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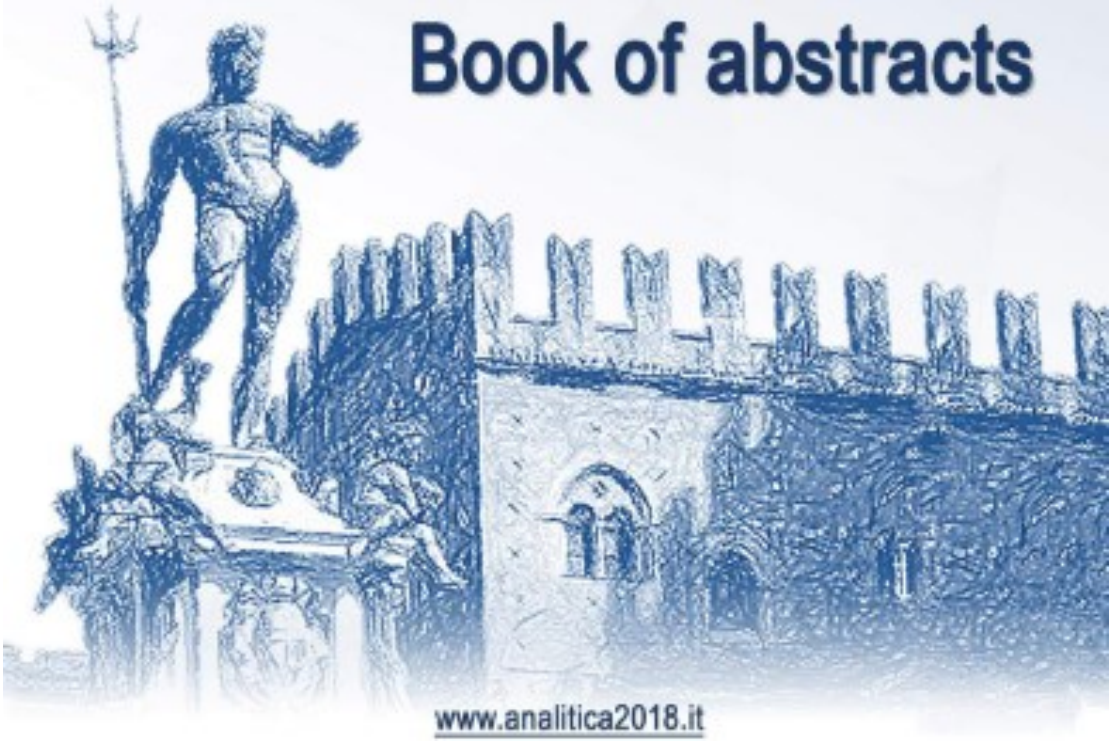

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WIDE-SCOPE ENANTIOSELECTIVE VOLTAMMETRY: TESTING INHERENTLY CHIRAL SELECTORS WITH CHIRAL PROBES REPRESENTATIVE OF DIFFERENT STEREOGENIC ELEMENTS

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Enantioselective electroanalysis is an advanced, attractive target of high potential interest in applicative fields like *e.g.* the pharmaceutical one. Of course, since specular molecules have the same properties excepting when interacting with a chiral environment, enantiodiscrimination can only be achieved with the electron transfer process taking place at a chiral electrode|medium interphase. In this frame, remarkable performances have been recently observed employing selectors endowed with "inherent chirality", *i.e.* in which chirality and key functional properties originate from the same element. Successful chiral voltammetry tests have been obtained (a) on chiral electrode surfaces based on inherently chiral, electroactive heterocycle-based oligomers, including cyclic ones [1-4] and (b) on achiral electrodes in inherently chiral ionic liquids or achiral ionic liquids with inherently chiral additives [5].
An attractive feature of the above approach is its general validity. In fact, we have observed that a given inherently chiral selector can discriminate the enantiomers of even very different chiral probes (and, symmetrically, the enantiomers of a given probe can be discriminated by different inherently chiral selectors). Moreover, enantiodiscrimination by inherently chiral selectors is being tested with chiral probes representative of different classes of stereogenic elements. A selection of examples will be presented, compared and discussed.

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[1] Angew. Chem. Int. Ed. 53 (2014) 2623-2627.
[2] Chem-Eur. J. 20 (2014) 15261-15634.
[3] Chem. Sci. 6 (2015) 1706-1711.
[4] Chem-Eur. J. 22 (2016) 10839-10847.
[5] Angew. Chem. Int. Ed. 56 (2017) 2079 –2082.