重庆大学药学院成立 10 周年系列报告
第三十七期

天然产物全合成与创新药物研究重庆市重点实验室学术报告

第三百九十三讲

报告题目： **Simplifying C−C and C−X Bond Formation with Photochemistry**

报 告 人： **Manuel Plaza**

主 持 人： 熊阳 教授

时　　间： **2025** 年 **10** 月 **9** 日（周四）**10：30**

地　　点： 药学院学术报告厅

报告人简介：

2024-present: Ramón y Cajal Assistant Professor, University of Oviedo, Spain
2022-2023: Margarita Salas Junior Group Leader, University of Oviedo, Spain
2019-2022: Postdoctoral Researcher, Technical University of Munich, Germany
(Supervisor: Prof. Thorsten Bach)
2014-2018: PhD in Synthesis and Chemical Reactivity, University of Oviedo, Spain
(Supervisor: Prof. Carlos Valdés)

Current research interests

the development of photochemical cross-coupling reactions and photobiocatalytic processes.

Awards

Thieme Chemistry Award, 2024;
Ramón y Cajal Grant, 2024;

Comienza Grant, University of Oviedo, 2023

报告简介：

Developing simple photochemical transformations that provide efficient routes to complex, high-value compounds remains a key focus in modern organic chemistry. Over the past year, our research group has made significant contributions by designing simple, light-driven strategies for constructing organosulfur and organoboron scaffolds. The first part of this lecture will showcase recent progress in the photochemical generation of alkenyl radicals via the excitation of halogen-bonding (HaB) complexes. Our method employs alkenyl halides and nucleophilic sulfur sources to facilitate C−S bond formation, enabling diverse transformations such as thioetherifications, carbothiophosphorylations, sulfonylations, and thiocyanations. The second part will highlight the development of photochemical carboborylation reactions involving N-tosylhydrazones and boronic acids. This includes the synthesis of benzyl boronates; allyl boronates, where the boronic acid intermediate can also be trapped with aldehydes to yield complex allylic alcohols; and 1,3-difunctionalization reactions that introduce two distinct C−C bonds on cyclohexene-type structures. Developing simple photochemical transformations that provide efficient routes to complex, high-value compounds remains a key focus in modern organic chemistry. Over the past year, our research group has made significant contributions by designing simple, light-driven strategies for constructing organosulfur and organoboron scaffolds. The first part of this lecture will showcase recent progress in the photochemical generation of alkenyl radicals via the excitation of halogen-bonding (HaB) complexes. Our method employs alkenyl halides and nucleophilic sulfur sources to facilitate C−S bond formation, enabling diverse transformations such as thioetherifications, carbothiophosphorylations, sulfonylations, and thiocyanations. The second part will highlight the development of photochemical carboborylation reactions involving N-tosylhydrazones and boronic acids. This includes the synthesis of benzyl boronates; allyl boronates, where the boronic acid intermediate can also be trapped with aldehydes to yield complex allylic alcohols; and 1,3-difunctionalization reactions that introduce two distinct C−C bonds on cyclohexene-type structures.