

Open PhD Position (FPI)

Innovative Bimetallic Complexes for C–H Bond Functionalization

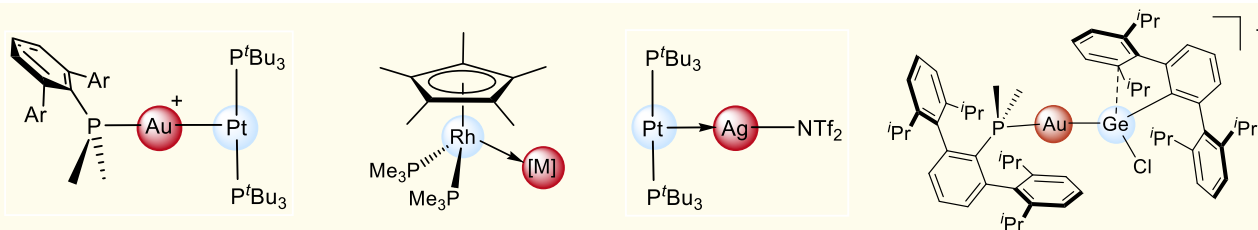
Institute for Chemical Research (IIQ), CSIC-University of Sevilla (Spain)

PhD Advisors: Jesús Campos and Joaquín López-Serrano

Group website: <http://jcamposgroup.iiq.us-csic.es/>

Expected Start: January 2024

PhD position available associated to the project 'Selective Functionalization of C–H Bonds through Innovative Bimetallic Designs' (Ref.: PID2022-139782NB-I00). The main idea will be to develop novel bimetallic systems to cooperatively activate and functionalize C–H bonds. These bimetallic catalysts will be based on bulky ligands (primarily phosphines) and contain highly polarized M–M bonds as those represented below. Besides, molecular confinement strategies will be exploited to modulate selectivity.



For bimetallic work from our group related to the project see: *JACS* **2017**, 139, 2944; *Chem. Commun.* **2019**, 55, 8812; *Chem. Eur. J.* **2020**, 26, 16833; *Angew. Chem. Int. Ed.* **2020**, 59, 20863; *JACS* **2021**, 143, 2509; *Angew. Chem. Int. Ed.* **2022**, 61, e202207581.

The PhD researcher will work closely with members of other sub-teams focused on a variety of cooperative designs. He/she will be responsible for synthesizing and characterizing ligands and complexes, carrying out reactivity and catalytic studies and investigating structures, bonding and reaction mechanisms by computational means.

Requirements. Bachelor and Master degree in Chemistry.

Elegibility. Proven track record in organometallic chemistry and he characterization of new compounds by spectroscopic techniques. Background in organic synthesis and catalysis will be considered.

Conditions. 4-Year Contract + International Research Stay.

Application Process. Candidates must send a motivation letter, CV (including academic record) and the contact information of two referees to Jesús Campos (jesus.campos@iiq.csic.es) before September 30th. After initial evaluation, shortlisted candidates will be interviewed online.

