ESTUDI de DOCTORAT en QUÍMICA

DEPARTAMENT DE QUÍMICA DE LA UAB

*Cicle de conferències de química**

"Controlled functionalization of surfaces: supported single-site catalysts and beyond"

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Homogeneous and heterogeneous catalysts have, each, specific advantages. While homogeneous catalysts are typically associated with efficient chemical transformations at low temperatures (high selectivity), heterogeneous ones are typically preferred in term of processes (easier regeneration and separation processes).

Here, we will show how it is possible to combine the advantages of homogeneous and heterogeneous catalysts by the controlled functionalization of the surfaces of oxide materials and by the characterization of surface species at the molecular level, thus allowing more predictive approaches. We will illustrate the power of this approach with the development of well-defined "single-sites", whose performance and stability can be far above those displayed by homogeneous and heterogeneous catalysts, *e.g.* alkene metathesis.[2]

With our current level of understanding of surfaces, we will also discuss new directions in this field: understanding defect sites of surfaces and metal-support interactions at the molecular level, introducing diversity in oxide chemistry, controlling the growth of nanoparticles, the development of luminescent devices

Dimecres 16 de maig de 2012,12:00h

Sala de Graus

Facultat de Ciències i Biociències

**Aquesta conferència forma part de les activitats formatives programades pel seguiment del progrés del doctorand*

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