

DEPARTAMENTO DE
INGENIERIA TERMICA Y DE
FLUIDOS

**DEPARTAMENTO DE INGENIERIA TERMICA Y DE
FLUIDOS**

Actividades de investigación

Tesis Doctorales

- Experimental study and monte carlo modeling of object motion in a bubbling fluidized bed
Autores: GARCIA-GUTIERREZ, L.M.
Director/Codirectores: RUIZ-RIVAS, U. ; SORIA-VERDUGO, A
Año: 2014
- Heat transfer and thermal storage in fixed and fluidized beds of phase change materials
Autores: IZQUIERDO, M.A.
Director/Codirectores: SOBRINO, C.; ALMENDROS, J.A.
Año: 2014
- Paste drying control in a rotating-distributor fluidized bed.
Autores: GOMEZ-HERNANDEZ, J.
Director/Codirectores: SANTANA, D.; BRIONGOS, J.V.
Año: 2014

Publicaciones y actividades de difusión de resultados

Publicaciones en revistas científicas internacionales

- BELMONTE, J.F.; IZQUIERDO, M.A.; EGÚA, P.; MOLINA, A.E.; Almendros-Ibáñez, J. A. PCM in the heat rejection loops of absorption chillers. A feasibility study for the residential sector in Spain, *Energy and buildings*, Vol. 80, 2014, pp. 331-351, HOLANDA - PAISES BAJOS.
- CANO-PLEITE, E.; HERNANDEZ-JIMENEZ, F.; DE VEGA, M.; ACOSTA-IBORRA, A. Experimental study on the motion of isolated bubbles in a vertically vibrated fluidized bed, *Chemical engineering journal*, Vol. 255, 2014, pp. 114-125, SUIZA.
- CUTZ, L.L.; SANTANA, D. Techno-economic analysis of integrating sweet sorghum into sugar mills: The Central American case, *Biomass & bioenergy* , Vol. 68, 2014, pp. 195-214, PAISES BAJOS.
- FERNANDEZ, D.; JIMENEZ, C.; SANCHEZ-SANZ, M.; KURDYUMOV, V.N. The differential diffusion effect of the intermediate species on the stability of premixed flames propagating in microchannels, *Combustion theory and modelling*, Vol. 18, Núm. 4-5, 2014, pp. 582-605, REINO UNIDO.
- GARCIA-GUTIERREZ, L.M.; SORIA-VERDUGO, A; MARUGAN, C.; RUIZ-RIVAS, U.

Simulation and experimental study on the motion of non-reacting objects in the freeboard of a fluidized bed, *Powder technology*, Vol. 263, 2014, pp. 112-120, SUIZA.

- GARCIA-SALABERRI, P.A.; VERA, M. ; IGLESIAS, I.
Modeling of the anode of a liquid-feed DMFC: Inhomogeneous compression effects and two-phase transport phenomena, *Journal of Power Sources*, Vol. 246, 2014, pp. 239-252, SUIZA.
- GOMEZ, A.; SANCHEZ-PRIETO, J.; SORIA-VERDUGO, A; SANTANA, D.
Moving bed syngas conditioning: Modelling, *Applied thermal engineering*, Vol. 62, Núm. 2, 2014, pp. 809-822, REINO UNIDO.
- GOMEZ-HERNANDEZ, J.; SANCHEZ-PRIETO, J.; BRIONGOS, J.V.; SANTANA, D.
Wide band energy analysis of fluidized bed pressure fluctuation signals using a frequency division method, *Chemical Engineering Science*, Vol. 105, 2014, pp. 92-103, REINO UNIDO.
- GORDILLO, J. M. ; SEVILLA, A. ; CAMPO, F.
Global stability of stretched jets: Conditions for the generation of monodisperse micro-emulsions using coflows, *Journal of fluid mechanics*, Vol. 738, 2014, pp. 335-357, REINO UNIDO.
- GUTIERREZ, C.; BOLAÑOS, R.; SEVILLA, A. ; MARTINEZ, C.
Bubble formation in a planar water-air-water jet: Effects of the nozzle geometry and the injection conditions, *International Journal of Multiphase Flow*, Vol. 65, 2014, pp. 38-50, REINO UNIDO.
- GUTIERREZ, G.; HUICOCHEA, A.; RODRIGUEZ, P. A. ; RIVERA, W.
Energy and exergy analysis of an adiabatic water-LiBr absorption system, *Journal of renewable and sustainable energy*, Vol. 6, Núm. 3, 2014, ESTADOS UNIDOS DE AMERICA.
- HEREDIA , M.C.; SANCHEZ-PRIETO, J.; BRIONGOS, J.V.; PALANCAR, M.C.
Feedback PID-like fuzzy controller for pH regulatory control near the equivalence point, *Journal of process control*, Vol. 24, Núm. 7, 2014, pp. 1023-1037, REINO UNIDO.
- HERNANDEZ-JIMENEZ, F.; LI, T.; CANO-PLEITE, E.; ROGERS, W.; ACOSTA-IBORRA, A.
Characterisation of the particle-wall frictional forces in pseudo-2D fluidized beds using DEM, *Chemical Engineering Science*, Vol. 116, 2014, pp. 136-143, REINO UNIDO.
- HUETE, C.; SANCHEZ, A. L. ; WILLIAMS, F.A.
Linear theory for the interaction of small-scale turbulence with overdriven detonation, *Physics of fluids*, Vol. 26, Núm. 11, 2014, pp. 116101-116118, ESTADOS UNIDOS DE AMERICA.
- IZQUIERDO-MILLAN, M; GONZÁLEZ-GIL, A.; PALACIOS, E.
Solar-powered single-and double-effect directly air-cooled LiBr-H₂O absorption prototype built as a single unit, *Applied Energy*, Vol. 130, 2014, pp. 7-19, REINO UNIDO.
- JIMENEZ, J.I.; SEVILLA, A. ; SANMIGUEL, E.; MARTINEZ, C.
Global stability analysis of the axisymmetric wake past a spinning bullet-shaped body, *Journal of fluid mechanics*, Vol. 748, 2014, pp. 302-327, REINO UNIDO.
- LEGRAND M. ; NOGUEIRA, J. I. ; VARGAS, A.A.; VENTAS, R.; RODRIGUEZ, M.C.
CCD image sensor induced error in PIV applications, *Measurement science and technology*, Vol. 25, Núm. 6, 2014, REINO UNIDO.
- LIÑAN, A.; MARTÍNEZ-RUIZ, D.; SANCHEZ, A. L. ; URZAY, J.
Regimes of spray vaporization and combustion in counterflow configurations, *Combustion science and technology*, Vol. 187, Núm. 1-2, 2014, pp. 103-131.

- QUINTERO, A.E.; VERA, M. ; RIVERO, B.
Wall conduction effects in laminar counterflow parallel-plate heat exchangers, *International Journal of Heat and Mass Transfer*, Vol. 70, 2014, pp. 939-953, REINO UNIDO.
- RODRIGUEZ, D.; BELMONTE, J.F.; IZQUIERDO, M.A.; MOLINA, A.; ROSENGARTEN, G.; Almendros-Ibáñez, J. A.
Solar energy captured by a curved collector designed for architectural integration, *Applied Energy*, Núm. 116, 2014, pp. 66-75, REINO UNIDO.
- RODRIGUEZ, D.; ROSENGARTEN, G.; BELMONTE , J.F.; IZQUIERDO, M.A.; MOLINA, A.; Almendros-Ibáñez, J. A.
Ray tracing of a solar collector designed for uniform yearly production, *Energy procedia (Online)*, Vol. 57, 2014, pp. 2221-2230, HOLANDA - PAISES BAJOS.
- RODRIGUEZ, J.; CASADO, A.S.; FUSTER, D.
Physics of Beer Tapping, *Physical review letters*, Vol. 113, Núm. 21(214501), 2014, ESTADOS UNIDOS DE AMERICA.
- RODRIGUEZ-SÁNCHEZ, M.R.; ALBERTO SÁNCHEZ-GONZÁLEZ; MARUGAN, C.; SANTANA, D.
Saving assessment using the PERS in solar power towers, *Energy Conversion and Management*, Vol. 87, 2014, pp. 810-819, REINO UNIDO.
- RODRIGUEZ-SÁNCHEZ, M.R.; MARUGAN, C.; ACOSTA-IBORRA, A. ; SANTANA, D.
Comparison of simplified heat transfer models and CFD simulations for molten salt external receiver, *Applied thermal engineering*, Vol. 73, Núm. 1, 2014, pp. 993-1005, REINO UNIDO.
- RODRIGUEZ-SÁNCHEZ, M.R.; SORIA-VERDUGO, A; ALMENDROS , J.A.; ACOSTA-IBORRA, A. ; SANTANA, D.
Thermal design guidelines of solar power towers, *Applied thermal engineering*, Vol. 63, Núm. 1, 2014, pp. 428-438, REINO UNIDO.
- SANCHEZ, A. L. ; FERNANDEZ-TARRAZO, E.A.; WILLIAMS, F.A.
The chemistry involved in the third explosion limit of H₂-O₂ mixtures, *Combustion and Flame*, Vol. 161, Núm. 1, 2014, pp. 111-117, ESTADOS UNIDOS DE AMERICA.
- SANCHEZ, A. L. ; WILLIAMS, F.A.
Recent advances in understanding of flammability characteristics of hydrogen, *Progress in energy and combustion science*, Vol. 41, 2014, pp. 1-55, REINO UNIDO.
- SANCHEZ-PRIETO, J.; SORIA-VERDUGO, A; BRIONGOS, J.V.; SANTANA, D.
The effect of temperature on the distributor design in bubbling fluidized beds, *Powder technology*, Vol. 261, 2014, pp. 176-184, SUIZA.
- SANCHEZ-SANZ, M.; FERNANDEZ, D.; KURDYUMOV, V.N.
Effect of the equivalence ratio, Damköhler number, Lewis number and heat release on the stability of laminar premixed flames in microchannels, *Combustion and Flame*, Vol. 161, Núm. 5, 2014, pp. 1282-1293, ESTADOS UNIDOS DE AMERICA.
- SORIA-VERDUGO, A; GARCIA-GUTIERREZ, L.M.; BLANCO-CANO, L.; GARCIA-HERNANDO, N. ; RUIZ-RIVAS, U.
Evaluating the accuracy of the Distributed Activation Energy Model for biomass devolatilization curves obtained at high heating rates, *Energy Conversion and Management*, Vol. 86, 2014, pp. 1045-1049, REINO UNIDO.

- VEREDA, C.S.; VENTAS, R.; LECUONA, A. ; Ricardo López
Single-effect absorption refrigeration cycle boosted with an ejector-adiabatic absorber using a single solution pump, *International Journal of Refrigeration*, Vol. 38, Núm. 1, 2014, pp. 22-29, HOLANDA - PAISES BAJOS.

Monografías Científicas

- LEGRAND M. ; VENTAS, R.; RODRIGUEZ, P. A.
Ingeniería térmica: principios de termodinámica técnica y transferencia de calor, *Garceta*, ESPAÑA, 2014.

Ponencias y Comunicaciones a congresos

- BLYTH, M.; RODRIGUEZ-RODRIGUEZ, J.; SALMAN, H.
Buoyant Norbury's vortex rings; en: [Bulletin of the American Physical Society](#), AMERICAN PHYSICAL SOCIETY, ESTADOS UNIDOS DE AMERICA, 2014.
- BOLAÑOS, R.; GUTIERREZ, C.; SEVILLA, A. ; MARTINEZ, J. C.
Effect of the injector geometry and the operation conditions on the bubble formation in a planar air-water coflow configuration, 10th European fluid mechanics conference (EFMC10), *Copenhague*, DINAMARCA, 2014.
- CASADO, A.S.; RODRIGUEZ-RODRIGUEZ, J.; FUSTER, D.
Physics of beer foaming-over, Condensed matter, *París*, FRANCIA, 2014.
- COENEN, W.; LESSHAFFT , L.; GARNAUD, X.; SEVILLA, A.
Global mode and frequency response analysis of low-density jets; en: [Bulletin of the American Physical Society](#), AMERICAN PHYSICAL SOCIETY, 2014.
- COENEN, W.; LESSHAFFT , L.; GARNAUD, X.; SEVILLA, A.
Modal instability analysis of low-density jets , 10th European fluid mechanics conference (EFMC10), *Copenhague*, DINAMARCA, 2014.
- CONSOLI, P.A.; COENEN, W.; SEVILLA, A.
Drop formation in gravitationally stretched Newtonian liquid jets: Experiments and global linear frequency response analysis, Condensed matter, *París*, FRANCIA, 2014.
- CONSOLI, P.A.; COENEN, W.; SEVILLA, A.
Experiments and non-parallel theory on the natural break-up of freely falling Newtonian liquid jets; en: [Bulletin of the American Physical Society](#), AMERICAN PHYSICAL SOCIETY, 2014.
- FERNANDEZ-TARRAZO, E.A.; SANCHEZ-SANZ, M.; SANCHEZ, A. L. ; WILLIAMS, F.A.
A multipurpose reduced kinetic scheme for methanol combustion; en: [Dynamics and structure of combustion waves](#), 2nd international conference: abstracts, Far Eastern Federal University, RUSIA, 2014.
- FERNANDEZ-TARRAZO, E.A.; SANCHEZ-SANZ, M.; SANCHEZ, A. L. ; WILLIAMS, F.A.
A multipurpose reduced kinetic scheme for methanol combustion, SPEIC14: Towards Sustainable Combustion, *Lisboa*, PORTUGAL, 2014.
- GALAN VICENTE, E.; COENEN, W.
Experimental and numerical analysis of the steady streaming around a cylinder pair; en: [Bulletin of the American Physical Society](#), AMERICAN PHYSICAL SOCIETY, 2014.

- GARCIA-SALABERRI, P.A.; VERA, M.
On the influence of GDL compression on the performance of liquid-feed DMFCs under low cathode flooding conditions, 11th Symposium on Fuel Cell and Battery Modelling and Experimental Validation: ModVal 11, Winterthur, SUIZA, 2014.
- GORDILLO, J. M. ; CAMPO, F.; RODRIGUEZ-RODRIGUEZ, J.; SEVILLA, A. ; MARTINEZ, J. C.
Physics of bubble generation. A specific procedure for the mass generation of monodisperse, micron-sized coated bubbles, Condensed matter, París, FRANCIA, 2014.
- GUTIERREZ, C.; BOLAÑOS, R.; MARTINEZ, J. C. ; SEVILLA, A.
Bubble formation dynamics in a planar co-flow configuration: Influence of geometric and operating characteristics; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, 2014.
- HARO, P.; CUTZ, L.L.; THUNMAN, H.; JOHNSSON, F.
Co-feeding of natural gas in pyrolysis plants producing biofuels: GHG savings and economic impact; en: 22nd European biomass conference and exhibition (EUBCE): online proceedings 2014, 2014.
- IGLESIAS, I. ; SANCHEZ, A. L. ; LIÑAN, A.; WILLIAMS, F.A.
Effects of natural convection on thermal explosions in spherical vessels; en: EFMC10 - European Fluid Mechanics Conference 10: book of abstracts, 2014.
- IGUALADA, E.; FUSTER, D.; RODRIGUEZ-RODRIGUEZ, J.; DUTILLEUL, H.
Numerical and experimental analyses of the translation of bubbles due to non-spherical interface deformations; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, ESTADOS UNIDOS DE AMERICA, 2014.
- IZQUIERDO, M.A.; SOBRINO, C.; Almendros-Ibáñez, J. A.
Modeling of the heat transfer coefficient in fixed and fluidized beds with PCM, Eurotherm seminar, nº 99: Advances in thermal energy storage, LLEIDA, ESPAÑA, 2014.
- IZQUIERDO, M.A.; SOBRINO, C.; Almendros-Ibáñez, J. A.
Modeling and experiments of energy storage in a fluidized bed with PCM, The 7th World Congress on Particle Technology, Pekín, CHINA, 2014.
- IZQUIERDO-MILLAN, M; MARTIN, E.; PALACIOS, M. E.
The directly air-cooled LiBr/H₂O absorption system: an opportunity for small machines; en: International sorption heat pump conference (ISHPC 2014): proceedings, Center for Environmental Energy Engineering (CEEE), ESTADOS UNIDOS DE AMERICA, 2014.
- JIMENEZ , J.I.; SEVILLA, A. ; SANMIGUEL , E.; COENEN, W.; MARTINEZ, J. C.
Linear stability of the flow around a spinning bullet-shaped body: global modes and sensitivity to base bleed, 10th European fluid mechanics conference (EFMC10)
, Copenhague, DINAMARCA, 2014.
- JIMENEZ GONZALEZ, J.I.; MARTINEZ, J. C. ; COENEN, W.; MANGLANO, C.E.; SEVILLA, A.
Stability of the laminar wake behind spinning axisymmetric bluff bodies: sensitivity and control; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, 2014.
- LEGRAND M. ; LECUONA, A. ; NOGUEIRA, J. I. ; FORTE, R.
Single camera 3-D shadowgraphy system for droplet sizing, 7th International symposium on application of laser techniques to fluid mechanics, Lisboa, PORTUGAL, 2014.

- LESSHAFFT , L.; COENEN, W.; GARNAUD, X.; SEVILLA, A.
Modal stability analysis of light jets, IUTAM - ABCM Symposium on laminar-turbulent transition, Río de Janeiro, BRASIL, 2014.
- MARTIN, L.; SANCHEZ-PRIETO, J.; HERNANDEZ-JIMENEZ, F.; VAN OMMEN, R.
A sampling method to determine the terminal velocity and size distribution of fluidized nanopowder agglomerates; en: Proceedings of the 11th International Conference on Fluidized Bed Technology: CFB-11, CHEMICAL INDUSTRY PRESS, CHINA, 2014.
- MARTÍNEZ-RUIZ, D.; URZAY, J.; SANCHEZ, A. L. ; LIÑAN, A.
Multicontinua description of spray diffusion flames in counterflow mixing layers; en: EFMC10 - European Fluid Mechanics Conference 10: book of abstracts, 2014.
- MARUGAN, C.; SANCHEZ-DELGADO, S.; RODRIGUEZ-SÁNCHEZ, M.R.; VENEGAS, M.
District cooling using central tower power plant; en: Energy Procedia: Proceedings of the SolarPACES 2013 International Conference, ELSEVIER, ESTADOS UNIDOS DE AMERICA, 2014.
- MEDINA, A.; IGUALADA, E.; RODRIGUEZ-RODRIGUEZ, J.
On the generation of mini-clusters of microbubbles using water electrolysis; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, ESTADOS UNIDOS DE AMERICA, 2014.
- MORENO, D.; COENEN, W.; SEVILLA, A. ; SANCHEZ, A. L.
Global stability analysis of jet diffusion flames; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, 2014.
- MORENO-RODRIGUEZ, A. ; GONZALEZ, A.; GARCIA-HERNANDO, N. ; IZQUIERDO-MILLAN, M
Theoretical model of a direct-expansion solar assisted heat pump: Model results to constant and variable condensing temperature; en: Avances en ciencias y técnicas del frío : actas del VII Congreso Ibérico y V Congreso Iberoamericano en Ciencias y Técnicas del Frío, CYTEF, celebrado en 2014, Tarragona, España, UNIVERSITAT ROVIRA Y VIRGILI, , 2014.
- MURPHY, D.C.; SANCHEZ-SANZ, M.; FERNANDEZ, C.
An experimental and numerical study of flames in narrow channels with electric fields; en: Journal of Physics: Conference Series, INSTITUTE OF PHYSICS PUBLISHING, 2014.
- NOGUEIRA, J. I. ; JIMENEZ, R.; LEGRAND M. ; LECUONA, A.
PIV error sensitivity analysis for free turbulent flow characterization, 17th International symposium on application of laser techniques to fluid mechanics, Lisboa, PORTUGAL, 2014.
- PARRALES, M.A.; RODRIGUEZ-RODRIGUEZ, J.
Quantum Analogies in the Interaction between Acoustic Waves and Bubble Clouds; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, ESTADOS UNIDOS DE AMERICA, 2014.
- PEÑAS, P.; PARRALES, M.A.; RODRIGUEZ-RODRIGUEZ, J.
Dissolution of spherical cap CO₂ bubbles attached to flat surfaces in air-saturated water ; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, ESTADOS UNIDOS DE AMERICA, 2014.
- QUINTERO, E.A.; VERA, M.
Wall conduction effects in laminar counterflow parallel-plate heat exchangers with small-scale wall corrugations, International Symposium on Convective Heat and Mass Transfer (CONV-14), Kusadasi, TURQUIA, 2014.

- Ricardo López; LECUONA, A. ; NOGUEIRA, J. I. ; VEREDA, C.S.
Effect of the order of accuracy in the accurate runge-kutta scheme for the determination of the transient true void fraction and pressure drops in pipes; en: Avances en ciencias y técnicas del frío : actas del VII Congreso Ibérico y V Congreso Iberoamericano en Ciencias y Técnicas del Frío, CYTEF, celebrado en 2014, Tarragona, España, UNIVERSITAT ROVIRA Y VIRGILI, , 2014.
- RODRIGUEZ-RODRIGUEZ, J.; PARRALES, M.A.; PEÑAS, P.; ENRIQUEZ, O.; IGUALADA, E.; VAN DER MEER, D.
History effects on the diffusion-driven growth and dissolution of a gas bubble; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, ESTADOS UNIDOS DE AMERICA, 2014.
- RUBIO-RUBIO, M.; TACONET, P.; CHAKRABORTY, I.; SEVILLA, A.
Transition to jetting in a dripping faucet at high Bond numbers, 10th European fluid mechanics conference (EFMC10), Copenhague, DINAMARCA, 2014.
- RUBIO-RUBIO, M.; TACONET, P.; SEVILLA, A.
Dripping dynamics at high Bond numbers; en: Bulletin of the American Physical Society, AMERICAN PHYSICAL SOCIETY, 2014.
- SANCHEZ, A. L. ; URZAY, J.; LIÑAN, A.
The role of separation of scales in the description of spray combustion; en: Proceedings of the Combustion Institute, 2014.
- SANCHEZ, D.G.; RUIU, T.; FRIEDRICH, A.K.; SANCHEZ-MONREAL, J.; VERA, M.
Effect of the inlet gas humidification on PEMFC behavior and current density distribution; en: ECS Transactions, Society for solid-state and electrochemical science and technology, 2014.
- SANCHEZ-SANZ, M.; MURPHY, D.C.; FERNANDEZ, C.
Effect of an external electric field on the propagation velocity of premixed flames; en: Proceedings of the Combustion Institute, 2014.
- SERRANO, D.; SANCHEZ-DELGADO, S.; SOBRINO, C.; MARUGAN, C.
Dynamics and agglomeration of a fluidized bed reactor under Cynara Cardunculus L. Gasification with a new catalyst (Sepiolite), 4rd International Symposium on Gasification and its Applications (iSGA-4), Viena, AUSTRIA, 2014.
- VAN OMMEN, J.R.; YANG, X.; GOMEZ-HERNANDEZ, J.; WAGNER, E.C.; MUDDE, R.F.
Recent advances in x-ray tomography of fluidized beds, 2014 AIChE annual meeting, Atlanta, ESTADOS UNIDOS DE AMERICA, 2014.
- VEREDA, C.S.; VENTAS, R.; LECUONA, A. ; RODRIGUEZ, P. A. ; NOGUEIRA, J. I. ; Ricardo López
Experimental evaluation of an ejector-adiabatic absorber with ammonia-lithium nitrate solution; en: Avances en ciencias y técnicas del frío : actas del VII Congreso Ibérico y V Congreso Iberoamericano en Ciencias y Técnicas del Frío, CYTEF, celebrado en 2014, Tarragona, España, UNIVERSITAT ROVIRA Y VIRGILI, , 2014.
- ZACARIAS, A.; FLORES, A.; VENEGAS, M. ; CARVAJAL, I.
Modelado y simulación del calentamiento de aire en invernaderos utilizando colectores solares planos; en: Avances en ciencias y técnicas del frío : actas del VII Congreso Ibérico y V Congreso Iberoamericano en Ciencias y Técnicas del Frío, CYTEF, celebrado en 2014, Tarragona, España , UNIVERSITAT ROVIRA Y VIRGILI, , 2014.

Actividades de formación y movilidad de personal investigador

Estancias en otros centros

- **ANTONIO LUIS SANCHEZ PEREZ**
Título: Estancia en la Universidad de California
Centro Externo: UNIVERSIDAD DE SAN DIEGO
País: ESTADOS UNIDOS DE AMERICA
Duración: 01/07/2014 a 31/08/2014.
- **ANTONIO SORIA VERDUGO**
Título: Estudio de cinética química de pirólisis de biomasa en el Departamento de Cinética Química del Deutsches Zentrum für Luft und Raum fahrt (DLR)
Centro Externo: Departamento Cinética Química del Deutsches Zentrum für Luft und Raumfahrt (DLR)
País: ALEMANIA
Duración: 16/06/2014 a 15/09/2014.
- **DANIEL SERRANO GARCIA**
Título: Cardoon gasification in a fluidized bed reactor using magnesite and olivine
Centro Externo: University of Limerick
País: IRLANDA
Duración: 09/09/2014 a 15/12/2014.
- **EDUARDO CANO PLEITE**
Título: Estancia en el centro de investigación Kyushu Institute of Technology
Centro Externo: Kyushu Institute of Technology
País: JAPON
Duración: 15/09/2014 a 15/12/2014.
- **FRANCISCO JAVIER RODRIGUEZ RODRIGUEZ**
Título: Analysis of the initial stage of plate lifting from a water surface
Centro Externo: University of East Anglia
País: REINO UNIDO
Duración: 01/01/2014 a 15/01/2014.
- **FRANCISCO JAVIER RODRIGUEZ RODRIGUEZ**
Título: Estancia de investigación financiada por una beca de la London Mathematical Society
Centro Externo: Universidad de East Anglia
País: REINO UNIDO
Duración: 01/06/2014 a 15/06/2014.
- **JUAN SANCHEZ MONREAL**
Título: Effect of inlet gas humidification on PEMFC behavior and current density distribution
Centro Externo: Institute of Engineering Thermodynamics, German Aerospace Center (DLR), Stuttgart
País: ALEMANIA
Duración: 17/10/2014 a 17/12/2014.