Università di Roma Tor Vergata

Materials Science Seminar
15/9/2023 11.00 am
Grassano room
Sogene Building

Bottom-up engineering of organic functional architectures

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Organic architectures are considered amongst the most promising candidates for engineering molecular-based devices. It is however necessary to develop systems that can form at interfaces organized molecular assemblies featuring addressable and controllable
arrangements. In this respect, the hierarchical self-assembly of organic molecules featuring complementary non-covalent recognition sites allowing the simultaneous assembly of several units and long-range order is one of the most promising approaches. In this talk, I will describe
our approaches to engineer multidimensional structures through the
exploitation of weak interactions established by programmed molecules.
Specific serendipitous examples will be discussed with the attempt to answer to the question of whether and how the supramolecular approach can bridge organic chemistry with molecular organization and to which extend we can achieve macroscopic functions solely through molecular engineering