, ESPAÑA, 2010.
- RODRIGUEZ, A.; SANGRADOR, J.; RODRIGUEZ, T.; BALLESTEROS, C. I.
Characterization of SiGe nanowires using TEM-STEM techniques, 17International Microscopy Congress. IMC-17, RIO DE JANEIRO, BRASIL, 2010.
- RODRIGUEZ, A.; SANGRADOR, J.; RODRIGUEZ, T.; BALLESTEROS, C. I. ; PRIETO, A.C.; JIMENEZ, J.
SiGe nanowires Grown by LPCVD: Morphological and Structural Analysis , 2010 MRS Spring Meeting Symposium P., SAN FRANCISCO, ESTADOS UNIDOS DE AMERICA, 2010.
- SANCHEZ, R.
On the nature of transport across sheared flows: insights from fluid and plasma turbulence, 13th International Conference on Plasma Physics (ICPP), Santiago de Chile, CHILE, 2010.
- SANCHEZ, R.
Non-diffusive transport of ARGO floats through equatorial oceanic zonal flows, International Workshop on Complex Systems, Alaska, ESTADOS UNIDOS DE AMERICA, 2010.
- SANCHEZ, R.
Physics of transport across sheared flows in plasma turbulence, International Workshop on Self-organization in turbulent plasmas, Dresden, ALEMANIA, 2010.
- SANCHEZ, R. ; MIER, J. A. ; NEWMAN, D.E.; PEDROSA, M.A.; HIDALGO, C.
Recurrent quantification analysis of Langmuir probe data from the edge of the TJ-II heliac, USA Task Transport Force (TTF) Meeting, Annapolis, ESTADOS UNIDOS DE AMERICA, 2010.
- SANCHEZ, R. ; NEWMAN, D.E.; LEBOEUF, J.N.; DECYK, V.K.
Mechanisms for sub-diffusive non Gaussian radial transport across zonal flows in ITG turbulence, 37th European Conference on Controlled Fusion and Plasma Physics, Dublin, IRLANDA, 2010.
- SANCHEZ, R. ; SAMADDAR, D.; NEWMAN, D.E.
Parallelization in time of numerical simulations of drift-wave plasma turbulence, EU-US Joint Task Transport Force (TTF) meeting, CORDOBA, ESPAÑA, 2010.

Actividades de formación y movilidad de personal investigador

Estancias en otros centros

- **BEGOÑA SAVOINI CARDIEL**
Título: Estudio de micro y nanoindentación a alta temperatura en aleaciones de Wolframio
Centro Externo: Departamento de Materiales. Universidad de Oxford
País: REINO UNIDO
Duración: 27/09/2010 a 11/10/2010.
- **MARIA VANESSA DE CASTRO BERNAL**
Título: Microscopía Electrónica de Transmisión de aceros ferríticos de baja activación endurecidos por dispersión de óxidos (ODS)
Centro Externo: Department of Materials. University of Oxford
País: REINO UNIDO
Duración: 17/05/2010 a 09/08/2010.