

## Enantiomer discrimination in voltammetry in media of high structural order at the electrochemical interphase implemented with chirality

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Discrimination of the enantiomers of electroactive chiral molecules in voltammetry is a fascinating frontier target. Of course the necessary condition to achieve it is that the two enantiomers undergo electron transfer in energetically different conditions. Since in an achiral context they would have identical physico chemical properties and thus also identical voltammetry features, this requires the implementation at the electrode|solution interphase of a suitable enantiopure chiral selector.

The so far most popular strategy consists in working on chiral electrode surfaces, and an impressive variety of approaches has been proposed [1,2]. However, working on achiral electrodes with chirality implemented in the medium has also been proposed [1,3], and very recent experiments have highlighted that this approach can yield outstanding discrimination in terms of potential differences for the enantiomers of chiral electroactive probes, when working in media of high structural order at the charged interphase, like ionic liquids ILs [3-7] and deep eutectic solvents DESs [8], implemented with chirality [5,6,9] or, even better, inherent chirality [4,7,8].

Such achievements will be comparatively presented and commented in terms of IL and DES structural order at the interphase (also compared to classical media and to ionic liquids / ionic liquid crystals [9]) as well as of possibility of probe/selector specific interactions.

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