UNIVERSITÀ DEGLI STUDI DI BRESCIA

I SEMINARI DEL DIPARTIMENTO DI MEDICINA MOLECOLARE E TRASLAZIONALE

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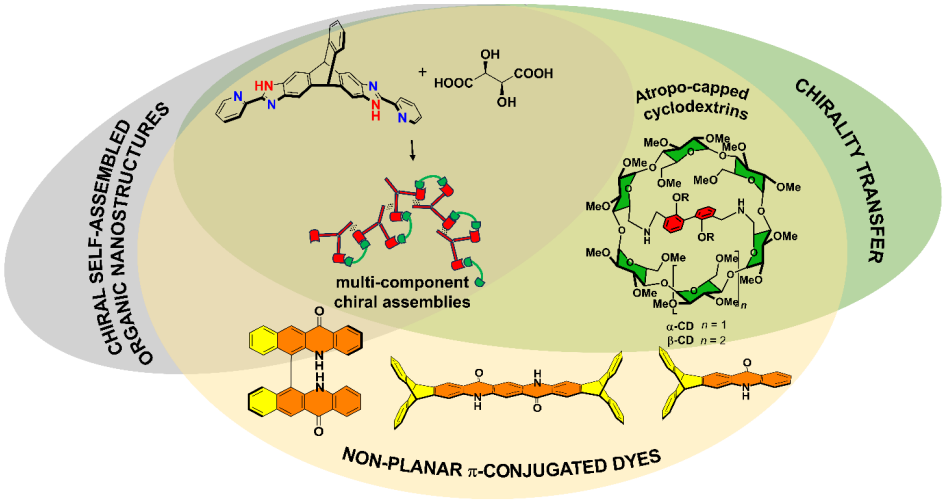
Chiral π-Conjugated rganic Materials

Chirality is a fundamental property of matter that pervades every level of the Universe, from the subatomic scale to the motion of galaxies. From the organic chemist's point of view, asymmetry at the molecular level originates a series of sophisticated (chiro)optical properties, which can be harnessed for a variety of important technological applications: data encryption, 3D displays, spintronics and bioimaging. In this seminar, we will disclose our recent efforts to develop chiral systems with intriguing (supra)molecular functions. The (chiro)optical materials we have developed include exquisitely artificial non-planar π-conjugated architectures, natural-inspired cyclodextrin cavities and mixed (self)assemblies. These new yet simple chiral organic soft materials have been utilized in fascinating areas such as sensing of environmentally relevant analytes, molecular switches, organic optoelectronics, self-assembled materials displaying chiral memory, self-recovery and stimuli responsive abilities.



Giovanni Preda obtained his master's degree (summa cum laude) in 2019 at the University of Pavia (Italy) under the supervision of Prof. Mauro Freccero, working on photoactivatable ligands for nucleic acids. In November 2019, he joined the research group of Prof. Dario Pasini at the same University, where he completed his PhD in October 2022 with a thesis on chiral π-conjugated organic materials. He spent part of his PhD as a visiting student in the laboratory of Prof. Dominique Armspach (Institut Le Bel, University of Strasbourg, France), where he was introduced to the cyclodextrin functionalization. He is currently a PostDoc researcher in Prof. Dario Pasini's group, working on self-assembled chiral nanostructures and organic synthesis.

Lunedì 29 aprile 2024, Ore 13:00, aula A1

Ospite: Prof. Paolo Bergese