Short Communication

Electrochemical Fingerprint for Species Identification in *Acer* Linn

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Aceraceae is the largest family in broad-leaved deciduous and evergreen forests, widely distributed in Asia, Eastern North America, and Europe. The interspecific hybridization and introgression occur extensively among closely related species of *Acer* Linn, causing transitional intraspecific morphological variations, such as similar shapes of leaves, inflorescences and samaras. The adoption of electrochemical fingerprint technology for the identification of plant species is an emerging application in the field of biosensors. In this work, leaves of *Acer sinense*, *A. oliverianum*, *A. wilsonii*, *A. tonkinense*, *A. kuomeii*, *A. elegantulum*, *A. henryi*, *A. sinopurpurascens*, *A. ceriferum*, *A. linganense*, *A. changhuaense*, *A. palmatum*, *A. davidii* subsp. *grosser*, *A. davidii*, *A. metcalfii*, *A. tataricum* subsp. *ginnala*, *A. negundo*, *A. amplum* subsp. *catalpifolium* and *Dipteroniasinensis* were selected for the recording of electrochemical fingerprint. Different electrochemical fingerprint were obtained according to the differences of electrochemically active substances in the leaf tissue. These electrochemical fingerprint can be used to construct different pattern recognition strategies and further used for the identification of species.

Keywords: Electrochemical sensor, Electrochemical fingerprint; Electroactive compounds; *Acer* Linn.; Phylogenetics

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