



PROGRAMA RAMÓN Y CAJAL - CONVOCATORIA 2012
Investigadores seleccionados - Correo electrónico y resumen de CV

Ámbito Multidisciplinar: Ingenierías y Tecnología

Orden dentro del ámbito multidisciplinar	Área Temática	Referencia	Investigador	Correo electrónico	Resumen del Curriculum Vitae
1	Ciencia y Tecnología de Materiales	RYC-2012-10991	GOMEZ BASTUS, NEUS	neus.bastus@icn.cat	After completion of my BSc in Physics at the Universitat de Barcelona (UB) in 2003, I began my PhD at the Catalan Institute of Nanotechnology, funded by a 4 years FPI fellowship. My research during those years was focused on the synthesis and functionalization of metal nanoparticles for biomedical applications. In December 2008, I received my Ph.D. degree in Physics, being awarded with the distinction Cum Laude. In January 2009, I joined the Physical-chemistry Department at the University of Hamburg under the supervision of Prof. Horst Weller funded by a Beatriu de Pinos Fellowship (AGAUR, Catalan Government). During that time, I expanded my expertise on material design, shifting the focus of my research towards the synthesis and functionalization of semiconductor nanocrystals (NCs) and complex hybrid nanostructures with applicability in energy harvesting and (photo)catalysis. In July 2011, I was awarded with a Juan de la Cierva Fellowship (MICINN, Spanish Government) and in August 2012, I obtained a Marie Curie Career Integration Grant (CIG), granted by the European Commission to support my research on the development of new strategies for the production of hybrid nanocrystals at the Catalan Institute of Nanotechnology. Derived from my work, I published 21 papers in international scientific journals with high impact factor (within the 25% top) and one book chapter (also, 6 more papers are currently submitted and 2 are in preparation). These publications include 1 Nature Materials, 2 Nano Letters, 1 ACS Nano, 1 J. Mater. Chem, 2 J. Phys. Chem C. and 2 Langmuir, amongst others. I have received more than 450 citations, having an average impact factor of 23.5 (per publication) and 49.5 (per year) and a citation h-index of 10. I am the first author of 10 of the articles (5 of them I appear as corresponding author), and in several others I was the supervisor of the first author (PhD student). During my scientific career, I was awarded with 4 Competitive Fellowships and 3 Scientific Prizes. I participated in 17 research projects funded by the European Union (6), the Spanish Government (6) and private companies (5). Moreover, I have been involved in several technology transfer activities, participating in research contracts, generating one patent. and working as a scientific consultant of the Centrum for Applied Nanotechnology (Hamburg, Germany). I have presented my scientific work in 28 reviewed-before-acceptance international conferences and workshops and I did 4 invited talks. I am regularly acting as referee of high impact factor ACS, Elsevier and Wiley journals and I have recently reviewed scientific R+D+I European projects.
2	Tecnología Electrónica y de las Comunicaciones	RYC-2012-10788	WIDMER , JOERG	joerg.widmer@imdea.org	Joerg Widmer is a Chief Researcher at Institute IMDEA Networks in Madrid, Spain. His research expertise covers computer networks and distributed systems, ranging from MAC layer design, sensor networking, and network coding to transport protocols and Future Internet architectures. From June 2005 to July 2010, he was manager of the Ubiquitous Networking Research Group at DOCOMO Euro-Labs in Munich, Germany, leading several projects in the area of mobile and cellular networks. Before joining DOCOMO Euro-Labs, he worked as post-doctoral researcher at EPFL, Switzerland on ultra-wide band communication and network coding.



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					Joerg Widmer received his M.S. and PhD degrees in computer science from the University of Mannheim, Germany in 2000 and 2003, respectively. In 1999 and 2000 he was a visiting researcher at the International Computer Science Institute in Berkeley, CA, USA. He authored more than 100 conference and journal papers and three IETF RFCs, holds several patents, serves on the editorial board of IEEE Transactions on Communications, and regularly participates in program committees of several major conferences. He is senior member of IEEE and ACM.
3	Ciencias de la Computación y Tecnología Informática	RYC-2012-11776	DAVID BAGDANOV, ANDREW	bagdanov@gmail.com	<p>Andrew D. Bagdanov received a dual Baccalaureate in Mathematics (specialization in logic and set theory) and Computer Science (specialization in digital image processing) in 1995 from the University of Nevada, Las Vegas. He received a Masters of Science in Computer Science in 1996, again from the University of Nevada, Las Vegas. In 2004, Dr. Bagdanov received his PhD from the University of Amsterdam. He has authored more than fifty books and scientific articles in peer-reviewed international journals and conferences. He has a Google Scholar h-Index of 14 and his publications span a broad spectrum of computer science, including digital image processing, pattern recognition and machine learning, document image understanding, parallel and distributed computing, active camera vision and control, and semantics-driven analysis of video. He has served on the IAPR Conferences and Meetings committee and was organizer and co-chair of the second and third International Workshops on Document Layout Interpretation and its Applications. He is a member of the IEEE.</p> <p>Dr. Bagdanov has studied and/or held professional or academic positions in four countries on two continents. He began his academic career in his native United States, obtained his PhD in The Netherlands, held a postdoctoral position for two years at the University of Florence in Italy, a postdoctoral position at the Computer Vision Center, Barcelona, and is currently a Senior Research Fellow and Head of Research Unit at the Media Integration and Communication Center at the University of Florence, Italy. Dr. Bagdanov is a native English speaker, speaks and reads Italian fluently, and has a working knowledge of both Dutch and Spanish.</p> <p>As an undergraduate and graduate student at the Information Science Research Institute in the United States, Dr. Bagdanov worked on the Yucca Mountain Project Site Characterization project, a study funded for USD 4.000.000,00 to investigate advanced digital document conversion technologies for the licensing network for the Yucca Mountain High Level Radioactive Waste Repository. As a PhD student in Amsterdam, Dr. Bagdanov worked on the national Multimedia Information Analysis Project, funded at EUR 4.000.000,00 to study paradigms for analysis of multimedia information. In Florence, Dr. Bagdanov worked on the FREESURF project</p>



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					<p>funded by the Italian National Research Council, and was actively involved in the European VIDI-Video project, an FP7 STREP on semantic video analysis funded at EUR 3.500.000,00. As a postdoc at the Computer Vision Center, Dr. Bagdanov continued his participation in the VIDI-Video project and was also workpackage coordinator in the FP7 STREP HERMES. HERMES was funded at EUR 2.100.000,00 for three years. In HERMES, Dr. Bagdanov coordinated the successful integration of partner outputs into a demonstration platform.</p> <p>Throughout his career, Dr. Bagdanov has conducted funded research in close collaboration with academic and industrial partners. In Florence, Dr. Bagdanov negotiated and conducted several technology transfer projects leading to working surveillance systems deployed and operating in real surveillance environments. Dr. Bagdanov continues this trend of practical, state-of-the-art research with his work at the Media Integration and Communication Center in Florence, Italy.</p>
4	Ingeniería Civil y Arquitectura	RYC-2012-11704	CUETO-FELGUEROSO LANDEIRA, LUIS	lcueto@mit.edu	<p>I am a Research Associate at the Department of Civil and Environmental Engineering (CEE), Massachusetts Institute of Technology (MIT). Previously, I was a Postdoctoral Associate at CEE (2008-2010), and a Postdoctoral Fellow at the Department of Aeronautics and Astronautics (2006-2008), also at MIT. I have Master (2002) and PhD (2005) degrees in Civil Engineering (Ingeniero de Caminos, Canales y Puertos) from the Universidade da Coruña, in Spain. My current research interests are in the field of multiphase flow in porous media. My research aims at advancing fundamental understanding and predictive capabilities of the simultaneous flow of two or more fluids through rocks, soils and other porous materials. It combines theory and simulation to elucidate fundamental aspects of multiphase flow, which I then apply in the areas of energy and the environment. Broadly, my background is in Computational Fluid Dynamics and Computational Physics. I have co-supervised one PhD thesis, and currently co-supervise three PhD students at MIT. I have published over 30 articles in journals, and contributed over 70 papers to international conferences. My current h-index is 8.</p>
5	Tecnología Química	RYC-2012-12181	GERNJAK , WOLFGANG	wgernjak@yahoo.de	<p>I am an internationally recognised expert in water treatment technologies and water quality applied to water recycling and drinking water production. I have focused on chemical oxidation processes during the earlier stages of my career in Spain (until 2008) and on physico-chemical processes, in particular membranes and disinfection processes in the past years in Australia (2008 onwards). At all stages of my scientific career, process integration has been a key focus, e.g. the coupling of chemical oxidative and biological treatment. A second continuous focus has been on water quality management to mitigate and control environmental and public health risks. Finally, sustainability considerations, in particular in relation to the water-energy nexus, have guided my research all along.</p> <p>My scientific production encompasses more than 60 peer-reviewed journal publications and over 80 conference</p>



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					<p>publications and several book chapters. Jointly, they have been cited more than 1600 times leading to an H index of 21 (www.scopus.com).</p> <p>I have obtained my MSc (2002) and my PhD degree (2006) from Austrian universities with the experimental work of both theses being performed during my affiliation to the ♦Plataforma Solar de Almería, Spain♦, where I was working first as externally financed pre-doctoral researcher (until 2006) and then contracted as post-doctoral researcher (2006-2008). In 2008, I moved to ♦The University of Queensland♦ to work as senior researcher at the ♦Advanced Water Management Centre♦, a globally renowned centre of excellence for water research.</p> <p>In 2009, I was promoted to lead the ♦Water Recycling Research Program♦, which had been founded in 2008 only. After more than three years of leading the group and continuously building up its activities and research capacity, it is now consolidated and well-reputed. It comprises of highly successful early career researchers and students with cutting-edge laboratory facilities. The group consists of around 15 people, whom I supervise directly in their majority. Among those, I currently supervise 5 PhD students.</p> <p>In my current position as group leader, I am the primary responsible person for the development of strategic directions, acquisition of research funding and projects (secured >5 million\$ since 2008), management and mentoring of staff and students, financial resource planning and internal and external stakeholder relationship management. I lead projects that span a wide range of scientific activities, from fundamental to applied research that collaborate and obtain funding from government agencies and national and international private industry.</p> <p>At all times, my research was embedded in an international context, with my research work on my MSc thesis (2000-2002), PhD thesis (2002-2006) and post-doctoral research (2006-2008) always being conducted in multi-institutional projects funded by the European Commission. During my post-doctoral time, I was entrusted with important research leadership tasks in those international projects by my supervisor at that time, Dr. Sixto Malato, winner of the prestigious ♦Jaime I environmental award♦ in 2011. Similarly, I have obtained excellent mentoring by my current supervisor, Prof. Jurg Keller, a global research leader in water management. Together, both positions allowed me to build up an international network of collaborators across all continents.</p>
6	Tecnología Química	RYC-2012-10147	ARIAS ROZADA, BORJA	borja@incar.csic.es	<p>I completed my PhD at the INCAR-CSIC in 2004. Main research lines during this period were related with combustion of coal blends and reduction of pollutant emissions studying the interactions between coals and their effect of burnout and emissions. During my PhD, I completed a stay in the University of Leeds (UK), where I collaborated in the integration of particle models for char combustion on 3D fluid-dynamic models to</p>



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SECRETARÍA DE ESTADO
DE INVESTIGACIÓN
DESARROLLO E INNOVACIÓN

SECRETARÍA GENERAL
DE CIENCIA, TECNOLOGÍA
E INNOVACIÓN

DIRECCIÓN GENERAL
DE INVESTIGACIÓN
CIENTÍFICA Y TÉCNICA

SUBDIRECCIÓN GENERAL
DE RECURSOS HUMANOS
PARA LA INVESTIGACIÓN

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					<p>predict coal burnout and NOx emissions in large power stations.</p> <p>After finish my PhD, I continued working in the INCAR-CSIC. During this period I was focused on coal reactivity and on the development of models to predict it. At the same time, I participated in research line related with co-utilization of coal and biomass. In this field, I also studied the application of thermal process to improve grindability of biomass properties to be used in coal power stations.</p> <p>In 2005, I moved to the Energy Technology Center of Cranfield University (UK), to work as a Process Research Officer. During this period, I started my research career in the topic of CO2 capture. The task during this period was focused on the development of an advance CO2 capture process based in Ca-looping, in collaboration with CSIC and others. Moreover, during my stay in Cranfield University, I was working in the utilization of carbonates in the flue gas cleaning at low/medium temperatures.</p> <p>After that I returned to the INCAR-CSIC where I was working in CO2 capture and co-utilization of coal and biomass. Regarding CO2 capture, I was working on oxy-fuel of coal and biomass blends and post-combustion technologies using adsorbents. A third line of activity during this period was to do with co-utilization of coal and biomass for hydrogen production by means of gasification.</p> <p>In 2008, I was hired by ArcelorMittal to work as a Process Research Engineer at the Technological Development Centre within the Global R&D branch. In this centre, I worked in the Department of Energy, Environment and Recycling. My main tasks during this period were focused on the improvement on steelmaking gases utilization and CO2 reduction in combustion processes.</p> <p>Currently, I am working in the INCAR-CSIC in the Group of CO2 capture. In this group, my research activities are focused on carbonate looping for CO2 postcombustion capture participating in two EU projects to validate this technology in a pilot plant of 1.7 MWt treating a fraction of the gas from an existing coal power station. During this period I have contributed to the design of the 1.7 MWt pilot plant, setting up a new platform for mass and energy balance, to the definition of an experimental matrix and to the operation of the facility. Other activities that I am engaged are related to improve sorbent performance in a carbonate looping by extended carbonation. As result, I have co-authored 33 articles in peer-reviewed journals in International journals of high impact factor (rated in the Science Citation Index) and received 548 cites (H index=13, source: Scopus). I have contributed with 40 communications in international and national conferences. I am also a co-inventor of a patent hold by Endesa Generación S.A., HUNOSA and CSIC within the field of energy production from carbonaceous fuels with capture of carbon dioxide.</p>
7	Ciencia y Tecnología de Materiales	RYC-2012-10639	MARTIN BRAGADO, IGNACIO	ignacio.martin@imdea.org	Dr. Martin Bragado has a degree in Physical Sciences (1998) by the University of Valladolid. He defended his PhD, "Atomistic Simulation of Processes for Microelectronics" in December 2004, also in the University of Valladolid, Spain. During his PhD he realized three pre-doctoral stays. One in the Emerging Technologies



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					<p>Research Center (Leicester, UK) as a pre-doctoral student, and two in Synopsys Inc. (Mountain View, California, USA) as a summer intern. He also got a position as Adjunct Teacher(Profesor Ayudante de Escuela Universitaria) at the Electronics Department in Valladolid and participated in at least two national Spanish research projects.</p> <p>After the thesis defense, Dr. Martín Bragado was hired by Synopsys to be the leader of the Kinetic Monte Carlo Processing simulation tools. His first task was to integrate the simulation tools learned and developed during his PhD in the commercial simulator being sold by Synopsys. He first spent 6 months working for "Taurus Process Atomistic" in Synopsys GmbH in Munich, Germany, and then went overseas to work for almost 5 years at Synopsys Inc. headquarters in Mountain View, CA, USA.</p> <p>At Synopsys Inc. Dr. Martín-Bragado evolved Taurus Process Atomistic into Sentaurus Process KMC, being released on March 2006 and being still sold today. Among other projects where he was the main responsible, he updated the internal mesh, implemented stress and strain dependencies, included alloying effects of Ge into Si and implemented a Lattice Kinetic Monte Carlo for amorphous/crystalline interface simulation. This work has made Sentaurus Process KMC be the most advanced commercial tool available for atomistic simulation of semiconductor processing today.</p> <p>Dr. Martín Bragado left California in December 2010 to join IMDEA Materials Institute in January 2011 as a junior researcher. At IMDEA he has started the "Atomistic Materials Modeling" Group, currently formed by another 4 PhD students. He is also the Principal Investigator of the EU FP7-PEOPLE funded project MASTIC, and co-P.I. in RADINTERFACES, a FP7-NMP project. He has obtain funding for two industrial projects, one from Synopsys and another one from GlobalFoundries.</p> <p>The research lines and interests of Dr. Martín-Bragado comprises atomistic simulations like ab-initio, Molecular Dynamics and Kinetic Monte Carlo. In KMC, he is an expert on the evolution of damage in crystalline solids using a) Lattice KMC to simulate the evolution of interfaces of crystals being grown epitaxially, and b) Object KMC to simulate the evolution of damage in irradiated crystalline solids. This is applied to microelectronic processing and evolution of heavy irradiated metals for energy generation.</p> <p>Even when he has worked for industry for 5 years, Dr. Martín-Bragado has currently 36 published articles, with a total of 190 cites and a h-index of 8 (according to Web of Science). He is also currently an Assistant Professor (Profesor Asociado) at the Polytechnic University of Madrid. He has supervised 2 final project thesis, and is</p>



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					currently supervising 4 PhD thesis, 1 of them through an international collaboration with French institutions. Finally, in the last two years, Dr. Martín-Bragado has developed the OKMC simulator MMonCa, that is currently being used at research institutions like Los Alamos National Laboratory in New Mexico and the Belgian Nuclear Research Center (CSK).
8	Ciencia y Tecnología de Materiales	RYC-2012-10737	WANG , DE-YI	deyi.wang@imdea.org	Dr. De-Yi Wang holds a PhD in Macromolecular Chemistry and Physics (Cum Laude with distinction of PhD Thesis), is DuPont Young Professor of Fire Retardant Material since 2010, was Guest Professor (2010-2012) in Processing Department of Leibniz Institute of Polymer Research Dresden in Germany. He is an internationally recognized expert in the development of novel environmentally friendly fire retardant materials and was appointed as Academic Consultant on environmentally friendly fire retardant materials by United Nations Industrial Development Organization (UNIDO) in Feb 2012. On the base of the extensive research experiences in Germany, UK and China in the last 10 years, he had obtained pretty solid research experiences on fire retardant design&synthesis, polymer processing, fire chemistry, multifunctional nanomaterials and high performance polymer nanocomposites. He has published 55 academic articles in major international peer-reviewed journals (eg: Chemistry of Materials, Langmuir, Macromolecules, Journal of Materials Chemistry, Polymer Degradation and Stability, Polymer, Acta Materialia, etc) and applied for 16 invention patents (including 11 authorized), contributed 2 book chapters in his research field. The high quality of his publications is manifested by the h-index of 19 and citation time close to 800 times (ISI Citation Report). Over 76% papers have been published on the top 25% Journals of different Subject Categories (Reported by SJR and powered by Scopus). Three of them were included in ScienceDirect's quarterly Top 25 Hottest Articles in 2011 in Polymer Degradation and Stability. In about 90 % of his papers, he played the dominant role from design, processing, characterization to analysing, and/or writing. Up to now, he has been awarded and participated in 15 projects(s) (10 projects as PI) at all levels, funded mainly by different nationals, European Commission and international public entities as well as by the Industry. Currently, he is granted the prestigious Marie Curie Action-CIG by European Commission (FP7-People, 2012-2016); as Co-PI in IMDEA Materials, he is leading the fire properties study of the project of Innovative Material Synergies&Composite Processing Strategies (IMS&CPS), supported by European Commission (FP7-Cooperation, NMP, 2010-2013). He once led two research groups, respectively, in China and Germany. In the last several years, he was awarded Alexander Humboldt Research Fellowship by Germany, National Award for Technological Invention by China, Lagrange Fellowship by ISI Foundation Italy, International Foundation for Science Grant in Sweden and DuPont Young Professor Awards by DuPont USA ((only 11 young professors were granted worldwide in 2010 mainly from North America). He was invited as the member on editorial board of 6 international peer-reviewed academic journals and regular reviewer for over 15



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					international journals in the general area of material science and engineering. Due to his research activities focus on application-oriented fundamental research, his research group always keeps a close connection and collaboration with industrial sectors in the worldwide, such as DOW, DuPont, TOLSA, etc. On the other side, his research group has established widely international academic collaborations with more than 10 famed institutions from all over the world.
9	Ciencia y Tecnología de Materiales	RYC-2012-11110	DIEZ PASCUAL, ANA MARIA	adiez@ictp.csic.es	The candidate graduated in Chemistry in 2001 (awarded Extraordinary Prize) at the Complutense University (Madrid), where she carried out her Ph.D. funded by MEC via a FPU fellowship (2002-2005) on dynamic and equilibrium properties of fluid interfaces under the supervision of Prof. R.G. Rubio. In 2005 she worked at the Max Planck Institute of Colloids and Interfaces (Germany) with Prof. Miller on the rheological characterization of water-soluble polymers. During 2006-2008 she was a postdoctoral researcher at the Physical Chemistry Institute of the RWTH-Aachen University (Germany) in the group of Prof. Richter, where she worked on the layer-by-layer assembly of polyelectrolyte multilayers onto thermoresponsive microgels, participated in a project with the Uniklinik Hospital to test their application as drug carriers and collaborated in the start-up of the dual-focus FCS technique. There she supervised two Diploma Thesis, taught theory and laboratory (480 hours) and organized weekly seminars; she obtained the positive assessment by the ANECA as Ayudante Contratado Doctor . Then she moved to the Institute of Polymer Science and Technology (ICTP-CSIC) to work with Prof. M.A. Gómez and participated in a NRC (Canada)-CSIC joint project to develop carbon nanotube (CNT)-reinforced epoxy and polyetheretherketone composites for transport applications. She also joined the group of Prof. Johnston at the Institute for Aerospace Research (Canada) to develop hierarchical CNT-reinforced laminates, and visited several times the A2 beamline at the HASYLAB-DESY synchrotron in Hamburg, Germany. In 2009 she obtained a Juan de la Cierva fellowship and started a new research line for the development of hybrid nanocomposites incorporating CNTs and inorganic fullerene-like nanoparticles. Currently she is a JAE-Doc researcher focused on the enhancement of thermoplastic/thermoset blends through targeted control of the interphase. She has participated in 21 research projects (6 National, 13 International and 2 with private companies). She has published 44 SCI articles (97% in Q1 journals; first author=29; second author=10; both first and corresponding author=24). She has an H index of 11 and more than 300 total citations. More than 50% of her articles are in journals with an impact factor >4.7 such as J. Mater. Chem (7 articles, IF=6.0), Macromolecules (2 articles, IF=5.2), Carbon (6 articles, IF=5.4), J. Phys. Chem. C (4 articles, IF=4.8). She is the first and corresponding author of an invited review in Prog. Mater. Sci. (IF=18.2) and one of her articles was featured in the front cover of Macromolecules. She is a frequent reviewer for both ACS and Elsevier journals. She has 14 non-SCI papers (10 conference proceedings) and 5 book chapters, and is the first author



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					of an international patent currently under negotiations with a leading company in the aerospace sector. She has contributed to 10 national and 32 international conferences (30 oral communications including 2 invited talks and 12 posters) and has been a member of the organizing committee in 3 workshops and 1 national meeting. She was invited to impart seminars at prestigious international research centres (i.e. Max Planck in Germany, NRC in Canada). Recently, she was awarded the TR35 2012 prize by the Massachusetts Technological Institute (MIT) for her innovative work in the field of nanotechnology.
10	Ciencia y Tecnología de Materiales	RYC-2012-10738	FERNANDEZ DOMINGUEZ, ANTONIO ISAAC	a.fernandez-dominguez@imperial.ac.uk	<p>My scientific activity began in 2005, when I started my PhD under the supervision of Prof. Francisco García Vidal and Prof. Luis Martín Moreno in La Universidad Autónoma de Madrid. Supported by the FPU studentship program, I investigated the interaction of light with materials structured at the sub-wavelength scale. I focused on two electromagnetic phenomena: extraordinary transmission and spoof plasmon metamaterials. I also explored the extension of sub-wavelength optics to other wave entities such as sound or cold atoms. During this period, my work gave rise to 13 publications (among them, 1 Nature Photonics, 1 Nature Physics and 2 Physical Review Letters), and I took part as a speaker in 6 international conferences. My PhD dissertation was awarded the highest honour, Sobresaliente Cum Laude and Premio Extraordinario de Doctorado, in May 2009.</p> <p>Immediately after my PhD, I accepted a 1-year Research Associate post in the group of Prof. Sir John Pendry and Prof. Stefan Maier at Imperial College London. In 2010, I was awarded a Marie Curie Intra European Fellowship, the most competitive EU postdoctoral scheme. This grant expired recently, and I am currently holding a Leverhulme Fellow post in the same group. My work during this time can be divided into two areas: purely theoretical investigation and experimentally-oriented research. The former has focused on the development of a powerful transformation optics method which makes the analytical description of complex plasmonic phenomena possible. Recently, I have used this tool to treat the emergence of nonlocal effects due to electron confinement in the optical response of metallic nanomaterials. The latter ranges collaborations with prestigious experimental groups on topics as diverse as photonic crystals, electron energy loss spectroscopy, or quantum plasmonics. During this time, I have continued working actively on metamaterials, supervising several master projects on this topic.</p> <p>In this postdoctoral period, the insightful character and predictive value of my theoretical findings have led to 22 publications (among them, 1 Science, 5 Nano Letters, 2 Physical Review Letters and 1 Advanced Materials). I have also written two influential reviews on nanoplasmonics (Small, Chemical Reviews), and a book chapter on spoof plasmon metamaterials (Cambridge University Press). Some of the outcomes of my research have been discussed in non-specialized journals and newspapers. During this time, I have attended as an invited or</p>



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					<p>contributing speaker to 13 international conferences.</p> <p>My record of scientific publications (35 papers and 1 book chapter, 17 as first or equal-to-first contributing author, and 1 as last author) and conference contributions (21 conferences and 10 seminars) has led to more than 700 citations (more than 300 in 2012) and a Hirsch factor $h=15$ (GS 11/2012). I am referee of the most relevant journals in the fields of plasmonics and metamaterials, and have taken part in the organization of international scientific events. These facts demonstrate not only the quality and impact of my research, but also the maturity of my career. At this stage, the Ramón y Cajal Senior Fellowship scheme offers me the time and independence necessary to deepen and broaden my scientific activity, working towards a permanent academic post and aspiring to become a leading researcher in the mid-term.</p>
11	Tecnología Electrónica y de las Comunicaciones	RYC-2012-10902	GOMEZ BARQUERO, DAVID	dagobar_@hotmail.com	<p>David Gómez-Barquero received a double M.Sc. degree in Telecommunications Engineering from the Universitat Politècnica de València (UPV), Spain, and the University of Gävle (HiG), Sweden, in 2004; and a Ph.D. in Telecommunications from UPV in 2009. During 2010 and 2011, he was a post-doc guest researcher at the Fraunhofer Heinrich Hertz Institute (HHI) in Berlin, Germany. He also holds a Specialist degree in University Teaching Pedagogy from UPV, and an R&D management degree from the Spanish Foundation of Science and Technology (FECYT).</p> <p>He got First Class Honors distinction for his outstanding student record during his M.Sc. studies at both UPV and HiG, and he was the recipient of the second national prize of the Spanish Telecommunications Engineering Studies. During his doctoral studies he was a guest researcher at the Royal Institute of Technology, Sweden, the University of Turku, Finland, and the Technical University of Braunschweig, Germany. He also did an internship at Ericsson Eurolab, Aachen, Germany. His Ph.D. thesis was awarded by the Spanish College of Telecommunications Engineering. In 2010, he was awarded with the best young researcher prize of Valencia.</p> <p>Dr. Gómez-Barquero is a Senior Researcher at the Institute of Telecommunications and Multimedia Applications (iTEAM) of UPV, where he leads a research group working on multimedia broadcasting, especially in the design, validation and optimization of DVB (Digital Video Broadcasting) systems. He has participated in several national and European public-funded R&D projects, and has cooperated with private companies: Abertis, Egatel, Axió, and SAPEC (Spain), Digital Fountain (USA), Alcatel-Lucent (France), Nomor and BMW (Germany), and LG Electronics (South Korea).</p> <p>Since 2008, he has been actively participating in the digital television standardization forum DVB</p>



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					<p>(www.dvb.org). He participated in the validation of the second generation digital terrestrial TV technology DVB-T2, and in the standardization processes of its mobile profile, T2-Lite, and its handheld evolution DVB-NGH. He also contributed to the DVB-T2 implementation guidelines, and co-edited the implementation guidelines for upper layer forward error correction in DVB systems as an invited expert.</p> <p>Dr. Gómez-Barquero has published over 100 scientific papers, holds two patent applications, and has participated in many technical program committees of international journals and conferences. He is the editor of the book <i>Next Generation Mobile Broadcasting</i> from CRC Press (www.crcpress.com/product/isbn/9781439898666). He also chaired a special interest group on hybrid cellular and broadcasting networks in the European cooperation action COST2100 <i>Pervasive Mobile & Ambient Wireless Communications</i> (www.cost2100.org).</p> <p>Since September 2011 he has been very involved in the promotion and adoption of DVB-T2 in Columbia, advising the national TV regulator (CNTV), and the national public and private broadcasters (RTVC and CCNP). He has given trainings about DVB-T2 to the national association of Colombian engineers (ACIEM), the national private broadcasters, and the Ministry of Information Technologies and Communications. He is currently a visiting professor at the Sergio Arboleda University of Bogota, where he leads a research project on DVB-T2 spectrum management and optimization with the national spectrum agency of Columbia (ANE).</p>
12	Tecnología Química	RYC-2012-10397	CARBALLA ARCOS, MARTA	marta.carballa@usc.es	<p>Alcancé el título de Ingeniera Química en enero de 2001 por la Universidad de Santiago de Compostela (USC), incorporándome inmediatamente al Grupo de Ingeniería Ambiental y Bioprocesos (Biogrup) de la USC e iniciando los estudios de doctorado en Ingeniería Química y Ambiental. Mi etapa de doctorado estuvo marcada por mi participación en el proyecto europeo POSEIDON (Assessment of Technologies for the Removal of Pharmaceuticals and Personal Care Products (PPCPs) in Sewage and Drinking Water Facilities to Improve the Indirect Potable Water Reuse). Durante el doctorado he disfrutado de diferentes becas de investigación, presentando la Tesis Doctoral en diciembre de 2005 y obteniendo la calificación final de Sobresaliente Cum Laude, mención Doctorado Europeo y Premio Extraordinario de Doctorado concedido por la Universidad de Santiago de Compostela.</p> <p>En marzo de 2006 obtuve un Contrato para Jóvenes Investigadores en la Pontificia Universidad Católica de Valparaíso (Chile) y en mayo de 2007 me incorporé como investigadora posdoctoral en el Laboratory of Microbial Ecology and Technology de la Universidad de Gante en Bélgica gracias a un contrato posdoctoral del Ministerio de Educación y Ciencia de España y de un contrato Ángeles Alvariño de la Xunta de Galicia. Desde</p>



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					<p>diciembre de 2008, soy investigadora Isidro Parga Pondal en el Departamento de Ingeniería Química de la USC. Durante estos años, mi experiencia investigadora se ha centrado fundamentalmente en el tratamiento anaerobio de aguas residuales y residuos sólidos/lodos, y en el estudio de la eliminación de microcontaminantes de aguas residuales. Ha incluido la participación en 4 proyectos de investigación europeos, 1 acción integrada con Italia, 8 proyectos de I+D del Ministerio y 3 proyectos de I+D de la Xunta de Galicia. Además, he participado en 6 contratos de investigación con diversas empresas (Aquagest, Espina&Delfin, Energylab, AIMEN, Unions Agrarias). Toda esta actividad ha dado lugar a:</p> <ul style="list-style-type: none"> i. la co-dirección de 4 tesis doctorales, 12 proyectos fin de máster y 7 proyectos fin de carrera. ii. la supervisión de 5 estancias de investigación de estudiantes extranjeros (Portugal, México, Alemania, Chile). iii. 7 capítulos de libros. iv. 46 artículos en revistas indexadas. v. Índice h: 16 (Scopus, 22-11-2012). vi. 5 artículos en revistas no indexadas. vii. >60 presentaciones en congresos, con >35 ponencias orales. <p>Además, he realizado 5 estancias de investigación: 2 predoctorales (marzo-junio 2004 y enero-marzo 2005) en Federal Institute of Hydrology en Koblenz (Alemania) y 3 posdoctorales (marzo 2006-abril 2007 y septiembre 2010 en Pontificia Universidad Católica de Valparaíso (Chile) y mayo 2007-julio 2009 en Universidad de Gante (Bélgica)).</p> <p>En cuanto a actividades académicas, formo parte del Plan de Organización Docente (POD) del Departamento de Ingeniería Química de la USC desde el curso 2009-2010 con 120 horas anuales de clase.</p> <p>En Gestión Universitaria, soy Coordinadora de 5º de Ingeniería Química desde el curso 2009-2010, Coordinadora del Programa Erasmus con Faculty of Bioscience Engineering de la Universidad de Gante a partir del curso 2012-2013 y miembro de la Comisión de Docencia y Calidad del Departamento de Ingeniería Química de la USC desde junio 2011.</p>
13	Ciencia y Tecnología de Materiales	RYC-2012-11954	LUO , FENG	feng.luo@imdea.org	<p>During the research for his PhD thesis, he initially joined several projects such as ♦Magnetic and Colossal Magnetoresistance Effects of Rare Earth as well as Transition Family Oxides♦ (Nos.G19980613), National Fundamental Research Project on Rare Earth Functional Materials, (MOST); and ♦Chemistry of Rare Earth Functional Materials♦ (Nos.20221101), Research Group of Innovation of National Science Fund of China (NSFC). Due to his excellent research work, he was awarded as ♦Excellent Science Research Award for the</p>



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14	Ciencias de la	RYC-2012-	AZNARTE	jlaznarte@dia.uned.es	<p>Graduate of College of Chemistry and Molecular Engineering, Peking University and Science Innovation Award for the Graduate of Peking University. In October 2004, he moved to the Max-Planck-Institute for Microstructure Physics, Halle, Germany and worked for two years as a postdoc (MPI postdoc fellowship) on nanomagnetism and surface physics in Prof. Kirscher's group. His work was devoted to tuning the perpendicular magnetic anisotropy in FeCo magnetic thin films through interface/surface modification or stress induced structure distortion for ultra-high density magnetic storage media. After two years of postdoc in Germany, he works together with Dr. Heyderman as a research scientist on bit patterned magnetic media and template assisted self-assembly in the Laboratory for Micro- and Nanotechnology, Paul Scherrer Institut, Switzerland until at the end of Oct.2009. Since Nov. 2009, the candidate becomes a principal investigator (Associate Professor) in Peking University with a start up grant of 450k to build up his own research Lab of magneto-electric materials and devices. From December of 2010, the candidate holds AMAROUT very experienced fellowships (200 k (Salary)/4years) and joined IMDEA Nanoscience as a researcher/junior grouper of Multifunctional Devices Lab with a four-year tenure-track contract. Throughout the candidate's career as a researcher, the candidate has published 37 publications (12 as first author plus another 2 as corresponding author) with h index of 14 and total citations more than 938 times in international peer review journals of high impact factor such as Phys. Rev. Lett.(2), J. Am. Chem. Soc.(1), Chem. Phys. Lett.(3), Appl. Phys. Lett.(7), J. Mater. Chem.(2), J. Appl. Phys.(3), Phys. Rev. B (1) and Angew. Chem. Int. Ed.(1). A review article about his work on magnetic nanorings and nanotubes is invited by Small, and the paper is ongoing. He has carried out activities of paper reviewing being contacted several times by the editors of Appl. Phys. Lett., Phys. Rev. B, Chem. Phys. Lett., Mater. Res. Bull. and so on. Moreover, he is also the referee of grant proposal for Shota Rustaveli National Science Foundation, Georgia. Regarding dissemination of results at international events he has 18 contributions as presenting author in well established international conferences (2 invited talks, 10 oral presentations and 6 poster presentations). In 2008, he got an invited talk on IEEE International Magnetism Conference (Intermag08), Madrid, Spain and also selected as the poster session chair of patterned magnetic antidots. He has given 12 invited seminars in different European research institutions and universities in Europe and China. He has been involved in 19 research projects (6 as PI) and 9 projects are now funded (5 as PI) with the total budget of 420.000 Euro.</p>
					El solicitante es Ingeniero en Informática por la Univ. de Granada y realizó parte de sus estudios en la Queen's



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	Computación y Tecnología Informática	11984	MELLADO, JOSE LUIS		<p>Univ. Belfast (Reino Unido). Obtuvo una beca de iniciación a la investigación de la UGr en 2002. Después, obtuvo una beca FPU del Ministerio, durante la cual visitó centros extranjeros de primer nivel como el Departamento de Economía de la PUC-Rio (Brasil) y el Instituto de Econometría de la Erasmus Univ. Rotterdam (Holanda). Defendió su tesis doctoral en 2008, titulada "Modelling time series through fuzzy rule-based models: a statistical approach", con mención europea y sobresaliente cum laude por unanimidad.</p> <p>Obtuvo una plaza de investigador postdoctoral en Francia, en la prestigiosa escuela de ingenieros Mines ParisTECH (École des Mines de Paris). Allí sometió a revistas de primer nivel un elevado número de publicaciones derivadas de la tesis y pudo aplicar los conocimientos teóricos desarrollados en ella a la predicción de la producción de energías renovables. Simultáneamente ejerció como consultor-investigador para la empresa ARMINES, especializada en la investigación pública industrial, donde fue 'project manager' en el proyecto ANEMOS.Plus, perteneciente al VI programa marco de la Comisión Europea. En este puesto, coordinó reuniones científicas y procesos de revisión por pares de la documentación del proyecto. También ejerció como investigador en otros dos proyectos europeos: SafeWind y MoreMicrogrids. Coordinó la redacción del proyecto PV-ERA.net como investigador principal para el territorio francés, siendo evaluado positivamente y concedido por la Comisión Europea. Este fructífero periodo culmina en la obtención de la beca Juan de la Cierva en 2010 con calificación 93/100 a la que no se incorporó en favor de una plaza de profesor ayudante en la UNED. Poco después, obtuvo también las acreditaciones de Ayudante Doctor y Contratado Doctor.</p> <p>Su trabajo científico se centra en la predicción de series temporales. Ha explorado las relaciones existentes entre el área estadística y la inteligencia artificial para el desarrollo de modelos más precisos y robustos. Demostró la equivalencia entre ciertos modelos y estudió las consecuencias de este hecho en su tesis. Ha presentado a la comunidad científica las ventajas y avances derivados de dichas relaciones en artículos en revistas de primer nivel.</p> <p>Desarrolló también soluciones prácticas para problemas concretos, presentadas en trabajos con gran repercusión. Es de destacar que en la mayor parte de las publicaciones el solicitante es primer autor, y que, pese a llevar relativamente poco tiempo publicadas, han recibido un número considerable de citas (teniendo el solicitante un índice h=5, y algunos artículos con más de 40 citas).</p> <p>El solicitante colabora en tareas docentes en el Depto. de Inteligencia Artificial de la UNED. También ha dirigido varios proyectos fin de máster y actúa como Tutor de Apoyo en Red para el Máster en Inteligencia Artificial de</p>



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					<p>la UNED.</p> <p>Ejerce de revisor para varias revistas internacionales y pertenece a asociaciones científicas como la Red Española de Series Temporales, la International Society of Applied Intelligence (ISAI) o la Asociación Española para la Inteligencia Artificial (CAEPIA). Además, ha liderado y participado en varios proyectos de investigación para empresas como Northern Ireland Electricity o Red Eléctrica Española.</p>
15	Tecnología Electrónica y de las Comunicaciones	RYC-2012-12196	MARTIN LOPEZ, SONIA	smarlop.sm@gmail.com	<p>Born February 4rd, 1977. Married, 2 children. Spanish citizen.</p> <p>- Current position: Postdoctoral Researcher (Juan de la Cierva) at the Instituto de Óptica, Consejo Superior de Investigaciones Científicas (CSIC), Spain, since June 2010. Member of Nonlinear Dynamics and Fiber Optics group at Instituto de Óptica, CSIC. Topics of research: Raman lasers, supercontinuum generation, distributed and point fiber sensors, frequency metrology.</p> <p>- Author or co-author of 100 publications in major journals (31, 10 as first author) and conference contributions (69), totaling >320 citations (according to Google Scholar).</p> <p>- Participant in 18 competitive research projects (1 as PI) and 7 industry-funded contracts (2 as PI).</p> <p>- Supervisor of 2 completed PhD theses and currently Director of 3 PhD students.</p> <p>- Referee for all the leading journals in Photonics.</p> <p>Education:</p> <p>1995-2006: Universidad Complutense of Madrid (UCM) Madrid, Spain. Master degree in Mathematics, 2002. Doctor degree in Physics, 2006. Doctoral work carried out at the Institute of Applied Physics, Consejo Superior de Investigaciones Científicas (CSIC), granted by an FPI fellowship.</p> <p>Relevant experience:</p> <p>2003-07: FPI (predoctoral) fellow at the Institute of Applied Physics, CSIC.</p> <p>2007-09: I3P (post-doctoral) competitive contract at the Institute of Applied Physics, CSIC.</p> <p>2009- : Juan de la Cierva (post-doctoral) competitive contract</p> <p>2005: Visiting Scientist at Ecole Polytechnique Federale de Lausanne, Switzerland.</p> <p>Selected publications (h=10):</p> <p>-F Vanholsbeeck, S Martin-Lopez, M González-Herráez, S Coen. Opt. Express 13 (17), 6615-6625 (2005). Citations: 72.</p> <p>-M González-Herráez, S Martín-López, P Corredera, ML Hernanz, PR Horche. Opt. Commun. 226 (1), 323-328(2003). Citations: 51.</p> <p>-S Martin-Lopez, L Abrardi, P Corredera, M Gonzalez Herraiez, A Mussot. Opt. Express 16 (9), 6745-6755 (2008).</p>



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					<p>Citations: 19.</p> <p>-F Rodríguez-Barrios, S Martín-López, A Carrasco-Sanz, P Corredera, J D Ania-Castañón, L Thévenaz, M González-Herráez. IEEE J. of Lightwave Technol., 28 (15), 2162-2172 (2010). Citations: 30.</p> <p>-S Martín-Lopez, M Alcon-Camas, F Rodriguez, P Corredera, JD Ania-Castañón, L Thévenaz, M Gonzalez-Herraez. Opt. Express 18 (18), 18769-18778 (2010). Citations: 16.</p> <p>-D Alasia, MG Herráez, L Abrardi, S Martín-Lopez, L Thevenaz. Proc. SPIE 5855, 587-590 (2005). Citations: 20.</p> <p>Projects as Principal Investigator:</p> <p>- MEHFO: Estudio de la Monitorización de Estructuras de Hormigón utilizando tecnologías basadas en Fibra Óptica (2006). 60800 €. Funded by OBRUM SL</p> <p>- FINEST: Fiber Network Strain and Temperature Distributed Sensor- Product Development (2012).108000 €. Funded by Fundación Repsol.</p> <p>- PROPOLIS: PRO-active Protection Of Large InfrastructureS. FP7-312975 (European Project, should enter in the negotiation phase soon, to start in mid-2013). Total 267000 € (EC funding 198000 €).</p> <p>Most relevant contributions to technology transfer</p> <p>-Several research contracts with companies, 2 as PI</p> <p>-Licensed Patent (PCT/ES2010/070340) SYSTEM FOR IMPROVING THE DYNAMIC RANGE AND REDUCING MEASUREMENT UNCERTAINTY IN FIBRE OPTIC DISTRIBUTED SENSORS AND FIBRE OPTIC DISTRIBUTED MEASUREMENT EQUIPMENT.</p> <p>-Founder of the CSIC spin-off Fiber Optics Consulting Services and Technologies FOCUS SL (2010).</p> <p>-Selected project in 1st call of €Fondo de Emprendedores€ of Fundación Repsol: FINEST: Fiber Network Strain and Temperature Distributed Sensor- Product Development (2012).</p>
16	Tecnología Química	RYC-2012-11853	MARTIN ALONSO, DAVID	mordenk@gmail.com	<p>Mi carrera investigadora se ha centrado en el estudio de catalizadores y procesos catalíticos heterogéneos aplicados principalmente al sector de las energías renovables con el objetivo de lograr la producción sostenible y competitiva de combustibles y productos químicos de alto valor añadido a partir de biomasa (procesos en biorrefinerías).</p> <p>Mi Tesis Doctoral ha consistido en estudios de actividad y caracterización de catalizadores sólidos ácidos y básicos para la producción de biodiesel como combustible renovable.</p> <p>Actualmente mi investigación se centra en la búsqueda y desarrollo de nuevos procesos catalíticos para la producción y transformación de biomasa en combustibles y productos de elevado valor añadido</p>



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					<p>A lo largo de mi carrera científica he participado en un total de 12 proyectos de investigación competitivos (2 de ellos con empresas), los cuales han sido financiados por: 1 UE, 2 USA, 4 MINCIN/Nacionales, 1 CAM/Regional, 2 CSIC, 2 Empresas privadas.</p> <p>He participado en un total de 23 congresos, de los cuales 20 son internacionales y el resto nacionales. De todos ellos 12 se han presentado comunicaciones orales mientras que en los restantes póster o carteles.</p> <p>A lo largo de mi carrera investigadora tengo un total de 25 publicaciones en revistas del SCI (3 más aceptadas para su publicación) y un capítulo de libro. Además soy coautor de 1 patente española y 6 patentes estadounidenses</p> <p>La calidad de mis publicaciones viene avalada por el elevado índice de impacto de las revistas en las que han sido publicadas, quiero destacar las 16 (3 más aceptadas para su publicación) de muy alta y alta calidad (índice de impacto > 6), Entre paréntesis se refleja el factor de impacto (IF impact factor, en ingles) de la revista correspondiente al año 2011:</p> <p>1 Science (31.201) 1 Chemical Society Reviews (28.760) 2 Energ. Environ. Sci. (9.610) 2 Chemsuschem (6.827) 3 Green Chem (6.320) 4 Appl, Catal B (6.052) 3 J. Catal (6.002)</p> <p>Tengo que destacar que el art. 1 se encuentra entre los cinco más citados de la revista APCATB. El artículo 12 estuvo entre los 10 más leído de la revista Green Chemistry 3 meses, mientras que el artículo 13 estuvo entre los 10 más leídos de la revista Green Chemistry 12 meses. Mis artículos han recibido 606 citas recogidas por la base de datos WOK y que ello constituye un factor h=14,</p> <p>Desde 2010 colaboro como censor de revistas del SCI</p>



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					<p>Applied Catalysis B:Environmental Fuel Processing Technology Topics in Catalysis Chemical Engineering Journal Catalysis Today Chemsuschem</p> <p>Estudiantes supervisados/dirigidos Tommy Reigle (1 semestre) Cristie Rivera Miranda (4 meses) Riley Larget (3 meses) Y. Chong (2 semestres) Hui Chin Wong (3 semestres) Jher Hau (2 semestres)</p>
17	Tecnología Electrónica y de las Comunicaciones	RYC-2012-10381	BIEL RUIZ, BLANCA	biel@ugr.es	<p>Me licencié en Ciencias Físicas por la Universidad de Granada en 1999. Cursé el último año de la licenciatura en la Franz-Joseph-Universität de Graz (Austria), donde comencé a interesarme por las propiedades físicas de la materia a nivel atómico. Mi investigación siempre ha estado dedicada a la aplicación de métodos ab initio (basados en la Teoría del Funcional de la Densidad) y otras herramientas a escala atómica en el estudio del transporte de carga en nanoestructuras. Me doctoré por la Universidad Autónoma de Madrid con una tesis sobre simulaciones ab initio en superficies semiconductoras III-V y transporte de carga en nanotubos de carbono con Sobresaliente cum Laude y Premio Extraordinario de Doctorado. Mi trabajo de tesis con nanotubos se considera pionero en la aplicación de técnicas ab initio combinadas con el formalismo de Funciones de Green de No Equilibrio para el estudio del transporte de carga a escala mesoscópica en sistemas realistas. Realicé una estancia postdoctoral durante dos años en el CEA-LETI, donde colaboré con el grupo experimental en el diseño de un transistor basado en "nanoribbons" de grafeno dopadas. Nuestras simulaciones muestran que el dopaje con impurezas de boro o nitrógeno puede solventar el problema de la ausencia de un "gap" en grafeno, abriendo un gap de movilidad para el transporte de huecos y preservando altas movilidades para electrones. Además, desarrollé técnicas tight-binding basadas en resultados DFT que permiten disminuir el tiempo de cálculo manteniendo la precisión ab initio. Ya en el LETI comencé el estudio de la influencia de diversos factores ("strain", orientación cristalográfica) en dispositivos SOI ultradelgados. En 2009 conseguí un contrato como investigadora "Juan de la Cierva" con el que me incorporé al grupo de Nanoelectrónica de la Universidad</p>



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SECRETARÍA DE ESTADO
DE INVESTIGACIÓN
DESARROLLO E INNOVACIÓN

SECRETARÍA GENERAL
DE CIENCIA, TECNOLOGÍA
E INNOVACIÓN

DIRECCIÓN GENERAL
DE INVESTIGACIÓN
CIENTÍFICA Y TÉCNICA

SUBDIRECCIÓN GENERAL
DE RECURSOS HUMANOS
PARA LA INVESTIGACIÓN

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					<p>de Granada. Desde entonces he estado desarrollando la línea atomística del grupo para validar y optimizar las herramientas existentes para el diseño de dispositivos y adecuarlas a su aplicación en nanodispositivos.</p> <p>Como resultado de mi trabajo, tengo 20 publicaciones, en su mayoría en revistas internacionales de alto impacto (1 Nature Materials, 1 IEEE Transactions on Electron Devices, 1 Nano Letters, 3 Physical Review Letters, 2 ACS Nano, 1 capítulo de libro, 2 reviews) con un total de más de 650 citas según ISI WoK (nov. 2012). Mi trabajo ha sido presentado en más de 70 conferencias internacionales, donde he presentado 4 comunicaciones orales y 1 charla invitada. Durante mi actividad investigadora he participado en 1 proyecto a nivel extra-europeo, 4 proyectos a nivel europeo, 4 nacionales y 3 regionales. En dos de ellos soy la investigadora principal. En 2011 recibí el Endeavour Award -Research Fellowship para empezar una nueva línea de investigación en la Curtin University of Technology (Australia). Soy referee de revistas de gran prestigio como IEEE Transactions of Electron Devices, Physical Review Letters, Nanotechnology y Physical Review B, entre otras. Asimismo, poseo la acreditación de la ANECA como Profesor Contratado Doctor.</p>
18	Tecnología Química	RYC-2012-11427	RAMOS FERNANDEZ, ENRIQUE	e.v.ramosfernandez@me.com	<p>The applicant is a postdoctoral researcher with more than 8 years-research experience (Ph+PostDoc) in catalysis and materials engineering. Prior to starting the PhD, he worked in the Department of Catalysis at the Norwegian University of Science and Technology (prof. Anders Holmes) developing a design project together with Statoil. Following to this experience, the applicant carried out his PhD at the University of Alicante (Spain) (prof. Rodriguez-Reinoso and prof. Sepulveda-Escribano) The main aim was the development of new catalysts for selective hydrogenation of α,β-unsaturated aldehydes. The study of the strong metal-support interaction was mainly done to get highly active and selective catalysts. A part from the main project of the PhD, the applicant was involved in other important projects such as: preparation of activated carbon for propane/propene separation preparation of highly dispersed CeO₂ on activated carbon for wet air oxidation preparation of expanded graphite for catalysts support hydrogen production and purification, heterogenization of homogeneous catalysts for polymerization reactions and removal of VOC pollutants from flue gas. As consequence, 14 papers were published.</p> <p>After the PhD he moved to one of the CNRS laboratories (Laboratoire Chimie Provence, Marseille, France). He worked Postdoc in calorimetric study of N₂, Ar, CH₄, H₂ adsorption in Metal Organic Frameworks, in order to understand the most fundamental aspects of these materials and how they behave during the adsorption process. The experimental results were used to validate the classical adsorption theories. During this period he supervised one PhD student who was doing calorimetric measurements of CO₂ adsorption on ion-exchanged zeolites. The applicant completed his skills in adsorption and calorimetric measurements, and gained a good knowledge of Metal Organic Frameworks. He was working in one of the top groups dealing with MOFs and</p>



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					<p>adsorption (Llewellyn et al.) Marseille (France). The second Postdoc project was carried out at the TUDelft. Zeolitic membranesbased on hydroxy-sodalite were developed for water purification and catalytic membrane reactors. Additionally, the applicant was also involved in the preparation and screening of MOFs as catalysts. In the meantime he acquired a Marie Curie fellowship to focus mainly on MOF activities. The project was focused in the development of multifunctional catalysts based on MOFs. The project is successfully developing and 10 papers have been already published and several additional ones are in the pipeline to be published soon. Summarizing, during his career the applicant has been working in many different topics that go from the synthesis to the final application of different materials in both catalysis and adsorption. As consequence of all these activities 24 papers have been already published in high impact factor journals such as: Chem. Mater. (7.2 IF), Ener. Env. Sci. (9.6 IF) J. Catal. (6 IF), Appl. Catal. B (5.6 IF) and several will be published soon and two books chapter are under editor revision Furthermore, he has been in more than 40 conferences and meetings and has presented more than 25 oral presentations. Some of these papers have been listed as the hottest of their respective journals and are among the most cited ones.</p>
19	Ciencia y Tecnología de Materiales	RYC-2012-10751	DELGADO JAEN, JUAN JOSE	juanjose.delgado@uca.es	<p>As it can be deduced from his CV, Dr. J J Delgado has a strong scientific background and a multidisciplinary education. He has focused his career on the rational design of innovative materials with tailored properties by elucidating structure-reactivity relationships at molecular scale. The applicant (Best Graduate Student Award) obtained his PhD degree in December 2003 (EU Mention and Doctorate Award) at U. of Cadiz-Prof S Bernal's group. He acquired significant skills in synthesis of nano-oxides and their chemical and structural characterization, as well as its application in catalysis JJD carried out a post-doctoral stay of 39 month in Germany (Fritz-Haber Institute-Max-Planck Society/Nanoscape). He was the FHI-coordinator of an EU project (CANAPE) and led several applied research projects sponsored by top chemical companies in Europe (Süd Chemie, Bühler, Nanoscape), as well as basic research projects for understanding the catalytic properties of metal-free carbon materials. He improved his synthesis and characterization (IR, XPS, TEM) skills. His experience in the chemical industries and spin-off companies have been extremely useful to propose international joint research projects with a clear industrial application, as example he has recently submitted a ITN (under evaluation) on Heterogeneous Catalysis for Sustainable Energy Production with top level companies such as GATAN, Jhonson Mathey, and VUCHT Actually he is leading his own research lines in Prof Calvino's group at UCA. The applicant has taken advantage of his solid background in the field of material design and synthesis, as well as the Electron Microscopy Advanced Characterization, to obtain nanostructured materials for energy production and new</p>



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					<p>biomaterials for medical applications. He has successfully supervised 2 master and 2 PhDs. Dr Delgado has participated in 4 national projects (1 project C and 1 consolider), 4 International cooperation projects (2 AECE-South America, 2 Acciones Integradas), 1 regional (Andalucía), 4 (CANAPE, CERENH2, STEEM and COST-CM1104) European, one EU-transnational project (ELCASS) and 4 sponsored by private companies. He has published 3 book chapters and 62 papers in international peer reviewed (JCR indexed) journals. During the last five years, when he started developing his own research lines and new collaborations with prestigious international groups, he has published an average of 10 papers per year, showing his research capabilities and trends. He has contributed to articles published in top level journals with high impact factors (average journal impact factor, 5.5), such as 1 Science (31), 5 Angew Chem Int (13.5), ACS Nano (11.4), JACS (9.9), Adv Mater (13.9), 5 J Catal (6.0), Green Chemistry (5.5) Chemistry An European Journal (5.5), Chemistry of Materials (5.4), Carbon (5.4), 2 Appl Catal B (5.6), 3 Appl Catal A (3.9) and 3 ChemCatChem (5.2). These publications have more than 450 cites (more than 6 cites per article, H=13). It is remarkable that during 2011 he got 100 citations, increasing in 2012 up to 160 (November). He is first (5 in 2012), second or corresponding author in more than 36% (55%, 2012) of the publications. The candidate has 72 contributions to national and international conferences (13 invited talks). He has recently joined the editor board of Cat Today as Guest Editor and acts as referee of prestigious journals like J Hazard Mater, Environ Sci Technol, Catal Commun, J Catal, Appl Catal A&B and Catal Lett</p>
20	Ingeniería Mecánica, Naval y Aeronáutica	RYC-2012-11996	TRIAS MIQUEL, FRANCESC XAVIER	xavitrias@gmail.com	<p>After obtaining my degree in Mechanical Engineering at the Technical University of Catalonia (UPC), I started my PhD in 2001 at the same University. I was granted with a FPU fellowship by the Spanish Government with a project concerning the numerical simulation of turbulent flows on parallel computers. During my PhD, I had the opportunity to spend several months at the University of Groningen (RuG) and at the University of California, Los Angeles (UCLA). At RuG I could consolidate my knowledge about high-order energy-conserving schemes with the Profs. Roel Verstappen and Arthur Veldman whereas at UCLA I had the opportunity to work with Prof. John Kim, well-known for his pioneering works on direct numerical simulation (DNS) of turbulence and main author of the most cited paper in this field. In collaboration with my supervisor Prof. Manel Soria, I developed a code for the simulation of turbulent flows in parallel computers. In particular, I implemented a fully-conservative high-order discretization and I developed a Schur complement-based parallel solver for the Poisson equation suitable for parallel systems with high latencies. This allowed to compute a set of DNSs of buoyancy-driven flows during the last part of my PhD. Nowadays, these results are being used by many authors as a reference solution to test the performance of turbulence models. Moreover, in the last year of my PhD, I broaden my research interest into new but related areas: the regularization modeling of turbulence and the extension of the energy-conserving schemes to unstructured grids. To advance further in these new topics,</p>



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					after finishing my PhD at the end of 2006 I moved to the prestigious Johann Bernoulli Institute for Mathematics and Computing Science (Groningen, The Netherlands) where I stayed until June 2009. This was financially supported by a Postdoctoral fellowship Beatriu de Pinós by the Generalitat de Catalunya. After more than two years of intense research work, my main scientific contributions were twofold: (i) a new class of discrete linear filters for regularization modeling and (ii) a new fully-conservative spatial discretization on unstructured collocated grids. They opened the possibility to use regularizations as a turbulence model in complex geometries and provided a solid mathematical framework for testing subgrid stress models. In 2009 I was awarded with a Juan de la Cierva research fellowship and I joined the School of Mechanical and Aeronautical Engineering at the UPC where I could consolidate my research lines. Moreover, on the basis of my research background, I have worked on the development of better differential operators for Large-Eddy Simulations (LES). Related with this, I derived a new approach to discretize eddy-viscosity models for LES. In the last years, I have participated in many national and international projects, one of them funded by the 7th framework programme of the European Commission (FP7) as a leader researcher. I have published 17 papers in international peer-reviewed journals and 2 more are under review. Except two, all of them belong to the 25% highest impact factor in their fields and I am the first author in 11. I also have 49 international conference papers, 26 of them as the first author. My H-index is 7. I have a wide teaching experience and I have supervised one doctoral thesis and I am currently supervising 4 more.
21	Ingeniería Eléctrica, Electrónica y Automática	RYC-2012-11838	VILLANUEVA TORRIJO, LUIS GUILLERMO	lgv@lgvillanueva.info	Luis Guillermo Villanueva obtuvo el título de licenciado en Ciencias Físicas por la Universidad de Zaragoza en Junio de 2002. Fue galardonado con el Premio Nacional Extraordinario de finalización de estudios universitarios. En Septiembre de 2002 comenzó la realización de su Tesis Doctoral en el Centro Nacional de Microelectrónica (Instituto de Microelectrónica de Barcelona), bajo la tutela del Prof. Dr. Joan Bausells y sobre el ◆ Desarrollo de cantilevers para la medida de fuerzas ◆ . De su trabajo durante la tesis se han publicado 22 artículos en revistas científicas, 4 charlas invitadas, dos premios en conferencias internacionales y un premio en una conferencia nacional. Justo después de doctorarse, Dr. Villanueva se unió al Laboratoire de Microsystèmes 1 del Prof. Juergen Brugger en la Ecole Polytechnique Fédérale de Lausanne, para trabajar en el desarrollo de nuevos métodos nanolitográficos y novedosos sensores de hidrógeno. Durante su estancia en el EPFL-LMIS1, Dr. Villanueva colaboró en la dirección de 5 tesis doctorales, publicó 23 artículos en revistas científicas, 1 charla invitada, obtuvo dos premios en conferencias internacionales, colaboró en la redacción de proyectos de investigación por valor de unos 1.8 millones de euros, y recibió una beca Marie Curie personal para el desarrollo de su carrera. Haciendo uso de dicha beca, Dr. Villanueva se unió en 2009 al grupo del Prof. Michael L. Roukes (experto



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					<p>mundial y reconocido fundador del campo de los dispositivos nanoelectromecánicos - NEMS) en el California Institute of Technology (Caltech), una de las universidades más prestigiosas del mundo. Durante sus tres años en Caltech, Dr. Villanueva trabajó en el desarrollo de nuevos métodos de transducción para NEMS; en la exploración de fenómenos paramétricos, fenómenos no-lineales y fenómenos que emergen en sistemas de muchos NEMS acoplados; y en la estabilidad de osciladores basados en NEMS. Del trabajo realizado durante esta estancia se han publicado 5 artículos en revistas científicas, hay 2 artículos en revisión y 3 más que están listos para ser submitidos; 3 charlas invitadas en conferencias internacionales; se ha aceptado una patente, aplicado por una segunda y archivado 2 solicitudes más en la oficina de transferencia tecnológica de Caltech; se obtuvieron 1.2 millones de euros de financiación a través de un proyecto de la agencia DARPA. Actualmente, desde Abril de 2012, está en el periodo final de su beca Marie Curie, cumpliendo una estancia en la Danmarks Tekniske Universitet (DTU), donde trabaja en la aplicación de los desarrollos realizados en Caltech para la detección de nanopartículas.</p> <p>En resumen, en poco más de 10 años desde que empezó su tesis doctoral, Dr. Villanueva ha publicado 50 artículos en revistas científicas (contando con un índice h de 11 según ISI Web of Knowledge); ha presentado 63 contribuciones en conferencias internacionales (8 de ellas charlas invitadas); ha publicado trabajos en las tres instituciones donde ha trabajado; y ha colaborado activamente en la obtención de casi 3 millones de euros de financiación externa a la universidad.</p>
22	Ingeniería Civil y Arquitectura	RYC-2012-10462	CASTRO ORGAZ, OSCAR	oscarcastro@ias.csic.es	<p>Abridged CV</p> <p>TRAINING: Agricultural Engineer, University of Cordoba, 2002./ Ph.D. University of Cordoba, Dept. of Agronomy, 2008, dissertation title: Critical flow in hydraulic structures, awarded with the best dissertation of the University in the Engineering and Technological Field, 2009./Postdoctoral stay, ETH Zurich under Prof. Willi Hager from 01/07/2009 to 28/02/2010.</p> <p>RESEARCH LINES: The applicant's research lines focus in the application of hydrodynamics to free surface flows in hydraulic engineering, including open channel hydraulics and hydraulic structures, groundwater hydraulics and hydraulics of sediment transport and river hydraulics.</p> <p>RESEARCH POSITIONS: From 01/02/2002 to 30/04/2009 consulting hydraulic engineer/ From 01/05/2009 to 30/04/2012 Postdoctoral contract JAE-DOC of the CSIC, IAS, Córdoba./ From 01/05/2012 to 31/12/2012 Hired by Project in IAS-CSIC.</p>



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					<p>SCI PUBLICATIONS: 42 articles (39 published+2 in press+1 provisionally accepted; first author in 40 of these articles), 18 short communications (discussions/replies) and 2 book reviews (one published and one in press).</p> <p>R&D&I INTERNATIONAL ACTIONS: Associate Editor of the Journal of Hydraulic Engineering, ASCE./ Editorial Board Member of Environmental Fluid Mechanics, Springer/ Reviewer of the main SCI journals of hydraulics and fluid mechanics/ Participation in research conducted in international R&D&I projects, including one project of the 6th framework programme, one project of the 7th framework programme and a project of the Swiss National Science Foundation/ External reviewer of projects in the 2012 call of the Portuguese Foundation for Science and Technology/ External Reviewer for the Civil Engineering Reports of the University of Queensland, Australia./ Collaboration with international researchers like Prof. Subhasish Dey, of the Indian Institute of Technology, at Kharagpur, and Prof. Hubert Chanson, of the University of Queensland, at Brisbane, Australia.</p> <p>TEACHING: professor in the Master Program ♦Environmental Hydraulics♦, with quality mention MCD2006-00361, with regular teaching of credits, where the applicant directed two master theses. The applicant is accredited as professor ayudante doctor and professor contratado doctor by ANECA.</p>
23	Ciencias de la Computación y Tecnología Informática	RYC-2012-11604	SOLA ORTEGA, JOAN	joan.scat@gmail.com	<p>MSc in Telecommunications for the Universitat Politècnica de Catalunya, and PhD in Automatic Systems for the Institut National Polytechnique in Toulouse.</p> <p>I incorporated Ecotecnia (now Alstom wind), a company devoted to the incipient wind energy sector. During 5 years, I developed innovative electronic power converters for solar, wind and diesel sources, and 3-phase inverters for grid generation.</p> <p>I moved to Toulouse, France, for a DEA on Automatic Systems. I obtained the first classification in the group. I started a PhD program at LAAS-CNRS, devoted to the robotics and computer vision areas, more precisely on visual simultaneous localization and mapping (SLAM). My major published contributions are largely cited and have inspired a number of improvements. I obtained in 2007 a prize on the "Best thesis on robotics in France award", given by the GDR-Robotique group, a national association of research groups in the area of robotics.</p> <p>After my PhD I helped creating the company Ictineu-3 in Barcelona with the aim of building an innovative scientific submarine, Ictineu-3 (funded in part with a CDTI-Neotec aid), for a crew of three people and depths</p>



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					<p>of 1200m. This is the 9th submarine in the world in terms of depth, and comes just after comparable submarines funded by powerful states such as the United States, Russia or Japan. In 2007, we won the "best business plan" award in Barcelona's "entrepreneur day" organized by Barcelona Activa, the largest startup incubator in Catalonia.</p> <p>I moved to SRI International laboratory, California. We developed large-scale vision-mapping algorithms. My goal was to incorporate inertial measurements (accelerations, angular velocities), with which localization accuracy could be dramatically improved: 4m error after 9km runs, using only vision and inertial, without the aid of GPS or similar. Our research team won the DARPA challenge "Learning applied to ground robots", in 2008.</p> <p>I moved back to LAAS-CNRS in Toulouse where I pursued my research on visual SLAM. I incorporated the humanoid group "Gepetto" where I used vision and inertial measurements to replicate the oculo-vestibular system of superior animals, with the aim of improving the humanoid's capabilities for keeping balance after strong disturbances as well as walking over rough or unmodeled terrain. I led a group of students in the writing and publishing of a C++ software package devoted to real-time visual SLAM with inertial measurements.</p> <p>I have been the first author of articles in the most prestigious international journals in robotics and computer vision, presented my research in major international conferences in the area of robotics, and been part of evaluation committees of journals and conferences.</p> <p>In 2010 I joined Ictineu Submarins, the company we created in 2007. I devoted my time to conceiving the full electric system. An important key was to allow the electric architecture to be incrementally automatized or "robotized". However, the most important contribution to the submarine Ictineu-3 was the research for, and development of, the first lithium battery in the world to be certified for manned submarines, with a number of world-wide innovations: pressure tolerant, fault-tolerant battery architecture, and the incorporation of innovative materials.</p>
24	Ciencia y Tecnología de Materiales	RYC-2012-10059	RIVERA GIL, PILAR	pilar.riveragil@gmail.com	<p>I studied Pharmacy (Speciality in Clinical Pharmacy) in Seville (Spain) and I acquired the necessary supervised work experience to obtain the degree in Seville (Spain), Berlin (Germany) and Harare (Zimbabwe). After obtaining my Pharmacy Degree, I worked in a Pharmacy in Berlin (Germany) until I got a pre-doctoral fellowship to do the PhD in the Pharmacology and Toxicology Department of the Institute of Pharmacy at the Freie Universität Berlin (Germany). There I worked under the supervision of Prof. Burkhard Kleuser in research</p>



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					<p>topics related with Molecular Biology & Pharmacology. Concretely I focused my research activities on the internalization pathways and the intracellular signaling cascades of a Sphingolipid derivate and the possible cross-talk with the TGF-β; growth factor signaling. During the last months of my PhD I was offered a temporary contract as researcher in the same Department. After I completed my PhD I was offered a Lecturer contract in the Institute of physics at the Philipps Universität Marburg (Germany). In the Biophotonic group of Wolfgang J. Parak I got in contact with the field of Material Sciences. During this period I applied my knowledge in Molecular and Cell Biology to the design of new materials with different physicochemical properties such as size, charge, surface chemistry. In 2009 I was awarded by the European Cooperation in Science and Technology Office (COST) with a prize to the best contribution in the field for my work on the intracellular processing of pro-drugs mediated by polymeric multilayer capsules. After 3 years postdoctorate, I was selected and propose by my supervisor Prof. W. J. Parak and by Prof. Thomas H. Kissel (Institute of Pharmaceutical Technology at the Philipps Universität Marburg) to pursue the (German) Habilitation in Pharmaceutical Technology, which I will complete January 2013. I am currently focusing my research on the design of novel colloidal, composite carriers for bioactive molecules such as drugs, genes and sensors. All the research work I have performed during these years, have resulted in 33 peer reviewed publications in high impact factor journals mostly in the area of Materials Science and some in the areas of General Chemistry and Molecular Biology, 2 book chapters, 2 granted research project (1 PhD student, 150,000 €). 4 of these publications and the 2 book chapters are as corresponding author and 9 of these publications are as first author. Regarding the overall impact of my publications, I have an h-index of 12 and more than 500 citations (average number of citations per publication is close to 20). Part of these studies has been collected in invited reviews where different aspects of Colloid Chemistry, Biology are related under the envisaged scenario of Material Science. Moreover, I have been invited to 7 invited talks. I have also disseminated (in form of oral contributions) my knowledge and the results of my research activities in more than 20 international conferences and Seminars.</p>
25	Ciencia y Tecnología de Materiales	RYC-2012-09864	GRANADOS RUIZ, DANIEL	daniel.granados@imdea.org	<p>I am a research fellow of IMDEA-Nanoscience, Madrid (Spain), since 01/09/2009. I am Director of the new clean room facilities for micro and nanofabrication. I am also head of the Scanning Nearfield Optics (SNOM) laboratory and currently starting up my own research Group on photonics and nanooptics. For the last three years i have been devoted to set-up from scratch the new Nano-Fabrication Centre, managing the whole budget for design, construction and acquisition of equipment. I am currently thesis advisor of one PhD student on SNOM of nano-patterned surfaces. Immediately after my PhD graduation I was hired as a Research Scientist at the Quantum Information Group of</p>



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					<p>Toshiba Research Europe Ltd. in its Cambridge Research Laboratory, Cambridge (UK). Since 01/11/2006 until 31/07/2009 I was PI of the research project ♦photon confinement♦, fabricating and characterising photonic crystal devices for nano-optics and cavity quantum electrodynamics. I was also visiting collaborator of the SP group of the Cavendish Laboratory. In this period I contributed as PI and as coordinator (together with Prof. A.J. Shields) of WP12-♦Single Photon Emission♦ of the EU-NoE-SANDiE. I also contributed to the supervision of the PhD student S.J.Dewhurst. I was the scientific manager of the photonics laboratory at QIG group. One of my task as a manager was the I demonstrated strong coupling between a single InAs Quantum dot and a non polarising monopole mode in a photonic crystal cavity. I also demonstrated Purcell effect in the in-plane emission from a single InAs Quantum dot of a photonic crystal waveguide.</p> <p>At the end of my PhD (01/05/2005-01/11/2005) I was visiting scientist at the NanoOptics group, Heriott-Watt University, Edinburgh (UK), were I learned advanced optical spectroscopy characterisation techniques. I investigated and succeeded in tuning through zero the fine structure splitting of a single quantum dot by applying a lateral electric field, for the first time ever reported with this approach. This was a critical requirement at that time for the generation of entangled photons with single quantum dots and very useful for the development of quantum information processing applications.</p> <p>For my PhD thesis (01/06/2001-31/10/2006) I joined the molecular epitaxy group of the IMM-CNM-CSIC, Madrid, Spain. I studied the growth and characterisation of self-assembled InAs/GaAs Quantum Dots and Quantum Rings. As a PhD student I mostly contributed to the EU projects NanoMat and NoE-SANDiE and to the national ones Nanoself-I, Nanoself-II, and NANIC.</p> <p>I carried out my first scientific collaborative project as an undergraduate physics student, in the laboratory of Prof.C. Sánchez (UAM, 1996-1997) and published my first peer-reviewed article at the age of 21. Also during the summers of 1998-99, i did two scientific stays at the Centre for Functional Imaging of the LBL, Berkeley, Ca (USA); hired as research assistant.</p> <p>I have published 60 peer-reviewed Works. I have attended 20 international conferences, and contributed to more than 30. I have a total of 873 citations and an H factor of 15. and i10 factor of 18 (Google-Scholar). I regularly act as reviewer of articles for Appl.Phys.Lett, Phys.Rev.B, Optics Express, Nanotechnology, or Langmuir. I have been PI in 9 research projects. Recently I have worked as evaluator for two ANPCyT projects and four MarieCurie AMAROUT proposals.</p>
26	Tecnología Química	RYC-2012-10927	MENDIARA NEGREDO, MARIA TERESA	tmendiara@icb.csic.es	M ^a Teresa Mendiara Negro



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					<p>Investigadora Postdoctoral ♦Juan de la Cierva♦ Instituto de Carboquímica-CSIC Miguel Luesma Castán, 4 50018 Zaragoza Tlfno: (+34) 976 733 977 Fax: (+34) 976 733 318 http://www.icb.csic.es/index.php</p> <p>-----</p> <p>Ingeniera Química por la Universidad de Zaragoza (Septiembre 2001) y doctora en Ingeniería Química por la misma Universidad (Junio 2006) con Sobresaliente Cum Laude por unanimidad.</p> <p>Durante el curso académico 2006-2007 trabajó como profesora ayudante del Departamento de Ingeniería Química y Tecnologías del Medio Ambiente de la Universidad de Zaragoza. Desde Octubre de 2007 a Mayo de 2010, trabajó como investigadora postdoctoral en la Universidad Técnica de Dinamarca (Copenhague), primero contratada por la Fundación Española para la Ciencia y la Tecnología (FECYT) y posteriormente contratada por la propia Universidad Técnica. Desde Mayo de 2010 hasta la actualidad trabaja como investigadora postdoctoral ♦Juan de la Cierva♦ en el Instituto de Carboquímica del CSIC.</p> <p>El interés de sus investigaciones se centra en los procesos de generación de energía a través de la combustión de combustibles fósiles. Sus dos líneas prioritarias de investigación son: (1) estudio de la formación y eliminación de contaminantes durante la combustión y (2) tecnologías de combustión para la generación sostenible de energía. Sus aportaciones en este último campo van dirigidas a facilitar la captura del dióxido de carbono generado durante la combustión, con el fin de minimizar las emisiones globales de este gas vinculado al incremento del efecto invernadero.</p> <p>Su actividad científica se ha traducido en diecisiete trabajos de investigación en revistas de alto índice de impacto y relevancia dentro de las áreas de Ingeniería Química y Energía: Energy & Fuels, Fuel, Fuel Processing Technology, Combustion and Flame, Industrial and Engineering Chemistry Research, todas ellas incluidas en el primer cuartil dentro de su área. También ha dirigido varios proyectos fin de carrera y participado como ponente en Seminarios y Congresos nacionales e internacionales. A su vez, participa como revisora en revistas internacionales de importante difusión en el ámbito de la Ingeniería Química.</p>



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					<p>Ha participado en varios proyectos de investigación tanto nacionales, dentro del plan de I+D+i, como europeos dentro del 7º programa Marco y dentro del marco de los programas ECSC/RFCs (Comunidad Económica del Carbón y el Acero). También ha participado en contratos de i+D de especial relevancia con empresas del sector energético como Alstom Power Boilers o Vattenfall.</p> <p>A lo largo de su trayectoria investigadora ha sido becada por diferentes instituciones, como la Diputación General de Aragón, el Ministerio de Educación y Ciencia y el Ministerio de Ciencia e Innovación, la Universidad de Zaragoza y la FECYT. Durante el periodo 2007-2011 fue miembro con grado de doctor del Instituto de Investigación en Ingeniería de Aragón de la Universidad de Zaragoza. Actualmente, pertenece al grupo de Combustión y Gasificación del Instituto de Carboquímica (CSIC), reconocido como grupo de investigación de excelencia por el Gobierno de Aragón. También es miembro de ♦The Nordic section of the Combustion Institute♦ y miembro de la Asociación de Ingenieros Químicos de Aragón.</p>
27	Ciencia y Tecnología de Materiales	RYC-2012-10894	MARTI GASTALDO, CARLOS	carlosmartigastaldo@gmail.com	<p>Dr Carlos Marti-Gastaldo (CMG) is currently a Research Fellow in the Department of Chemistry of the University of Liverpool (UL). He gained an MSc in Chemistry (1st Hons, 91%, Extraordinary Award to the best graded) from the University of Valencia (UV). CMG obtained a FPU Scholarship and joined Prof. Coronado♦s group at the Molecular Science Institute (ICMol), where he completed his PhD in Chemistry in 2009. His research focused on the design of Multifunctional Magnetic Materials by using Coordination Polymers and Layered Inorganic Materials and merited the highest mark, ♦Cum Laude♦, along with recognitions like the ♦Best thesis in Chemistry♦ awarded by the UV and the ♦NanoMatMol Award♦ to the best thesis in Nanoscience and Molecular Materials granted by the RSEQ. Among his contributions, the design of oxalate-based soluble magnets and single-chain magnets (JACS, 2010 & 2008 and international patent) or the report of the first mononuclear polyoxometalate single-molecule magnet (JACS, 2008), are worth being highlighted. CMG was invited to present his work at the ECMM (Poland, 2009) where he was distinguished with the ♦Young Researcher Olivier Kahn Recognition Award♦.</p> <p>As a Postdoc in Coronado♦s group, CMG started co-supervising the thesis of E. Navarro and C. Bosch (to be completed in 2013) approaching the chemical design of superconducting/magnetic hybrid materials (Adv. Mater., 2011 & Nature Chem., 2010) and the functionalization of carbon nanotubes and chemical synthesis of graphene-based nanocomposites (Chem. Sci. & Adv. Funct. Mater. 2012). CMG♦s independent role should be</p>



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					<p>stressed here since these research lines were not present in the group before this activity was set up. These contributions granted him the ♦POSTDOC SusChem Award♦ that recognizes talented young chemistry researchers in a postdoctoral stage in 2011.</p> <p>In 2010, CMG earned a self-driven Marie Curie Fellowship and joined Prof. Rosseinsky♦s group in UL to develop a new class of biomimetic Metal-Organic Frameworks (MOFs) by using flexible peptide linkers. His findings (ACIE, 2012 & Nature Chem., submitted), will enable the design of advanced porous materials whose structural stability and sorption behaviour is controlled by the amino-acid sequence of the peptide. The ability of CMG to develop an independent research portfolio is exemplified by his recent papers as corresponding author (Adv. Funct. Mater., Carbon, Nanoscale & J. Phys Chem. C, 2012). CMG aims to self-finance his future research with his project on ♦Layered Solids & 2D Nanomaterials for Energy Conversion & Storage♦ (RSF2013, UK; submitted) and the project ♦Chironics♦ (FP7-FET-ICT-2013.9.7, EU), that he is co-leading with other 4 young European researchers and will be submitted for evaluation on Jan, 2013. He has begun to establish an internationally recognised profile with contributed talks in international conferences (between 2009-2012: MOF2012, ICC40, PacificChem, ECMM & EMRS) and by acting as a regular reviewer for ACS, RSC and Wiley publications. His collaborations with external groups (i.e. University of Oxford, bioMAGUNE & CNR-ISMN) also support his ability to deliver scientific research at an internationally competitive level. Since 2005, CMG has published 42 ♦peer-reviewed♦ papers in primary journals in Materials Science & Chemistry (avg.citations/paper>22; h-index=14), 1 book chapter and 1 patent.</p>
28	Ciencia y Tecnología de Materiales	RYC-2012-10796	BENITO LOPEZ, FERNANDO	fbenito@cicmicrogune.es	<p>Fernando Benito-López is a Senior Scientist at CIC microGUNE: Microtechnologies Cooperative Research Center in the Basque Country (Spain) since June 2012 and he was recently appointed as Adjunct Faculty Member at Dublin City University, DCU, (Ireland).</p> <p>He studied chemistry at the Universidad Autonoma de Madrid, UAM, (Spain) finishing in June 2000 (4 years). He carried out a Master in Organometallic Chemistry at UAM for two years. In 2002 he joined to the Supramolecular Chemistry and Nanotechnology group from Prof. Reinhoudt working at the MESA+ Institute for Nanotechnology, University of Twente (The Netherlands) obtaining his PhD in 2007. During that period, novel miniaturised systems like capillary micro-reactors, NMR-microreactors and glass chip microreactors were developed to study the influence of high-pressure in chemistry at the micrometer scale.</p> <p>He carried out his postdoctoral research at DCU, first at the Centre for BioAnalytical Sciences working on</p>



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					<p>analytical chemistry and separation techniques in microfluidic devices and later, after obtaining a personal fellowship, he joined to CLARITY: Centre for Sensor Web Technology, Ireland.</p> <p>In 2010, he became Team Leader in polymer microfluidics at the National Centre for Sensor research also at DCU where he carried out his research on smart functional materials and microfluidics. In 2011 he visited the University of California Berkeley (USA) and the University of Auckland (New Zealand) as a visiting Scholar.</p> <p>He has received several awards including: IRCSET postdoctoral fellowship (2007), DCU Career Start fellowship (2010), SFI-STTF (2011) and several commercialisation and Enterprise Ireland feasibility study awards. He is involved in multi-partner FP7-based projects; co-supervise PhD students and has numerous industrial and academia partnership and collaborations. He is co-author of 63 publications in peer-reviewed journals including six Lab Chip (RSC, IF: 6.5), 1 book (doctoral thesis) and 1 invited book chapter, 4 patent applications, 2 patents filed, 320+ citations and a h-factor of 9.</p> <p>Highlights:</p> <ul style="list-style-type: none"> ◆ Cited in Press Journals (e.g. New Scientist, L◆Expansion, Sunday Times, The Irish Times) ◆ Involved in multi-partner FP7-based project including co-supervision of a PhD students. ◆ Co-supervision of PhD students: one under DCU Research Career Start Programme as Principal Investigator. ◆ Supervised 4th year project students and summer intern students. ◆ Awarded >548000 Euro so far. ◆ Independently initiated international collaborations and research initiatives. ◆ Numerous industrial partnership and collaborations. ◆ Entrepreneurship: transforming innovation into economic goods (pH sensor activity) ◆ Serving as a reviewer for several internationally recognised journals: Lab on a Chip, Microfluidics & Nanofluidics, Sensors and Actuators B, Talanta, among others. ◆ Member of the Editorial Board of ◆The Scientific World Journal◆.
29	Ciencia y	RYC-2012-	LOPEZ	amlopez@icmab.es	BsC and MsC in Chemistry from the University of Santiago de Compostela. Short Stay at the Max-Planck Institut



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	Tecnología de Materiales	11588	PERIAGO, ANA MARIA		<p>für Strahlenchemie (2 months).PhD in Chemistry (2000-2004) carried out at the Schools of Chemistry at University of Surrey (United Kingdom).My thesis was focused in the synthesis of symmetrical and enantiomerically pure macrocycles, and supramolecular host-guest interactions for their evaluation of the selective extraction of pesticides. In October 2005,I joined the Institute of Materials Science in Barcelona (CSIC) contracted under the European Project SURFACET with Dr. C. Domingo, coordinator of the same. During 2006-2009 I worked with a postdoctoral I3P contract at ICMAB,where I continued working contracted in the framework of a CENIT project.Since joining the ICMAB, my work has been focused on the research and development of applications and processing of new materials using supercritical CO2 (scCO2). I also worked on the design and construction of high pressure equipments suitable for carrying out chemical processes, as well as high-pressure phase equilibria studies.The specific lines of research that I have worked on are:(i)Preparation of hybrid materials and composites by the design and modification of surfaces using anhydrous methods for silanization of nanosized materials,(ii)Preparation of high added value calcium-based materials using scCO2 for accelerated carbonation, and the study of CO2 capture and sequestration.(iii)Preparation of photoactive materials by scCO2 impregnation of photoactive compounds in zeolites and silica aerogels for use in photocatalysis, and (iv)Processing of biomaterials; including preparation of controlled drug release systems, and preparation of fibres and scaffolds for tissue engineering. From the 27 SCI published articles (374 cites),20 have been on my work at ICMAB. My collaboration with companies includes MATGAS 2000 AIE and Uriach SA(Spain) for the upscaling of the controlled drug release systems, and FEYECON (Holland) for the optimization of process variables.The collaborations with public centres include Inst. de Tecnología de Polímeros (ITCP-CSIC),Universidad de Barcelona, Imperial College-London and CNRS-France. Since my incorporation at the ICMAB,I intensively participate in a total of 19 national and international research projects (besides 1 under evaluation).I participated in a total of 5 Collaborative European projects, 2 NoE and one COST.I also worked in a total of 12 national projects,emphasizing my participation in the program CENIT (Ingenio 2010) from CDTI with a 27 M ♦ project(SOST-CO2).I am currently participating as a member team in a National MAT-2012-35161 project, a MAT2010-18155 (coordinated by J. San Román); a COST (OC-2011-2-10820), an Intramural CSIC (PIE-201160E110),and working in the preparation of a European Project (NANOADSORB-Call Energy).I have participated in a total of 34 congresses (mainly in the areas of materials and engineering) from which 20 were internationals, with 36 presented works. I gave 7 oral presentations and was invited to orally present my work in a key note in an international conference.I am currently supervising the final year project of a student from the ♦Universidad del Atlantico♦ of Colombia.I also contributed in the supervision of PhD student,and directly supervised one internship student from the Université de Nantes.</p>



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30	Ciencia y Tecnología de Materiales	RYC-2012-11307	STOLIAR , PABLO	pablo-alberto.stoliar@u-psud.fr	<p>Pablo Alberto Stoliar was born in Buenos Aires, Argentina, on December 15, 1972. He received the Master's degree in electronic engineering from the Universidad Nacional de la Matanza, Argentina, in 1999, and the Ph.D. degree in science and technology, mention physics, from the Universidad Nacional de General San Martín, Argentina, in 2004.</p> <p>He was a Postdoctoral Training and Research in Italian Laboratories (TRIL) Fellow at Abdus Salam Centre for Theoretical Physics, Trieste, Italy, in the Istituto per lo Studio dei Materiali Nanostrutturati (ISMN), Bologna, Italy. Since 2007, he has been a Research Scientist at ISMN, Bologna. During that period he worked on inorganic and molecular electronics, biosensors, software developing, numerical calculus, and development of instrumentation.</p> <p>In 2010 he obtained the Associate Professor appointment in the School of Science and Technology, University of San Martín, Argentina. He is currently on leave of this position, living in Orsay (France) and working fulltime in the Laboratoire de Physique des Solides (LPS), CNRS & Université Paris-Sud. Also, he works in close collaboration with the Nanodevices group at nanoGUNE, Donostia, San Sebastian.</p> <p>His current research interests include experimental research and mathematical modeling in applied physics, physics of emerging electronic devices (resistive switching, motronics and organic electronics), bio-inspired systems and morphology and scaling properties of disordered systems.</p> <p>He is co-authored 43 indexed publications (h-index: 13) and 5 patents in collaboration with many European institutions. Also, apart from its physical background, it is worthy to mention that in 2003 he was the engineer at charge of the building of the Heavy Ion Microprobe of Argentina.</p> <p>With more than 10 years of teaching experience, he acts as teaching staff of 4 Argentinean universities. Also directed students in Italy.</p> <p>With his Argentinean colleges, he obtained the Prize Dupont-CONICET 2010 for the work on Non-volatile memory on Resistive Switching mechanism for satellite use. He also obtained the Grant Call 2011 of the Jose A. Balseiro Foundation, Argentina, and the Grant Call 2010 (Open Topics) for young researchers, National University of General San Martín, Argentina.</p>
31	Ciencia y Tecnología de Materiales	RYC-2012-11709	GAZQUEZ ALABART, JAUME	jgazqueza@gmail.com	<p>In 2007 I obtained my PhD in materials science (Universitat Autònoma de Barcelona), having performed the research in the Superconductivity Group at the Materials Science Institute of Barcelona (ICMAB-CSC). I devoted my time to the microstructural analysis of superconducting thin films by means of Transmission Electronic Microscopy (TEM). During the PhD I had the opportunity to collaborate and being trained by several leading European groups in TEM, such as the Centre d'Elaboration de Materiaux et Etudes Structurales (CEMES-CNRS), in Toulouse, and the Electron Microscopy for Materials Science (EMAT), in Antwerp. After the PhD, I</p>



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					enrolled, for almost three years, in the STEM Group of the Oak Ridge National Laboratory (ORNL) with a postdoctoral fellowship of the Spanish Ministry for Science and Education and under the supervision of Dr. Maria Varela and Dr. Steve Pennycook. The STEM group at ORNL is the world leading group in the atomic scale characterization of materials by scanning transmission microscopy (STEM) and electron energy loss spectroscopy (EELS). The main research theme that I have engaged in since then is the study of the growth-microstructure-property correlations on complex oxides, specially the role of reduced dimensionality and the structure of interfaces and defects, where I have made significant contributions. In September 2010 I joined back the Superconductivity Group at the ICMAB as a JAE-doc, where I led the microstructural and nanoscale characterization of oxide thin films and multilayers, and co-supervise two PhD theses. My scientific work has led significant results that have been published in 43 refereed research papers in international journals, including Nature Materials, Nano Letters, Advanced Materials, ACS Nano, Phys.Rev.B, Appl.Phys.Lett., receiving more than 660 citations, 574 times cited without self-citations. My h-index is 13. I am the co-author of three book chapters and three Spanish patents. In 18 of the publications I am the first or the second author, with an average impact factor of 6.06. All these publications are the result of different collaborations with research groups of different countries. I have performed 18 oral presentations (4 as an invited speaker) in national and international workshops and conferences including MRS, APS, M&M (American Microscopy Society).
32	Ciencia y Tecnología de Materiales	RYC-2012-10839	PELLICER VILA, EVA M	eva.pellicer@uab.cat	I currently work at the Physics Department of Universitat Autònoma de Barcelona (UAB) as an appointed Research Fellow and Deputy Quality Control Manager for the EU-funded project MANAQA (FP7). I graduated in Chemistry in 2000 from Universitat de Barcelona (UB), completed a Master program in Experimental Chemistry (2001) and got the PhD (FI fellowship from Generalitat de Catalunya) in 2005 with a thesis entitled <i>Láminas magnéticas de aleaciones base cobalto obtenidas por electrodeposición</i> (Electrodep group, UB, supervised by E. Gómez and E. Vallés) with the highest marks. Before joining UAB in 2008 I performed 2 previous postdoc stays: at CNM (CSIC)-EME(UB) for 1 year, where I worked on the synthesis of ordered mesoporous metal oxides for gas sensing applications, and at the Catalan Institute of Nanotechnology (ICN) also for 1 year, where I worked on carbon nanotubes for bio-applications. I joined the Física de Materials II group at UAB after being granted with a Beatriu de Pinós Fellowship in 2008 and, later, with a UAB Postdoctoral Fellowship in 2010. By taking advantage of my expertise in both the electrodeposition of metallic nanostructures, gained during my PhD, and on the nanocasting synthesis of mesoporous metal oxides, acquired during my first postdoctoral stay, I have implemented harmoniously these two research lines in Física de Materials II group with great success. In fact, I am co-director of a doctoral thesis (Mrs. Aida Varela) that focuses on the electrodeposition of functional



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					<p>metallic nanostructures, which has been submitted on November 2012 (oral defense scheduled for January 2013), and of another doctoral thesis dealing with novel mesoporous mixed metal oxides (Mr. Moisés Cabo, expected oral defense July 2013). I have participated in 13 Research Projects, including a recent private contract with industry on the electrodeposition of porous Cu. I have authored or co-authored 72 articles and 2 book chapters that have received around 760 citations (H = 17): first author in 9 articles and 1 book chapter, second author in 25 articles (12 of them derived from my PhD -alphabetical order policy in Electrodep-), and corresponding author in 22 articles, including 6 Adv. Funct. Mater. (first author in 2 and corresponding author in other 2, one of them having 69 citations), 2 Small, 2 Chem. Mater., 1 J. Mater. Chem., 3 Electrochem. Commun., 2 J. Phys. Chem. C, 1 ACS Appl. Mater. Interf., 1 Carbon, 1 Int. J. Hydrog. Energy, etc. I was awarded the Westinghouse Prize in 2005 from the Institute of Metal Finishing (UK). I have participated in 99 conferences of both national and international scope with either poster, oral communication or invited talks (in 12 of them, e.g. invited talk at 3DMR 2011 in Jeju (Korea) and at ISMANAM 2012 in Moscow). I have been abroad at Bioforsk (Norway) in 2008 and at ETH-Zurich in 2010. I am also involved in teaching activities in the Physics and Nanoscience and Nanotechnology degrees at UAB and I have been the coordinator of the Final Master's Thesis module of the UAB Official Master Program in Nanotechnology and Materials Science the years 2011-2013. I serve as a referee in many top-leading journals including Adv. Funct. Mater., Adv. Funct. Mater., Chem. Soc. Rev., etc. I have also acted as reviewer of projects handled by the National Foundation of South-Africa and the ETH Zurich Research Commission.</p>