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"CHIRALITY AND MULTIFUNCTIONALITY IN HELICENE-BASED CHEMICAL PLATFORMS"

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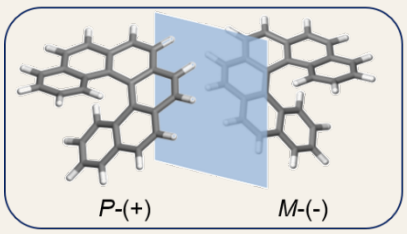
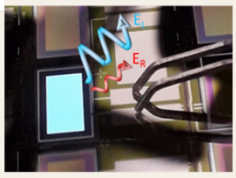
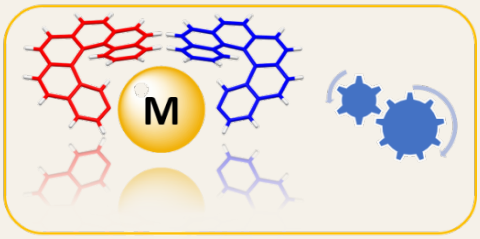
Ortho-fused aromatic rings form helically shaped chiral molecules such as carbo[6]helicenes, that wind in a left-handed (*M*) or a right-handed (*P*) sense.[1] The helical topology combined with extended pi-conjugation provide helicenes with peculiar properties such as strong photophysical and chiroptical properties (high optical rotation values, intense electronic circular dichroism and circularly polarized emission). The molecular engineering of helicenes using organometallic and heteroaromatic chemistries offers a convenient way to tune the properties of these helically shaped pi-ligands. Indeed, their combination with metallic or organic assembling units leads to chiral materials with appealing properties (circularly polarized phosphorescence, magnetochirality, spin selectivity) for applications in materials science (Circularly Polarized OLEDs, Chiroptical Switches, Spintronics). I will present a set of representative examples.[2]







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