

TRANSIENT ABSORPTION AND RAMAN SPECTROSCOPIES IN ORGANIC ELECTRONICS

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Raman spectroscopy has proved to be a very valuable tool for characterization in a large number of research fields, both biological, chemical and material sciences.[1] In the last decades, organic electronics has broken out as a real alternative to conventional electronics, based on inorganic materials. However, in order to advance significantly in this field of research is paramount the full characterization of electronic devices, going from the individual molecule to the system as a whole.

Moreover, the study of photophysical and photochemical processes crosses the interest of many fields of research in physics, chemistry and biology. Among the experimental approaches developed for this purpose, the advent of ultrafast transient absorption spectroscopy has become a powerful and widely used method.[2,3] This pump-probe technique is a popular means of studying photophysics, because of its versatile time resolution and its ease of comparison with ground-state absorption spectra.

In this communication, I will present the basic principles of transient absorption spectroscopy, along with some examples where its combination with Raman spectroscopy allows the great characterization of organic molecules with potential applications in organic electronics.[4,5]

References

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