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Electrochemistry-based chemotaxonomy in plants using the voltammetry of microparticles methodology

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Supplementary information

Figure S.1. a) Cyclic voltammogram and b) its semi-derivative deconvolution, of a microparticulate film of the ethanolic extract of *Isatis tinctoria* deposited on GCE immersed into 0.25 M aqueous acetate buffer, pH 4.75. Potential scan initiated at 0.0 V in the positive direction; potential scan rate 50 mV s^{-1}.

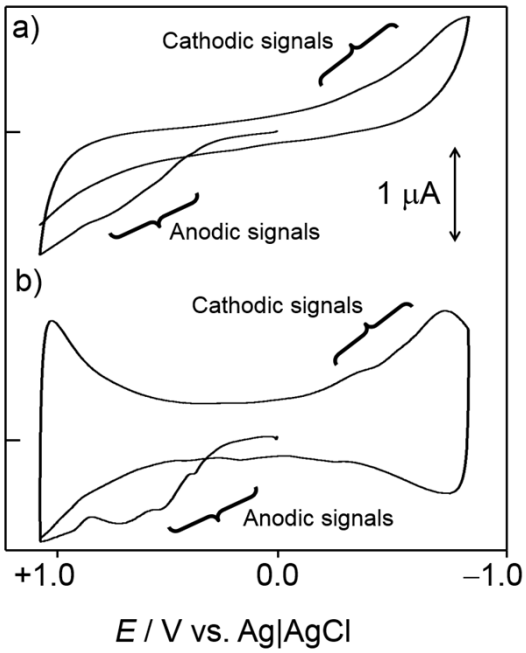

Figure S.2. Square wave voltammograms of microparticulate films deposited on GCE of ethanolic extracts of *Passiflora edulis*. Replicate experiments on freshly prepared films immersed into a,b) 0.10 M phosphate buffer, pH 7.00; c,d) 0.25 M acetate buffer, pH 4.75. Potential scan initiated at –1.05 V in the positive direction; potential step increment 4 mV; square wave amplitude 25 mV; frequency 5 Hz.

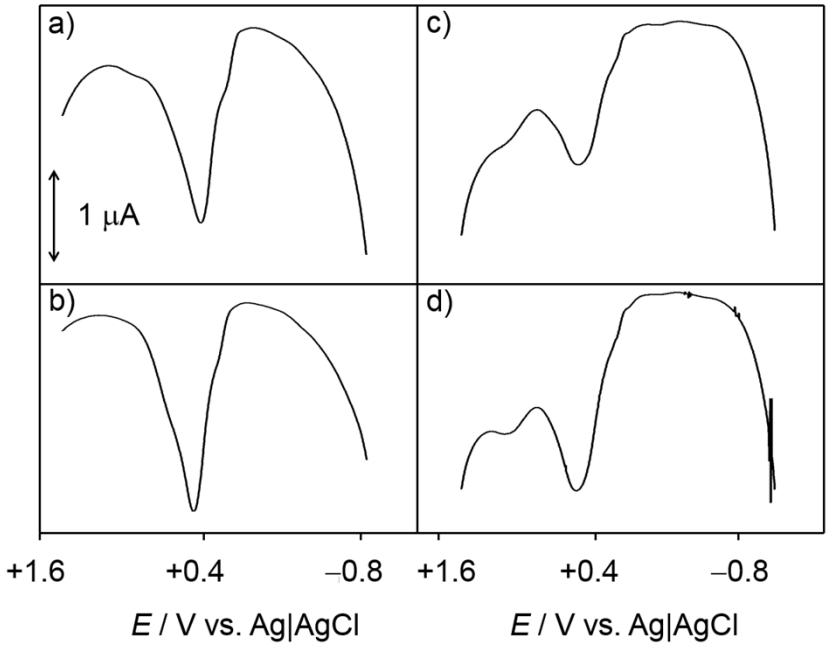

Figure S.3. Plots of $(I(E)/I_{max})_{Acetone}$ vs. $(I(E)/I_{max})_{Ethanol}$ for four replicate experiments on films of leaf extracts of *Passiflora edulis* immersed into 0.25 M aqueous acetate buffer, pH 4.75. Conditions such as in Fig. 2; potentials taken at intervals of 100 mV.

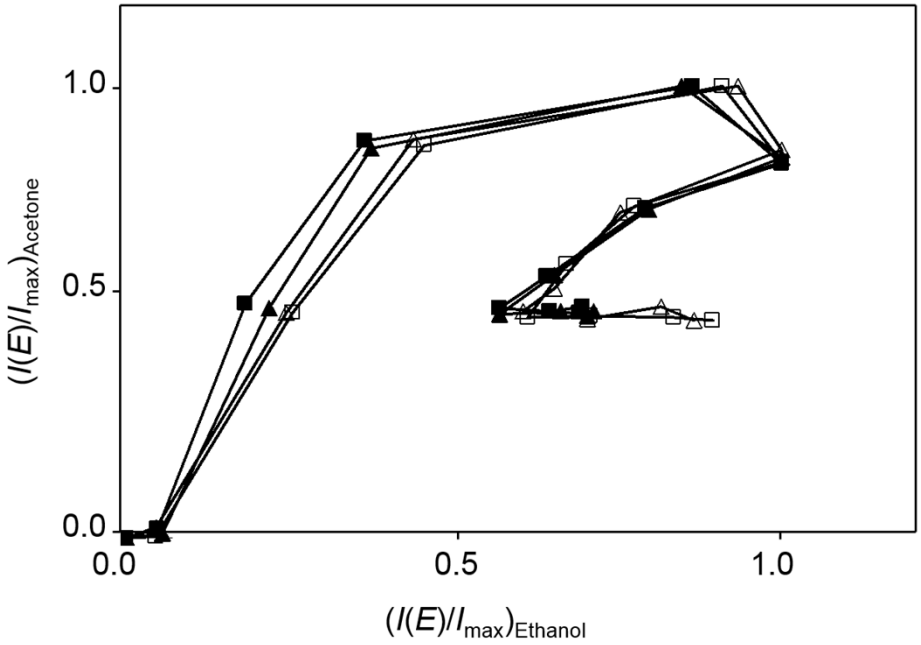

Figure S.4. Square wave voltammograms, after semi-derivative deconvolution, of microparticulate films of ethanolic leaf extracts deposited on glassy carbon electrode immersed into 0.25 M HAc/NaAc aqueous solution at pH 4.75. a) *Maclura pomifera* (Moraceae); b) *Parietaria judaica* (Urticaceae); c) *Ziziphus jujuba* (Rhamnaceae); d) *Potentilla reptans* (Rosaceae).

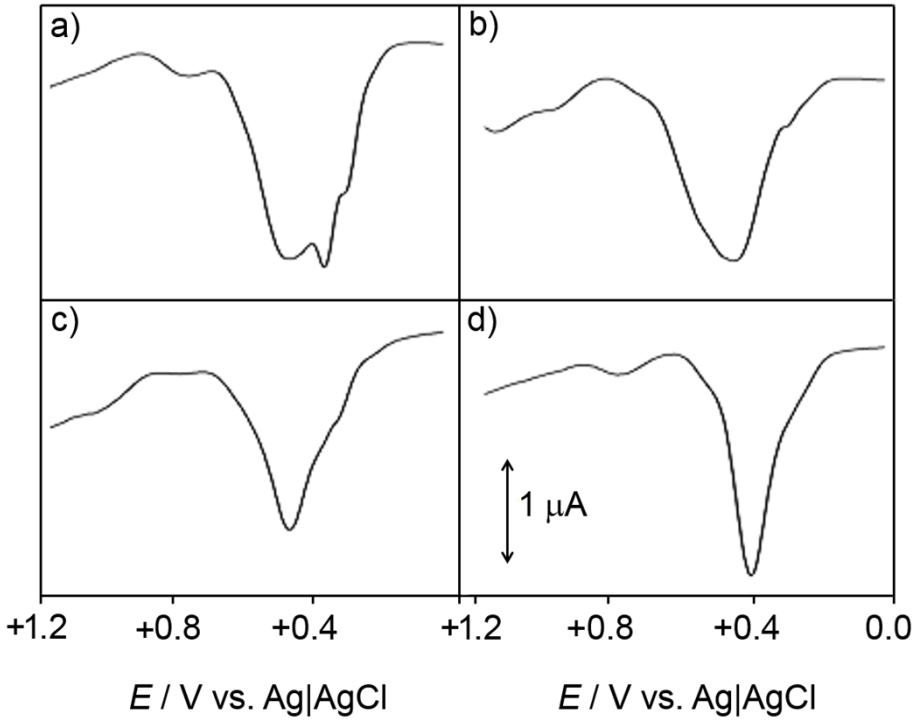

Figure S.5. Square wave voltammogram, after semi-derivative deconvolution, of a microparticulate film deposited on GCE of ethanolic extract of *Fagus sylvatica* superimposed to the components assuming separate contributions of different products. Conditions such as in Fig. 1.

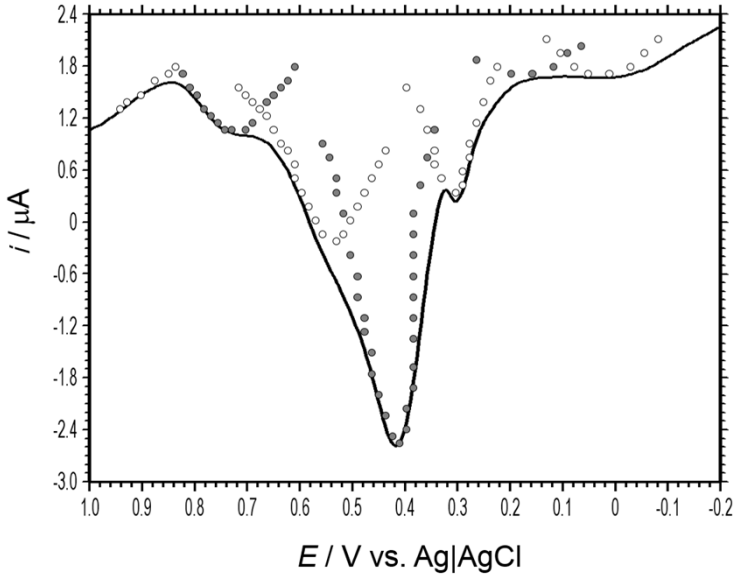

Figure S.6. Dendrogram of the species in Table 1 based on the $(I(E)/I_{max})_{Ethanol}$ data from voltammograms of leaf extracts in conditions such as in Fig. 1. Several representative species have been labeled; the assignment of the numbers of the dendrogram is detailed in Table 1.

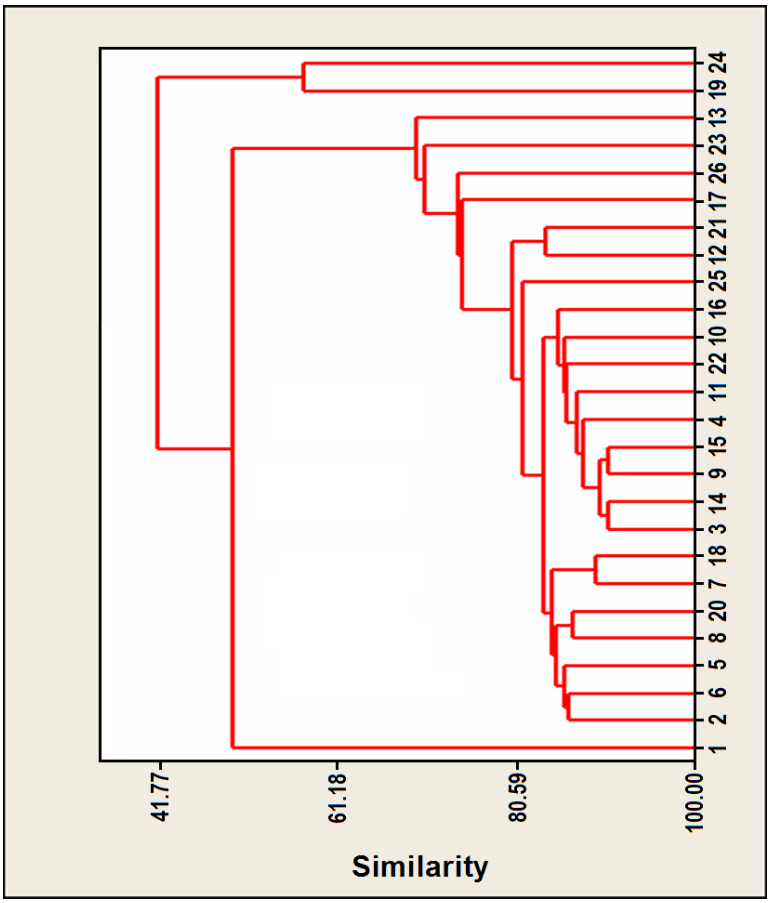

Figure S.7. Simplified phylogenetic scheme of the Rosid orders based on APG III (2009).[1]