

## OPTEXC Invited Speaker Series

## Design and characterization of small molecular systems for photo-induced charge separation

In this talk I will review some achievements in molecular systems for photo-induced charge separation, in particular for organic photovoltaic applications (from fullerene to Y-systems). Then I will show how theoretical predictions from quantum mechanical approaches can guide the design of small molecular systems for photo-induced charge separation. We present the design of a naphthalene diimide with phenothiazine derivatives and, for the chosen system, we show that electrical properties under illumination are greatly improved. In particular, the dielectric constant of the system changes considerably with illumination, providing us important insights to understand the charge separation mechanism in donor-acceptor molecular systems.

Date: Tuesday, 12th December 2023 | Time: 1:30 pm | Room: 1.1.02.621 (NWII)



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