



## Farewell Programme

### 5<sup>th</sup> Graduating Class · 2023-2025

#### INVITED SCIENTIST: Dr Daniel Maspoch



*Dr. Daniel Maspoch is an ICREA Research Professor and Group Leader at ICN2 (Spain). His main interests focus on clip-off chemistry, porous reticular materials, and delivery systems. He is the author of over 211 articles, has filed 16 patents (4 of which have been licensed), has signed 4 technology transfer contracts, has developed 3 technologies that are available on the market, and is the co-founder of the spin-off company Ahead Therapeutics. In recent years, he has received prestigious ERC Consolidator, Proof-of-Concept and Advanced Grants, been awarded several prizes including the Rei Jaume I Award, and has been appointed as a new Corresponding Academician of the Royal Spanish Academy of Science (RAC).*

#### More info

#### Monday February 3<sup>rd</sup>, 2025

##### 17:00 Master Students meet Dr Daniel Maspoch

Location: CiQUS | Seminar Room 3<sup>rd</sup> Floor

Note: Coffee and Tea will be served during the session

#### Tuesday February 4<sup>th</sup>, 2025

##### 9:00 Meetings with CiQUS PIs and Junior Scientists

Location: CiQUS | PIs' Offices

##### 12:00 Invited Lecture by Dr. Daniel Maspoch

Location: CiQUS | Seminar Room (Ground Floor)

## Clip-off Chemistry: Synthesis by Bond Cleavage

**Resume:** Historically, innovations in synthetic methods and reactions have changed the way scientists think about designing and synthesizing materials and molecules. Indeed, novel synthetic methods not only unlock access to previously unattainable structures, but also inspire new concepts as to how we design and build materials to address global social, economic and industrial needs. In this talk, I will present the concept of bond breaking as a new synthetic methodology that we have named Clip-off Chemistry. Unlike most state-of-the-art synthetic approaches, which use bottom-up strategies to link atoms and molecules through the formation of new bonds, Clip-off Chemistry is based instead on the selective cleavage of existing bonds in molecules and materials, providing precise spatial control over bond cleavage. Therefore, Clip-off Chemistry represents a new synthetic methodology, whereby the programmed selective disassembly affords new molecules and materials. This disassembly occurs at the molecular level through a chemical reaction; in a first approach, through ozonolysis, a gas/solid reaction that enables cutting of constituent organic molecular building blocks or linkers via direct cleavage of their alkene bonds. In this talk, I will show the principles of Clip-off Chemistry, and the first examples of structures and molecules synthesized through controlled bond fission in porous reticular materials (i.e. MOFs, macrocycles and cages).

##### 13:00 Farewell ceremony and closing

Location: CiQUS | Seminar Room (Ground Floor)

