Transient Absorption Spectroscopy (TAS) for the Study of Organic Materials for Energy Conversion

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Keywords: Spectroscopy, Transient Absorption, Organic Solar Cells

Transient Absorption Spectroscopy (TAS) is a pump probe technique with the ability of directly probe the photogenerated species and their evolution with time. This technique consists in two light sources, one of them generates the photoexcited species while the other one probe those as-generated species. TAS allows to study energy transfer dynamics in a wide range of materials (organic molecules, metal complexes, inorganic materials, etc) in a wide range of media (solution, solid state, etc).

Following the School spirit of this '*Escuela de Materiales Moleculares*' this talk is going to explain the capabilities and functioning of TAS. This will include both, picosecond and microsecond TAS, with their differences in setup and applicability. This talk will focus on the application of this technique in the study of organic materials used to generate energy.

Among the variety of the studied examples, there will be small molecules donors, diradicals materials. And the information that TAS is able to obtain from those.