

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

Institut  
Català  
d'Investigació  
Química



www.iciq.es

## New Group Leaders have joined ICIQ

As ICIQ enlarges its headquarters, new Group Leaders join the Institute. Prof. Paolo Melchiorre and Dr. José Ramón Galán-Mascarós have been the first GL out of five GL expected to join ICIQ in short time.

Prof. Melchiorre is a senior Group Leader at ICIQ and ICREA Professor and will focus his research on the design of novel organocatalysts, which allow previously elusive synthetic transformations, and the development of organocatalytic cascade reactions for streamlining the process of complex molecule synthesis.

Dr. Galán-Mascarós has joined ICIQ under its Tenure Track Program and his main research areas are synthesis, physical characterization and processing of transition-metal complexes of interest in Biology (metal-peptide interactions and models for protein active sites) and Materials Sciences (multifunctional molecular materials).



*Dr. Galán-Mascarós (left) and Prof. Melchiorre, new ICIQ group leaders*

The other group leaders to be incorporated throughout the year are Prof. Kilian Muñoz (in November), who will pursue research in the area of transition metal catalysis with a focus on oxidative nitrogen transfer reactions; Prof. Vladimir Grushin, late this year, and Dr. Atsushi Murakawa, as a Tenure Track researcher, early 2010.

## Prof. Piet van Leeuwen, honoris causa

On October 14th Prof. Piet van Leeuwen was invested Doctor Honoris Causa by the University Rovira i Virgili (URV). Prof. Carmen Claver was in charge of presenting Prof. van Leeuwen's achievements, and she pointed out that he was the first Chemist invested Honoris Causa by this university. During his speech, Prof. van Leeuwen stated it was an honor for him to be a member of the faculty of URV, and highlighted the importance of research in catalysis for the development of chemical processes and products of industrial use which minimize energetic expenses, produce few residues and are environment friendly. Prof. Van Leeuwen

also stressed the idea that any research project, despite how fascinating, has to accomplish one goal: it has to be useful to industry and to society.



*Dr. Francesc Xavier Grau, Rector of the URV hands over the honoris causa diploma to Prof. van Leeuwen*

EL PUNT

## Unitat Mixta Esteve-ICIQ

ICIQ is strongly committed to improving the competitiveness of the local Chemicals and pharmaceutical industries. This commitment can be established in three different ways: through an active policy to transfer the results of its research to these industrial sectors; by promoting the creation of high-tech businesses based on the research performed at ICIQ (for example, Crysforma) and by the creation of hybrid ICIQ-industry units. The Unitat Mixta Esteve-ICIQ is an example of this third strategy.



*Dr. Ana Isabel Oliva, Project researcher of the Unitat Mixta Esteve-ICIQ*

The Unitat Mixta Esteve-ICIQ started its research activities on June, 2009 and occupies one of the laboratories in ICIQ's new building, on the floor that houses the laboratories part of the Science and Technology Park of Tarragona (PCTT). According to Dr. Miquel A. Pericàs "The Unitat Mixta Esteve-ICIQ shows the success of the hybrid ICIQ-industry formula. I'm sure this is an experience that will be repeated in the future with other companies".

Currently, the Unitat Mixta Esteve-ICIQ is formed by five researchers, Drs. Félix Cuevas, unit coordinator and the project researchers Drs. Ana Isabel Oliva, Frédéric Ratel, Maria Ángeles Sarmentero and Dani Font.

**i** **More info:** [www.iciq.es/portal/strategic/361/business\\_development.aspx](http://www.iciq.es/portal/strategic/361/business_development.aspx)



## Briefs

**Paper in Nature Chemistry:** The paper entitled "Gold Catalysis. Carbene or Cation?", authored by Prof. Antonio M. Echavarren, was published last September in the first number of Nature Chemistry, (*Nature Chemistry* **1**, 431-433).



*Prof. A.M.Echavarren*

**i** **Prof. Echavarren Group:** [icq.es/portal/348/default.aspx](http://icq.es/portal/348/default.aspx)

**Agreements with UPENN and ICAC:** ICIQ has recently signed two collaboration agreements with the University of Pennsylvania (UPENN) and the Institut Català d'Arqueologia Clàssica (ICAC).

The Memorandum of Understanding (MOU) signed with UPENN seeks to establish a cooperation in a scientific, technical, and student exchange level, and to encourage technology transfer activities between ICIQ and UPENN. The agreement with the ICAC establishes a frame of cooperation in scientific projects, education and scientific outreach.

**i** **More info:** [www.upenn.edu](http://www.upenn.edu)

**i** **More info:** [www.icac.net](http://www.icac.net)

**Changes in ICIQ organisation:** Following the recommendations by the evaluation boards (administrative and scientific) some changes have been done in the organisation of the Institute.

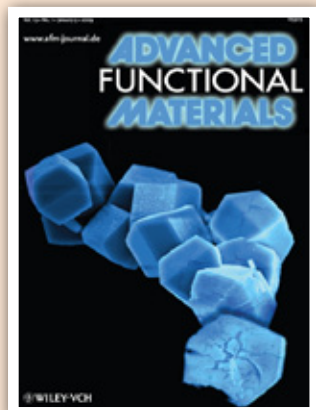
The Strategic Area will no longer depend on the Director and Dr. Lluís Solà will be the Manager for this area. The Research Support Area will now be led by Dr. Gisela Colet and Prof. Antonio M. Echavarren will be the Vice-director for Academic Affairs. Finally, a Human Resources Unit has been created and the Communication and Image Unit will depend on the Director's Office.

**i** [icq.es/portal/home/299/structure\\_organization.aspx](http://icq.es/portal/home/299/structure_organization.aspx)

**ICIQ's h-index:** According to the Web of Knowledge database, the current h-index obtained for the ICIQ (under the address abbreviation "Inst Chem Res Catalonia") is 42. It is worth highlighting this good result taking into account that the research activity of the centre started just five years ago.

## ICIQ's highlighted papers

This year, six scientific journals have chosen ICIQ papers for their covers:



Co-authored by Prof. Javier Pérez-Ramírez



Co-authored by Prof. Carles Bo



Co-authored by Prof. Carles Bo



Co-authored by Prof. Piet van Leeuwen



Authored by Dr. Arjan W. Kleij

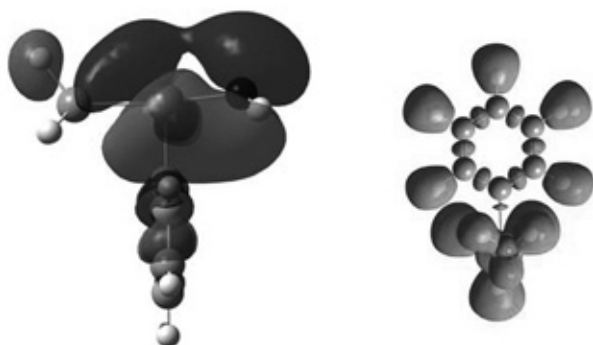


Co-authored by Prof. Pau Ballester

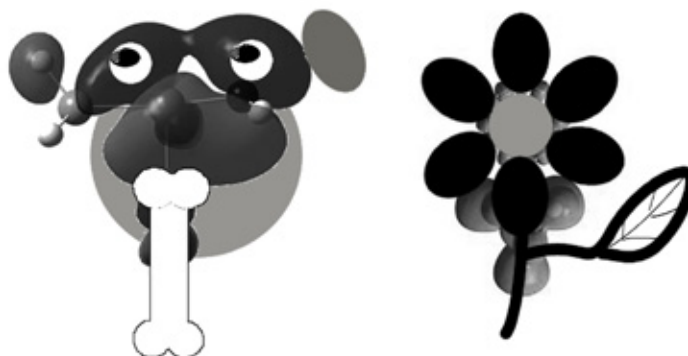
## Fun Chemistry

HOMO representation (left) and isosurface ELF=0,80 (right) of the model complex  $[\text{Pd}(\text{Ph})(\text{NH}_2)(\text{PH}_3)]$  (extracted from the article Theor Chem Acc 2009, 123:75-84).

Chemical Perception:



Non - Chemical Perception:



## ICIQ Science Week

From 16th to 21st November, the ICIQ organizes several activities in the frame of the Science Week, with the aim to involve our society in Science and, more specifically, in Chemistry.



Guided tours of ICIQ facilities will take place every morning from Monday to Friday, offering a great opportunity for secondary schools to visit our research laboratories. During the tour, students will learn how a research project is carried out in a cutting-edge research institute.

On the other hand, there will be a workshop on Familiar Chemistry, a fun way to discover and understand Chemistry from everyday experiences. Getting light out of lemons, making hot ice and transforming milk into plastic are some of the spectacular and amazing experiments that will be performed for and by the audience. This activity is addressed to the general public, specially to children, and will take place on Thursday 19th November at 6:30 p.m. (ICIQ Auditorium) as well as on Saturday 21st November, at 6 p.m. at CaixaForum (Cristofor Colom, 2, Tarragona).

The ICIQ will also have a booth at the Fira de Mostres d'R+D de Tarragona, which will be celebrated from 18th - 20th November at Campus Catalunya (Av. Catalunya, 35, Tarragona). In this booth there will be information about ICIQ and the research carried in the centre, and those who attend will have the opportunity to see and perform chemical experiments with materials of daily use. The schedule will be from 9:30 a.m. to 2 p.m., and from 4 p.m. to 8 p.m.

[iciq.es/portal/noticiaID!1187/Lang!en-US/339/Desktop-Default.aspx](http://iciq.es/portal/noticiaID!1187/Lang!en-US/339/Desktop-Default.aspx)

## Summer fellowship holders: Their experience

During the months of July through September, ten undergraduate students, each of them granted with a Summer Fellowship, spent a stay at ICIQ with the aim of carrying out a research project in some of the research groups of the centre.

The students pointed out that this was a great opportunity to learn different techniques that they did not know of before, and that they enjoyed working with so many tools and laboratory equipment.

Even though some of the students came from abroad (United Kingdom, Italy, US and Colombia), they stated it was very easy to communicate with the rest of the people at ICIQ without any idiomatic problem.

All of them agreed that this kind of stays are highly positive and that they would recommend it to other undergraduate students.



Participants in the ICIQ Summer Fellowship Program 2009

## Chemical Commuters

Working at the ICIQ can be a great opportunity to know the city of Tarragona and its vicinity. However, there is an increasing number of people who live in the metropolitan area of Barcelona and travel every day to work at ICIQ – they are the Chemical Commuters. Many of them travel by train, although the car is, to a lesser extent, another means of transport, and especially useful for those who do not live in the city of Barcelona.

As some of the regular commuters state, “Traveling from Barcelona to Tarragona every day implies having less time to dedicate to some tasks as shopping, doing housework, etc. But on the other hand, you can also use the journey by train to read, sleep, talk with your workmates and even work and write projects!”

From the ICIQ, a great improvement has been made for these commuters by providing a bus service which brings them from the train station to the Institute (and vice versa). As stated by one of the users, “This service makes the access from/to the train station much easier, since the urban buses give a quite limited service”.

Furthermore, this year the ICIQ bus service has been extended to the station of Camp de Tarragona (about 12 km from ICIQ), making it easier for some commuters to travel by high-speed train (AVANT). In spite of being more expensive and less frequent than the regional trains, travelling by AVANT entails saving time (it takes 40 minutes from Barcelona to Camp de Tarragona, while the journey by regional train takes around 1 hour and 15 minutes). One of the regular commuters cheerfully declared: “Since I go back home by AVANT, I have time to go to the gym!”



*ICIQ researchers in front of the transfer coach*

## Agenda

### Science Week at ICIQ

**Nov. 16-20th** Guided Tours

**Nov. 18-20th** Fira de mostres R&D de Tarragona (Av. Catalunya 35, Campus Catalunya URV)

**Nov. 19th**, 6:30 p.m. Química en Família: la Química de la vida quotidiana (ICIQ Auditorium)

**Nov. 21st**, 6 p.m. Química en Família: la Química de la vida quotidiana (Caixaforum, Tarragona)

**i** **Més info:** [www.iciq.es/portal/noticialD=1185/339/Default.aspx](http://www.iciq.es/portal/noticialD=1185/339/Default.aspx)

### PhD Thesis Defence

**Nov. 19th** 11:30h a.m. 11:30h ICIQ Auditorium  
Sr. Guzmán Gil “Supramolecular Chemistry of Aryl Extended Calix[4]pyrroles”

### Fem un Parèntesi a la Química

**Nov. 24th**, 6 p.m. ICIQ Auditorium  
Prof. Ignasi Ribas (ICE-CSIC)  
“La cerca de vida a l’univers”

**Nov. 13th:** Prof. Jonathan P. Clayden ( University of Manchester)  
“Conformational Communication and New Organolithium Reactivity”

**Nov. 20th:** Prof. Magnus Rueping (Johann Wolfgang Goethe Universität - Frankfurt am Main) “Chiral Brønsted Acids in Asymmetric Catalysis”

**Dec. 3rd:** Prof. Bert Weckhuysen (Universiteit Utrecht)  
“In Situ Spectroscopy and Heterogeneous Catalysis: Probing Catalyst Materials at Different Length Scales”

**Dec. 11th:** Prof. Andreas Kirschning (Leibniz Universität Hannover)  
“Enabling Technologies in Organic Chemistry- From Minireactors to New Heating Techniques”

**Dec. 18th:** Dr. Natalie Fey (University of Bristol) “Exploring Ligand Effects in Homogeneous Catalysis - Maps, Models and Mechanisms”

**Jan. 15th:** Prof. Eugenio Coronado (Universitat de València)

**Jan. 29th:** Prof. Troels Skrydstrup (University of Aarhus)  
“New Developments in C-C and C-Si Bond Forming Reactions”

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