Organic and hybrid materials for photonics and electronics

Prof. Luisa de Cola, University of Strasbourg
8 hours (1 cfu)

18/02/2019 - 2.30-4.30 p.m. seminar room Department of Material Science - U5
19/02/2019 - 2.30-4.30 p.m. seminar room Department of Material Science - U5
20/02/2019 - 2.30-4.30 p.m. seminar room Department of Material Science - U5
21/02/2019 - 2.30-4.30 p.m. room U9-09

The course will cover fundamentals on the design, synthesis, characterization, processing, and applications of organic molecules, polymers and inorganic materials.
In particular the course will be divided in 4 classes of 2 hours each discussing the following topics:

1. Design, synthesis, and characterization of materials. The first lecture will discuss the chemical structures/property relationship. Photophysics concepts such as light absorption, emission, photoinduced processes

2. Organic and hybrid photonic devices: OLED, Lighting. The second lecture will apply the concepts learnt in the first one for the construction of light emitting devices

3. Organic and inorganic systems for photovoltaics. The third lecture will address the different type of photovoltaic devices and the evolution of the materials used.

4. Nanomaterials for sensing, upconversion and imaging. The last lecture will cover new development in three areas where “nano” can be important.