

**ICIQ** <sup>R</sup>

Institut  
Català  
d'Investigació  
Química



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## ERC Starting Grants awarded to Drs. Martín, Melchiorre and Galán-Mascarós

Dr. Paolo Melchiorre, Dr. Rubén Martín and Dr. José Ramón Galán-Mascarós, ICIQ group leaders, have been awarded an Starting Independent Researcher Grant from the European Research Council.

These grants will allow Dr. Melchiorre to carry out the project "Exploring Chemical Reactivity with Organocatalysis" (ORGA-NAUT), Dr. Martín will develop the project "Chasing a Fundamental Challenge in Catalysis: A Combined Cleavage of Molecules" (FunCBonds), and Dr. Galán-Mascarós will carry out the project "Building-up Chemical Complexity into Multifunctional Molecule-based Hybrid Materials" (CHEMCOMP).

ERC Starting Independent Researcher Grants (ERC Starting Grants) aim to support up-and-coming research leaders who are about to establish or consolidate a pro-

per research team and to start conducting independent research in Europe. Funding for these grants is normally up to € 1.5 M per grant for a period of up to 5 years.

At the present time, ICIQ hosts 5 ERC Starting Grant holders (Drs. Palomares, López, Martín, Melchiorre and Galán Mascarós) and 1 ERC Advanced Investigators Grant researcher (Dr. van Leeuwen).

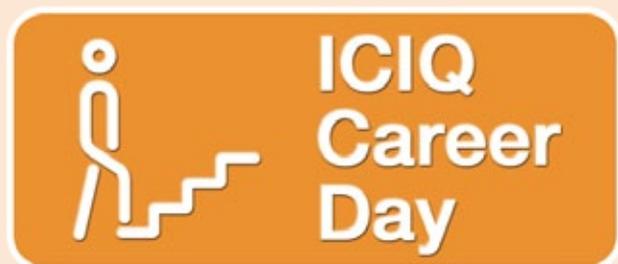


From the left, Dr. Martín, Dr. Galán-Mascarós and Dr. Melchiorre.

-  [More info: Dr. Martín Research Group](#)
-  [More info: Dr. Melchiorre Research Group](#)
-  [More info: Dr. Galán-Mascarós Research Group](#)

## First Edition of ICIQ's Career Day

On June 15th ICIQ celebrated its first Career Day at its facilities in Tarragona.



The ICIQ Career Day is an initiative that aims at bringing together both post-doctoral and doctoral students and

chemical and pharmaceutical industry representatives. Our goal is to give industries the opportunity of meeting/recruiting bright researchers and at the same time, help our young researchers to start a professional career. In this first edition, we counted with the participation of Basf, Henkel, Almirall, Dow Chemical and Bayer.

During the morning industry representatives presented their company, R+D and profile of the positions they sought to fill. The afternoon was reserved for interviews with candidates interested in a particular company or position.

This latest initiative by ICIQ is aligned with the institute's commitment to assist in the development of the chemical and pharmaceutical industries by training highly qualified scientists. And this mission includes helping our young bright scientists have access to industry representatives.

## ICIQ Summer Fellows 2011

On July 7th representatives from ICIQ and “La Caixa”, institution that has sponsored the 2011 ICIQ Summer Fellowships programme, welcomed the scholars: Pilar Calleja (Universitat de Barcelona); Álvaro Gutiérrez (Universidad Autónoma de Madrid); Claudia Ivette Mejía (Universidad del País Vasco); Laura Juliana Mateus (Universidad Industrial de Santander, Colombia); Debra Zian (Universidad de Trieste); Albano Galán (Universidad Autónoma de Madrid); Maxim A. Novikov (High Chemical College of Russian Academy of Sciences); Ruth Dorel (Universidad de Zaragoza); Carmen Fernández (Universidad Complutense de Madrid) and Jéssica Rodríguez (Universidad de Santiago de Compostela)

The ICIQ Summer Fellowships programme offers 10 grants to undergraduate students to spend a three-month internship in one of ICIQ’s research groups during the

months of July – September. This is the 4th edition of this programme, which aims to encourage outstanding undergraduate students with a background in chemical science to pursue a scientific career in Chemistry.

**i** [More info: ICIQ Summer Fellowships Program](#)



ICIQ Summer Fellows

## ICIQ leads the Connect-EU Sustainable Catalysis Group

The Connect-EU Sustainable Catalysis Group is part of the network of Connect-EU groups that aims to collect the interests and needs in research and innovation sectors they represent in order to defend them against the European Union and then have an influence in projects of European funding, mainly the 7<sup>th</sup> European Framework Programme (FP7) for R & D.

**GRUP**  
**Connect-EU**  
Catalisi sostenible



ICIQ leads the Sustainable Catalysis group in which also participates Bayer, Dow Chemical, Centre Tecnològic de la Química de Catalunya (CTQC) and the Universitat Rovira i Virgili (URV). The main objective of this group is to increase the impact of the chemical and pharmaceutical sector in the definition of the Catalan strategy in R&D in the field of chemical reactions and processes.

The Connect-EU project is an initiative of the Generalitat de Catalunya (ACC1Ó) charged with reinforcing the influence of Catalan companies and research institutions in the decision-making process for funding in the frame of the FP7 and the next FP8.

**i** [More info: Connect-EU Groups](#)

## News in brief

**PhD thesis defence:** Drs. Nicolas Delpont, Toni Sánchez, Nora Planas, Stephan Röser, Rocío Marcos, Carolina Mendoza, Esther Alza and Sander J. Wegenberg, pre-doctoral students at ICIQ, have defended their PhD thesis recently. All eight were awarded the highest honors for their work.

**Research live!:** ICIQ participated in the “Recerca en Directe” 2011 fair, held in La Pedrera (Barcelona) on 5-7 April. “Chemistry brings us the light!” was the workshop offered by researchers from Prof. Palomares research group, in which visitors could see how a chemical reaction transforms solar light into electricity using organic solar cells (Grätzel cells).

**i** [More info: Recerca en directe](#)



Laia Pellejà and Lydia Cabau (Palomares research group) at ICIQ’s booth

## ICIQ students awarded

Dr. Héctor Fernández (Vidal research group), Dr. Vanessa Lillo (Galán-Mascarós research group), Dr. Noelia Barrabés (associated researcher from the Technological University of Vienna –TU Wien– in Urakawa’s group) received the PhD Extraordinary Award for their doctoral theses.

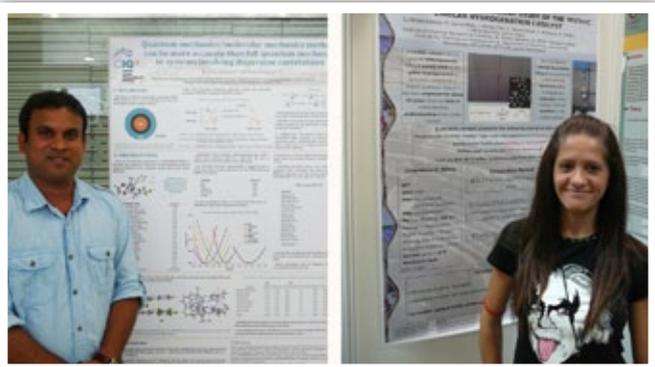
Also, Núria Fernández (Palomares research group and Josep Maria López Valbuena (lab. engineer at Esteve/ICIQ Joint Unit) have been awarded the Master studies extraordinary award.



From the left, Dr. Héctor Fernández, Dr. Noelia Barrabés, Dr. Vanessa Lillo, Núria Fernández and Josep Maria López Valbuena

Crisa Vargas (López research group) and Dr. Chamil Sameera (Maseras research group) have been awarded a prize for presenting one of the best 15 posters on exhibition at WATOC 2011. Crisa’s poster was titled “A density functional theory study of the ‘mythic’ Lindlar hydrogenation catalyst?” and Sameera presented the poster “Quantum mechanics /molecular mechanics methods can be more accurate than full quantum mechanics in systems involving dispersion correlations”.

**i** [More info: Watoc 2011](#)



Dr. Chamil Sameera (left) and Crisa Vargas

## News in brief

**ICIQ/URV PhD fellowships:** ICIQ and the URV have launched a joint call for PhD fellowships for collaborative research projects between both institutions. This call offers 6 fellowships and deadline for applications is September 9, 2011.

**i** [More info: www.urv.cat](http://www.urv.cat)      **i** [More info: www.iciq.es](http://www.iciq.es)

### **Prof. Arjan Kleij, ICREA Research Professor:**

Prof. Arjan Kleij has been appointed ICREA (Catalan Institution for Research and Advanced Studies)



Research Professor. ICREA is a foundation supported by the Generalitat de Catalunya which aims to recruit top scientists for the Catalan R&D system. Previous to this appointment, Prof. Kleij had a position of ICIQ’s Tenure Track group leader and ICREA researcher.

**RSEQ awards to ICIQ group leaders:** The Real Sociedad Española de Química (RSEQ), in the frame of the “Premios RSEQ 2011”, has awarded Prof. Antoni Llobet (left) the “Premio de Química Inorgánica” and it has also awarded Prof. Feliu Maseras (right) the “Premio de Química Física”. Both awards are sponsored by Bruker Española.



**Henkel’s ATG meeting at ICIQ:** Henkel’s Advanced Technology Group (ATG) held its 2nd Global Conference at ICIQ last February 15th-17th. ATG, a technology platform of Henkel adhesive division, sets annual meetings to exchange update technologies and to encourage internal technology collaborations.



ATG is a global platform with 5 satellite teams around the world, Düsseldorf, Bridgewater (USA), Shanghai, Barcelona/ Tarragona (Henkel-ICIQ Joint Unit) and Dublin. ATG works in the fields of trigger/response systems, temporary and reversible fixturing, functional and sustainable materials and flexible substrates.

## Kids around the lab

The Campus of International Excellence Southern Catalonia (CEICS), promoted by Rovira i Virgili University and supported by ICIQ, is participating this year in the second Summer Science Campus programme sponsored by the Ministry of Education and the Spanish Foundation for Science and Technology (FECYT). ICIQ participates in this Summer Campus with the workshop “How to prepare a medicine.”

Throughout the month of July, students from 4th year of ESO and 1st year of Bachelor from Spanish schools and who have excelled in scientific subjects, will see and learn the whole process of performing a chemical reaction: From the study and preparation of the reaction to the analysis of the resulting product. Students will work under the supervision of ICIQ researchers and staff from ICIQ’s research support units. The purpose of this workshop is to familiarize students with chemistry and the way researchers do research.

A part of the workshop offered by the ICIQ, the campus offers other workshops such as “Chemistry for a sustainable world” (Faculty of Chemistry URV), “Searching for the Temple of Augustus” (Catalan Institute of Classical Archaeology, ICAC) and “H2 Creative Junior” (School of Chemical Engineering, ETSEQ).

 [More info: Summer Science Campus 2011](#)



*Students preparing a chemical reaction*

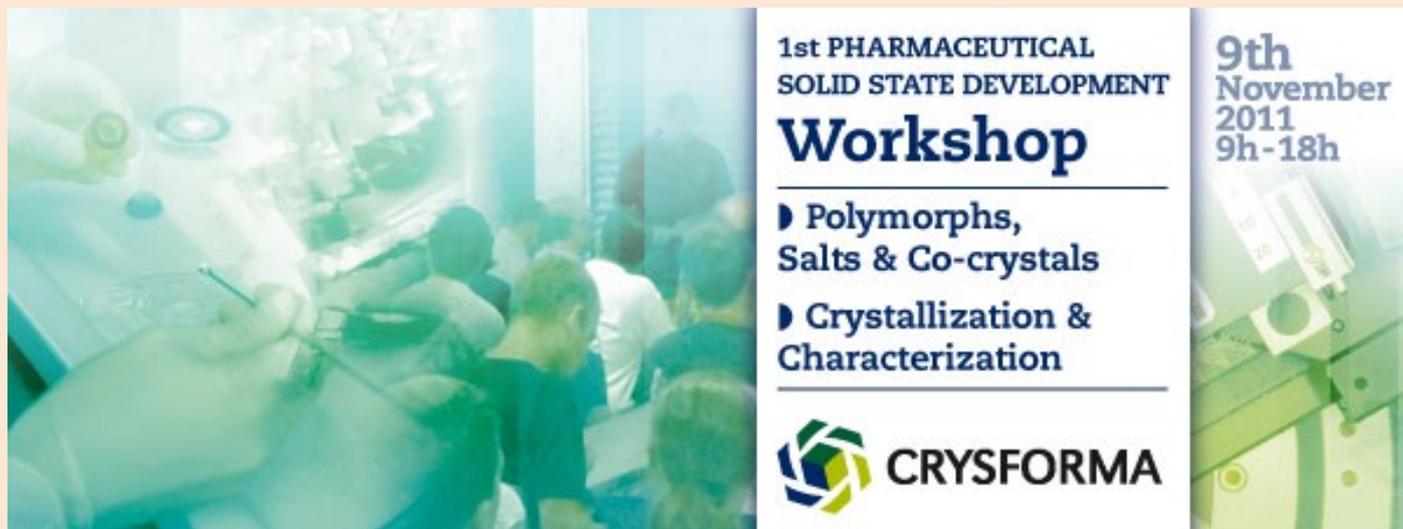
## Crysfarma organizes its 1<sup>st</sup> pharmaceutical solid state development workshop

Crysfarma, one of ICIQ’s technological platforms, has organized a problem-oriented workshop on pharmaceutical solid state development which will take place on November 9th, at ICIQ facilities. In this workshop Crysfarma’s researchers put their expertise to the benefit of industry. Discussion of practical cases, in-depth

analysis of results from several characterization techniques and a guided tour of ICIQ’s instrumentation facilities will give the participants a useful insight into pharmaceutical solid state development.

The workshop will cover aspects on Solid state development and its importance in the pharmaceutical industry; Polymorphism; Salts and co-crystals (strategy, counterion and co-crystal former selection); Crystallization; Solid state characterization and Crystallization screening.

 [More info: Crysfarma](#)



**1st PHARMACEUTICAL  
SOLID STATE DEVELOPMENT  
Workshop**

**9th  
November  
2011  
9h-18h**

- Polymorphs,  
Salts & Co-crystals
- Crystallization &  
Characterization

 **CRYSFORMA**

## Journal Covers



Electronic Properties and Molecular Simulations of Polyoxometalates

**i** [Access to the abstract](#)

(*Isr. J. Chem.* **2011**, *51*, 228-237) Authored by C. Bo and J.M. Poblet. Cover of the Israel Journal of Chemistry.



SPOs as new ligands in Rh(III) catalyzed enantioselective transfer hydrogenation

**i** [Access to the abstract](#)

(*Catalysis Science and Technology* **2011**, 401-407), authored by Pascal M. Castro, Henrik Gulyas, Jordi benet-Buchholz, Carles Bo, Zoraida Freixa and Piet W. N. M. van Leeuwen. Cover of *Catalysis Science & Technology*.



Access to Multinuclear Salen Complexes Using Olefin Metathesis

**i** [Access to the abstract](#)

(*Dalton Trans.* **2011**, *40*, 3352-3364), authored by obert H. Haak, Ana M. Castilla, Marta Martínez Belmonte, Eduardo C. Escudero-Adán, Jordi Benet-Buchholz, and Arjan W. Kleij. Cover of *Dalton Transactions*.

## Glass Blowing

“This is the Ferrari of the bench blowing torches” says Xavier Asensio, glass blower at ICIQ’s Glass Workshop, while he turns on the oxygen speeding up the flame and making it roar. Xavier repairs the broken glassware used in ICIQ’s labs and he blows special pieces designed by ICIQ researchers.

ICIQ’s glass blowing workshop was set up in April, 2011 in order to quicken the glassware reparations and to easily meet the needs of ICIQ researchers regarding the design of new or special pieces. “The researchers explain or draw the piece they want and I have to figure out how to make it. In fact, this is a very creative work,” adds Xavier who learnt how to blow glass at the age of 9, in his brother’s workshop.

A part from two torches (comb shape flame and circular flame), the workshop also has two saws (steel disc and diamond disc), a lathe, and an oven. “And now I’m waiting for a wet belt sander. Then, I’ll be all set,” affirms Xavier.



Xavier Asensio, manager of ICIQ’s glass blowing workshop



## Summer Meetings



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### CPHI-ICSE

25-27 October (Messe Frankfurt)  
 Crysforma's stand: 41A34

 [www.cphi.com](http://www.cphi.com)

 [www.crysforma.com](http://www.crysforma.com)

### Expoquímia

15-18 November (Fira Barcelona, Gran Via)

 [Expoquímia web page](#)

### Science Week at ICIQ

14-18 November (ICIQ, Tarragona)

### IYQ Celebration at ICIQ

8 November (ICIQ, Tarragona)

### ICIQ Seminar Program (September/November)

All seminars at 12p.m. in the ICIQ Auditorium

**Sept. 2nd:** Prof. Stephen Hashmi (University of Heidelberg)

**Sept. 16th:** Dr. James C. Romine (Dupont)

**Sept. 30th:** Prof. Carlos Saa (Universidad de Santiago de Compostela)

**Oct. 7th:** Prof. Marco Bandini (Università di Bologna)

**Oct. 28th:** Prof. Martin Oestreich (Universität Münster)

**Nov. 11th:** Prof. Ruth M. Gschwind (University of Regensburg)

**Nov. 18th:** Prof. Juan Manuel Cuerva (Universidad de Granada)

**Nov. 25th:** Prof. Alois Fürstner (Max-Planck Institut für Kohlenforschung)