

Conferencias:

- **Organizing and processing functional molecules. Materials and devices with advanced properties and their applications.**
- **Multifunctional molecular nanovesicles. A new challenge for drug delivery**

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Jaume Veciana
ICMAB-CSIC, Barcelona

7-8 /05/15

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Aula de Seminarios
do CIQUS

12:15 h

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BIOSKETCH Jaume Veciana

Prof. Jaume Veciana (*Institut de Ciència de Materials de Barcelona, ICMAB-CSIC and Centro de Investigación en Red en Biomateriales, Bioingeniería y Nanomedicina, CIBER-BBN*) was appointed as Colaborador Científico of the *CSIC* in 1979 and in 1982/1983 moved to *The Johns Hopkins University*, MD (USA), with Dwaine O. Cowan, as a Postdoctoral fellow working on molecular conductors and organic metals. In 1991 he moved to the *ICMAB* where was promoted to Full Professor in 1996. He co-authored more than 400 journal articles and book chapters, 15 patents, and edited two books receiving in 2001 the Solvay Award and in 2004 the Real Sociedad de Química Española Award for his research in chemistry. In 2005 he received the DuPont Award for his contributions in Molecular Nanoscience and Nanotechnology. His research interest focuses on Molecular Functional Materials, Molecular Nanoscience, and Nanomedicine.

Conferencias de Jaume Veciana en Universidad Santiago de Compostela

Multifunctional molecular nanovesicles. A new challenge for drug delivery

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In this lecture a simple one-step and scale-up methodology for preparing multifunctional nanovesicle-drug conjugates will be presented. This method is readily amenable to the integration/encapsulation of multiple bioactive components, like peptides, proteins, enzymes, into the vesicles in a single-step yielding sufficient quantities for clinical research becoming, thereby, nanocarriers to be used in nanomedicine. A couple of examples of novel nanomedicines for solving serious diseases, prepared by this methodology, will be presented.

Organizing and processing functional molecules. Materials and devices with advanced properties and their applications

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In this lecture several procedures for organizing molecules, based on the use of weak intermolecular interactions, to self-assemble molecules on surfaces or to organize them as crystals will be presented. Moreover the processing of the resulting supramolecular materials to obtain different kinds of devices will be discussed. Examples of organization/processing of functional materials will be made using molecular materials that behave as multifunctional magnetic memories and as sensing devices, capable to detect tiny deformation changes and small temperature changes, will be presented.