Seminario 🖣

Università degli Studi di Padova Dipartimento di Scienze Chimiche

Ciclo di Seminari 'Frontiers in Chemistry'

Prof. Jurriaan Huskens

Molecular Nanofabrication group (MnF) Department of Molecules & Materials University of Twente, MESA+ Institut, Netherlands j.huskens@utwente.nl



Superselectivity and recruitment as organizing principles in bio-sensing and self-assembly

Giovedì 5 Giugno 2025, ore 16.30 Aula I

Multivalent interactions govern biological processes like cell signaling and virus infections. Such interactions are characterized by unique energetic, structural and dynamic properties, and they occur at a well-defined contact area, in which multiple complementary binding sites interact with each other in a reversible and dynamic manner. Emerging properties of such systems are superselectivity and recruitment. Superselectivity describes the nonlinear dependence of binding with receptor/ligand densities, whereas recruitment occurs when mobility allows receptor and/or ligand sites to move in and out of the contact area, typically leading to enhanced binding sites occurring within the contact area and depletion thereof outside. This presentation shows how superselectivity and recruitment can be engineered to create new principles for virus detection, biomarker isolation, and materials self-assembly.



La presenza della S. V. sarà molto gradita.

Prof. Leonard Prins

Dipartimento di Scienze Chimiche **Prof. Stefano Mammi** Direttore del Dipartimento di Scienze Chimiche



Università degli Studi di Padova

