

重庆大学药学院

天然产物全合成与创新药物研究重庆市重点实验室

学术报告第三百四十二讲

报告题目: Advancing Simple Photochemical Methods For C-C and C-X Bond Formation

报告人: Manuel Plaza 助理教授 (University of Oviedo)

时 间: 2024 年 10 月 14 日 (周一) 上午 10: 30

地 点: 药学院学术报告厅

报告人简介:

Manuel Plaza

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

- (1) Photochemistry of EDA and halogen-bonding complexes
- (2) Visible-light-driven reactions between diazocompounds and boronic acids
- (3) Asymmetric photobiocatalytic transformations

Awards



Thieme Chemistry Award, 2024

Ramón y Cajal Grant, 2024

Comienza Grant, University of Oviedo, 2023

报告简介:

Developing synthetic photochemical transformations that offer straightforward pathways to complex, high-value compounds is an important area of research in modern organic chemistry. Over the past year, our research group has made notable contributions by devising simple, light-driven transformations for producing organosulfur and organoboron scaffolds. The first part of the lecture will highlight recent advancements in the photochemical generation of alkenyl radicals through excitation of halogen-bonding (HaB) complexes. Our approach utilizes alkenyl halides and nucleophilic sulfur sources to enable streamlined C–S bond forming reactions including thioetherifications, carbothiophosphorylations, sulfonylations, and thiocyanations. The second part will focus on the development of photochemical carboborylation reactions of N-tosylhydrazones with boronic acids. These transformations give access to relevant benzyl boronates, unreachable through such reagents under thermal activation. This reactivity was extended to the creation of allyl boronates, where the boronic acid intermediate could also be trapped with aldehydes to access complex allylic alcohols.