Conférence – CEISAM – UMR CNRS 6230

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Supramolecular control of electronic properties in organic materials and their applications towards devices

In recent years, the development of nanoscale molecular devices has emerged as a viable route to intelligent functional materials operating at the molecular level. For applications in organic electronics, the organization of electractive moieties is a prerequisite. Such organization, which can be attained by making use of supramolecular interactions, can lead to materials exhibiting controlled electron and energy transfer processes. A major feature of the self-assembly process is that individual components will spontaneously combine in a predetermined fashion due to the presence of complementary molecular recognition sites. An advantage of supramolecular architectures is their ability to accommodate geometries not easily obtained by conventional synthesis, such as proximal arrangements of distant orthogonal units. This can lead to interesting photochemical and photophysical behavior, such as the observation of additional electronic interactions, or the control of excited-state processes.[1-4]

References

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3. *ACS Nano,* **2016**, *10,* 998; *Macromolecules* **2013**, *46*, 1591.
4. *Angew. Chem. Int. Ed.* **2011**, *50*, 9584; *Phys. Chem. Chem. Phys.* **2012**, *14*, 8859.

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