

Near-Infrared biphotonic molecular engineering in the service of biology or defense

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Biphotonic irradiation is used in different fields of applications from microfabrication, biology and therapy to defense. The design of chromophores for these applications is strongly related to their excited state properties.

During this seminar, our molecular engineering will be presented

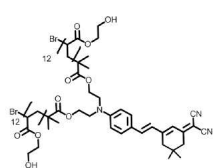
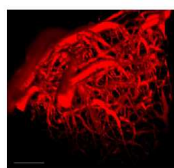


Fig. 1: Example of fluorophore with a 3D image of the functional cerebral vasculature in the motor cortex of mice using two-photon laser scanning microscopy



in the view of biological imaging (Fig. 1) or photodynamic therapy (1), optical power limiting at telecommunications wavelengths (Fig. 2) (2) and materials sciences (3). Besides the molecular design

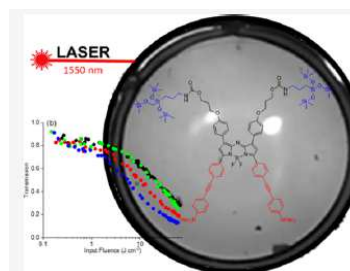


Fig. 2: Optical limiting filters: when azabodipy dyes bond to sol-gel materials

for each application, taking into account all the photophysical requirements in addition to the optimisation of biphotonic properties, the compatibility of molecules with their environment will be also addressed in each case.

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