

## **The International Conference on Self-Assembly in Confined Spaces (SACS 2016) starting today will address the subject of molecular self-assembly and its biomedical applications**

The event coincides with the end of the European project involving the participation of the CIC biomaGUNE research group led by Luis Liz-Marzán

Some 170 chemists, physicists, engineers and biomedical researchers specialised in nanoparticle self-assembly are expected to attend

Self-assembly processes are creating systems with enhanced functions compared to those of conventional molecular systems

### **(Donostia-San Sebastián, 25 October 2016).**

The International Conference on Self-Assembly in Confined Spaces (SACS 2016), to be held from 25 to 27 October in the Palacio de Miramar in Donostia-San Sebastián, will bring together some of the most active and renowned chemists, physicists, theoreticians, engineers and biomedical researchers worldwide to discuss the use of self-assembly as a tool to design, organize and endow nanomaterials with new properties.

The five main areas to be addressed are molecular self-assembly, nanoparticle self-assembly, interfacial properties, biomedical applications of self-assembled systems and advanced characterisation techniques. As Luis Liz-Marzán, Ikerbasque researcher and Scientific Director of CIC biomaGUNE, the host organisation of the conference expected to bring together some 170 researchers, explains: “Over the three days of the conference, the idea is to cover both the basics and the latest developments in the field of self-assembly”.

### **Applications**

Supramolecular chemistry studies molecules and macromolecules that bond to form large systems through spontaneous processes of self-assembly which endow them with new and interesting properties. This concept of self-organisation of nanomaterials to form hybrid materials gives rise to systems ranging spatially from nanometric size to



beyond the micrometric, thereby enabling chemical (adsorption affinity, reactivity and catalytic activity) and physical (mechanical, electrical, optical, etc.) properties to be controlled on different scales and in different directions. Systems can thus be obtained with enhanced functions compared to those of conventional molecular systems and with a wide range of new applications to be explored.

Keynote speakers include researchers such as Paul Weiss (University of California: Los Angeles, USA), Marie Paule Pileni (University Pierre et Marie Curie: Paris, France), Horst Weller (University of Hamburg, Germany), Rafal Klajn (Weizmann Institute of Science: Rehovot, Israel), Christopher B. Murray (University of Pennsylvania, USA), Jan Vermant (ETH Zurich, Switzerland), Teresa Pellegrino (Istituto Italiano di Tecnologia, Italy), Wolfgang Parak (Phillips Universität Marburg, Germany), Sara Bals (University of Antwerp, Belgium), Frank Caruso (University of Melbourne, Australia) and Kostas Kostarelos (University of Manchester, UK).

Jean-Pierre Sauvage, Sir J. Fraser Stoddart and Bernard L. Feringa were recently awarded the Nobel Prize in Chemistry for their research into the design of controllable molecules, a subject which will also be addressed within the conference.

The conference coincides with the end of the European project of the same name - "Self-Assembly in Confined Spaces" (SACS) – involving the participation of the research group led by Luis Liz-Marzán, and will showcase the project findings with a view to engaging fellow experts and laying the foundations for future collaboration to further add to the knowledge acquired.

The final project meeting was held yesterday as a pre-conference event. The project itself was EU funded and focused on research into processes of self-organisation of nanomaterials with applications of interest for catalysis, lighting and electrochromic devices.

### **About CIC biomaGUNE**

The Centre for Cooperative Research in Biomaterials (CIC biomaGUNE), located in the Donostia-San Sebastián Technology Park, conducts cutting-edge research at the interface between Chemistry, Biology and Physics, and particularly on the properties of molecular level biological nanostructures and their biomedical applications.