

Centro Singular de Investigación en **Química Biolóxica** e **Materiais Moleculares**

Conferencia: Chemical Probes in Metal Catalysis

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Aula de Seminarios do CIQUS

17:30 h

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Chemical Probes in Metal Catalysis

Organic synthesis lies at the core of every advanced technology in our modern world: first, providing substances for further development and usage for other disciplines but also delivering previously unprecedented scaffolds. As the construction of complex molecular architectures from chemical building blocks still remains a far-from-routine task, the discovery of methodologies to increase the control over reactivity, while achieving molecular complexity with high levels of efficiency, is still one of the frontier challenges of chemistry in the 21st century.

Our group aims to develop a multidisciplinary research program supported on three pillars: first, the development of new processes for the construction of C-C and C-X bonds based on late-transition metal catalysis; second, the implementation of such methods to streamline the synthesis of complex natural products. A third focus is the study at a molecular level, both computational and experimentally, of relevant biological processes influenced by these advanced organic molecules such as cancer progression, cancer metastasis and cell motility. Our main contributions to each of these fields are summarized below.

Cristina Nevado graduated in chemistry at the Autónoma University of Madrid in 2000. In October 2004 she received her PhD in organic chemistry from the same University working with Prof. Antonio M. Echavarren in late transition metal catalyzed reactions. After a post-doctoral stay in the group of Prof. Alois Fürstner at the Max-Planck-Institut für Kohlenforschung (Germany), she joined the University of Zürich as an Assistant Professor in May 2007. In 2011, Cristina was awarded the Chemical Society Reviews Emerging Investigator Award and the Thieme Chemistry Journal Award in recognition of her contributions in the field of synthetic organic chemistry. In 2012 she received an ERC Junior Investigator grant and has been awarded the Werner Prize of the Swiss Chemical Society. In 2013 she became Full Professor at the Organic Chemistry Institute of the University of Zürich. Rooted in the wide area of organic chemistry, her research program is focused on complex chemical synthesis and new organometallic reactions.