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# Chiral Electro- and Photoactive Materials

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Chirality manifests itself in many areas of physics, chemistry and biology, where objects or materials can exist in two non super-imposable forms, one being the mirror image of the other.<sup>1</sup> Introduction of chirality into conducting systems is a topic of much current interest as it allows the preparation of multifunctional materials in which the chirality might modulate the structural disorder or expresses its influence through the electrical magneto-chiral anisotropy effect.<sup>2</sup> The access to various chiral electroactive precursors for molecular conductors is therefore of paramount importance.<sup>3</sup> Our endeavour towards chiral molecular superconductors will be outlined.<sup>4</sup>

In the same time, the most distinctive manifestation of chirality in chemistry is in the optical activity of chiral compounds, expressed as optical rotation or circular dichroism (CD). Additionally, when a chiral compound is emissive, circularly polarized luminescence (CPL) can be expected to occur. Another chirality related effect is the chirality induced spin selectivity (CISS) consisting in a preferential spin transmission through a chiral material. We will show in this contribution different families of helicene based materials showing these two properties.<sup>5,6</sup>

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<sup>2</sup> F. Pop, P. Auban-Senzier, E., Canadell, G. L. J. A. Rikken, N. Avarvari, *Nat. Commun.* **2014**, *5*, 3757.

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