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The use of organic materials to design electronic devices has actually presented a broad interest because they constitute an ecological and suitable resource for our current "electronic world". These materials provide several advantages (low cost, light weight, good flexibility and solubility to be easily printed) that cannot be afforded with silicon.[1] They can also potentially interact with biological systems, something impossible with inorganic devices. The performance of the organic-based electronic devices critically depends not only to the intrinsic properties of the conjugated cores but also to the supramolecular arrangement.[2] In this contribution, we present some of our more recent investigations on this field dealing with the better understanding of the complex structure-properties relationships of organic nanomaterials.[3] For this purpose, we use a joint experimental and theoretical approach that includes spectroscopic measurements and molecular modeling.

Figure 1. Examples of the supramolecular arrangements recently studied.

References