POWER CO_2

Fabrice Odobel

The research activity of Dr. Fabrice Odobel's group is centered on the development of functional molecular devices exhibiting complex photochemical functions. The team is currently developing two distinct research projects:

1 – Conversion of Solar Energy into Electrical Energy in Dye Sensitized Solar Cells

Design and preparation of compounds for the fabrication of photovoltaic cells based on the sensitization of wide band-gap semiconductors.

2 – Artificial Photosynthesis

Molecular architectures aimed at designing hybrid systems made of molecules and semiconductors for Photoelectro-chemical Cells (PECs) and Dye-Sensitized Photoelectro-chemical Cell (DSPEC) to convert sunlight into chemical energy such as hydrogen, carbon monoxide, methanol or ammonia. Moreover, reticular materials such as Metal Organic Frameworks (MOFs) and Covalent Organic Frameworks (COFs) are also developed for electro- or photo-catalytic devices.