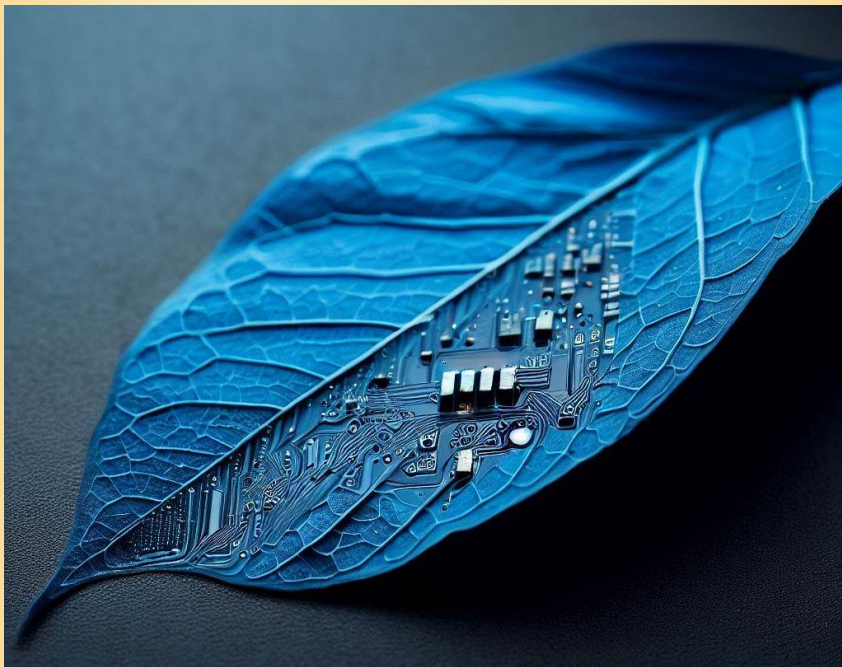


Colóquio de Física

CFUM, LIP-Minho, DF

Terça-Feira, 7 de maio às 16h
Anfiteatro de Química, Escola de Ciências,
Gualtar

Bio-inspired polaritonic photonic structures: exploring new paths for light harvesting **Dra. Sara Sanchez , Centro de Física das Universidades do Minho e Porto**



Resumo:

Photosynthesis is a fascinating phenomenon due to its extraordinary efficiency. When an exciton is generated on a light-harvesting antenna it is transported to the photoreaction with values close to 100 % revealing an extraordinary strategy to transport information and collect energy. The complexity of the natural photosynthetic structures and their molecular components makes it difficult to work out the mechanism that governs them. However, under this biological complexity, there seem to be some structural rules with similar molecular spatial distributions at the nanoscale repeated between different photosynthetic life entities, such as bacteria or plants. In this colloquium, I will show how photosynthetic molecular distributions at the nanoscale can inspire us to develop novel photonic nanostructures and technologies that manipulate light and mimic their transport efficiency. Moreover, I will show how this multidisciplinary vision which joins quantum physics, chemistry, and biology is developed in three currently funded projects: CATARSIS, BIO-POLARITON, and, the recently granted EIC Pathfinder Open - ADAPTATION.