

Einladung zum V O R T R A G

Adolf-Lieben-Lecture 2026

“Memory of Chirality in Radical Chemistry”

Prof. Dr. Paolo Melchiorre
(University of Bologna/IT)

Mittwoch, 7. Oktober 2026, 15:30 Uhr
HS H „Ulrich Santner“
Technische Universität Graz
Kopernikusgasse 24, EG

Biography: Prof. Melchiorre studied chemistry at the University of Bologna and obtained his PhD under the supervision of Prof. Cozzi and Prof. Umani-Ronchi. After a research internship in Aarhus (Prof. Jørgensen) he first worked as a postdoc with Prof. Bartoli (Bologna), before starting his independent career as an Assistant Prof. in Bologna in 2007. In 2009 he joined the ICIQ in Tarragona as a Professor where he stayed till 2022 when he moved back Bologna as a Full Professor. Prof. Melchiorre is well-known for his pioneering work in the development of novel catalytic methods and tools, especially in the field of asymmetric organocatalysis and photoredox chemistry.

Prof. Melchiorre has received several awards among which an ERC Starting Grant (2011), ERC Consolidator Grant (2016) and ERC Advanced Grant (2024).

Abstract:

Radical intermediates are often considered incompatible with the preservation of stereochemical information because of their high reactivity, conformational freedom, and rapid stereochemical scrambling. This lecture will discuss strategies to impose “memory of chirality” in radical chemistry by using excited-state catalytic intermediates and confined reaction environments. Engineered photoenzymes use the confined space of an active site to control excited-state radical intermediates and preserve stereochemical information during bond formation.¹ This concept provides a blueprint for developing stereospecific radical strategies outside biological systems, where molecular organization, confinement, and direct photoexcitation can impose memory of chirality in radical chemistry.

(1) Tseliou, V.; Kqiku, L.; Berger, M.; Schiel, F.; Poelarends, G. J.; Melchiorre, P. *Nature* **2024**, 634, 848–854.