

Chiral molecule to chiral functional nanoobjects



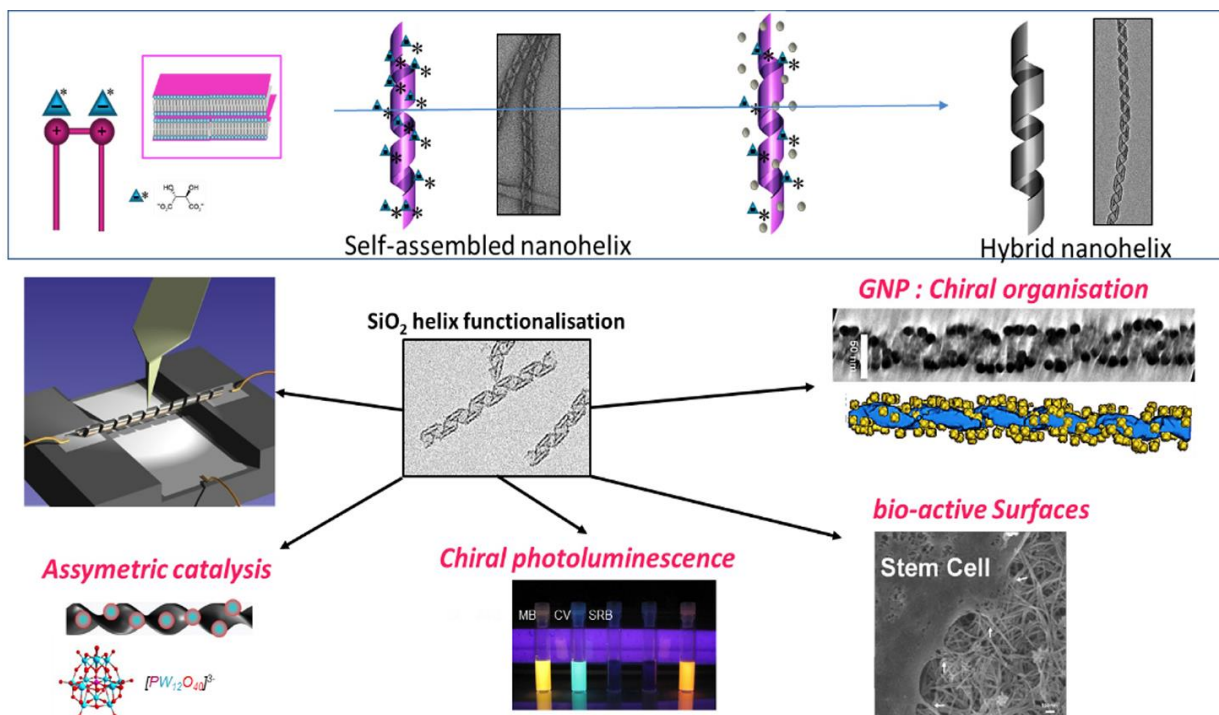
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Résumé/Abstract

Recently, there are many reports on biologically inspired helical structure obtained by polymers, foldamers and low molecular-weight molecules. The helices with controllable pitches are attractive not only to mimic nature, but also for the wide range of applications in materials sciences, chemical and biomaterial sensing, and enantioselective catalysis. We have reported that chiral supramolecular assembly system can be achieved from non-chiral cationic surfactants with chiral counterions,¹ the role of the latter is extremely important to control the intimate morphologies of these chiral nanostructures. In this talk, I would like to discuss how such structures can then be used as scaffold to obtain hybrid organic/inorganic nanohelices,² which can then be used as a) nano-sensors, b) biomimicking objects, or c) the chiral environment of which can be used to organize nanoparticles or chromophore³ and thus induce chiroptical signals.

Keywords: Chirality, Self-assembly, Nanomaterials, Hybrid materials.



References

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