

Electropolymerized phenol derivatives as permselective polymers for biosensor applications

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In the electronic supplementary information there are a cyclic voltammetry of *o*PD polymerized as described in the experimental section in the text; scanning electron microscope (SEM) at 5000 magnification of PPD electrodeposited onto Pt-Ir in CV and CPA at day1 and day 15; graphics of the linear slope of new polymers and permselectivity compared with PPD by day 1 to day 15; scanning electron microscope (SEM) at 5000 magnification for poly-eugenol, poly-isoeugenol, poly-dehydrodieugenol and poly-magnolol electrodeposited onto Pt-Ir in CV and CPA at day 15; NMR spectra of synthesised dehydrodieugenol; effect of pH on the AA / H₂O₂ and DA / H₂O₂ permselectivities (S%) of polyisoeugenol film electrosynthesised by means of CV.

Figure S-1. Cyclic voltammetry of *o*PD (10 mM) dissolved in PBS (pH 7.4) with scan speed of 20 mV/sec. A progressive lowering of the current is observed from the first to the fifth scan, as well as the formation of non-conductive polymers on the Pt-Ir surface.

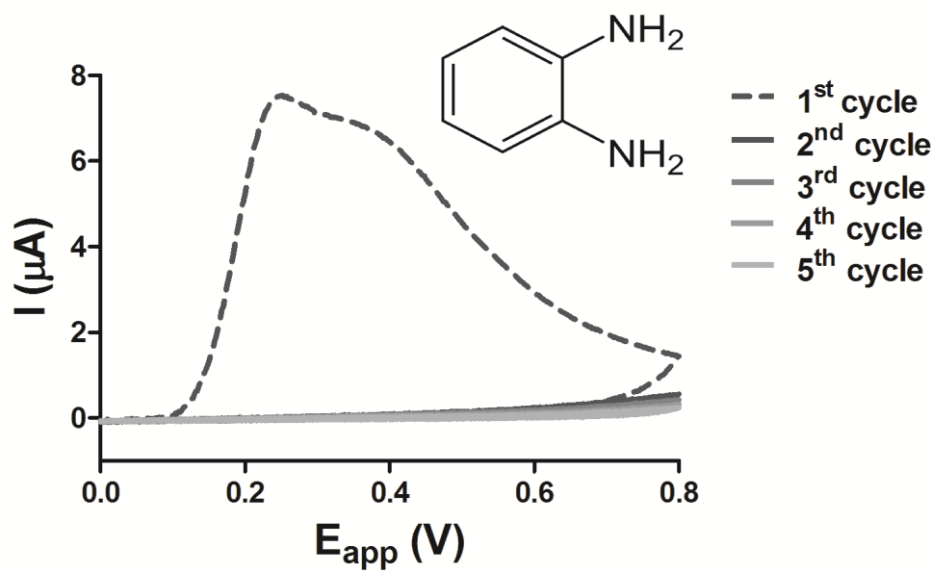


Figure S-2. Scanning electron microscope (SEM) at 5000 magnification of PPD electrodeposited onto Pt-Ir in CV (A-B) and CPA (C-D) at day1 (A-C) and day 15 (B-D).

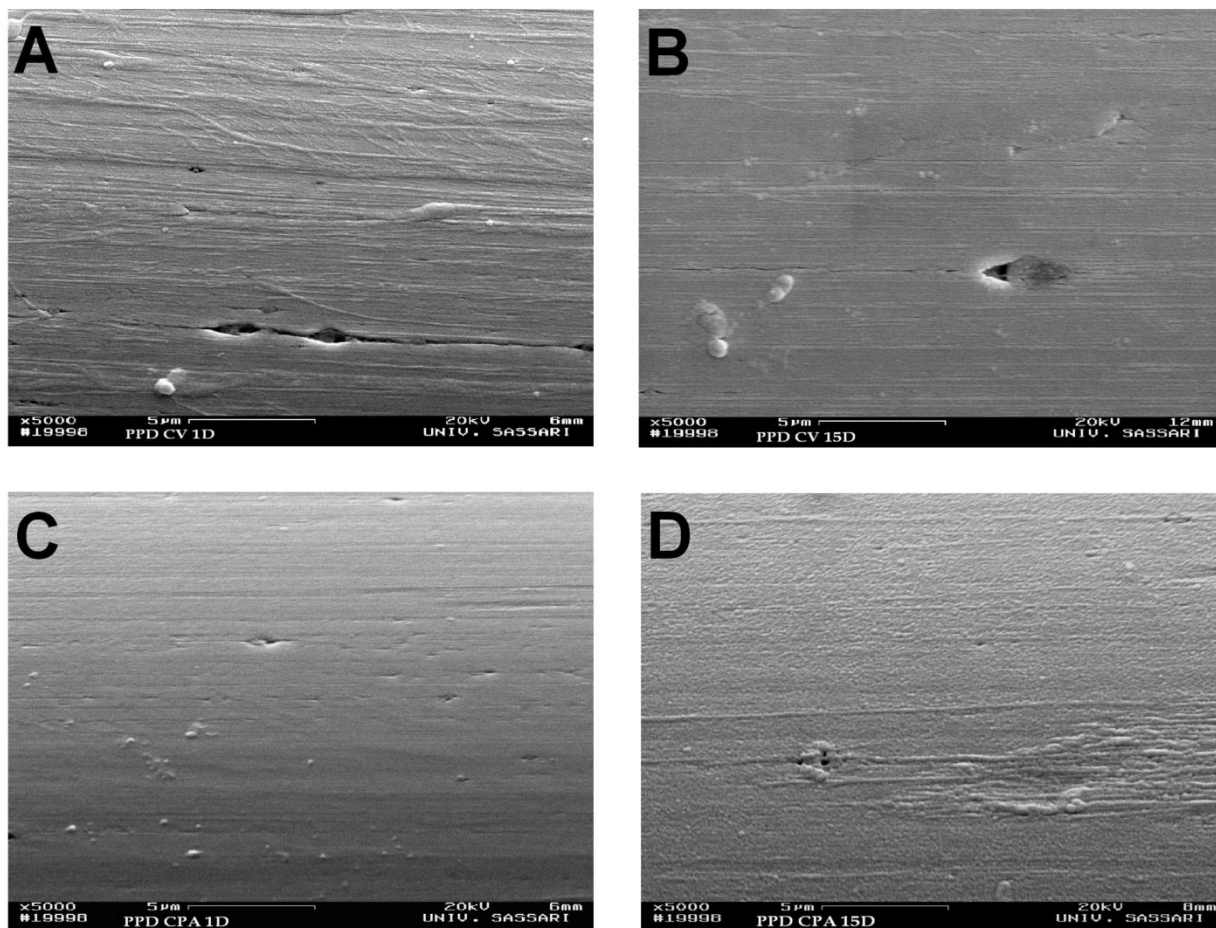


Figure S-3. The linear slope of new polymers and permselectivity compared with PPD by day 1 to day

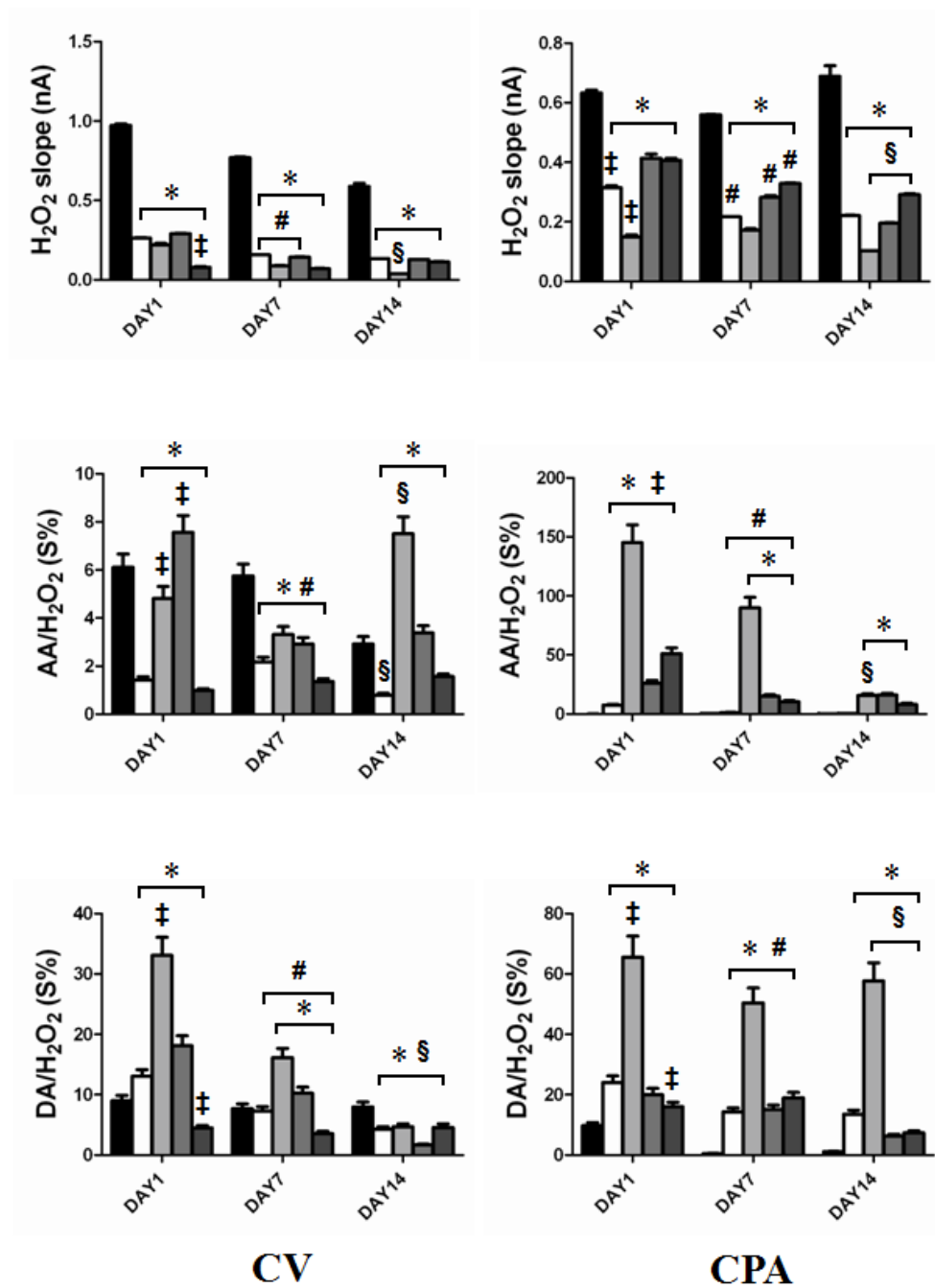
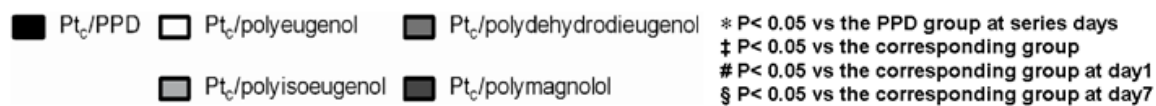


Figure S-4. Scanning electron microscope (SEM) at 5000 magnification for poly-eugenol, poly-isoeugenol, poly-dehydrodieugenol and poly-magnolol electrodeposited onto Pt-Ir in CV (A,C,E and G) and CPA (B,D,F and H) at day 15.

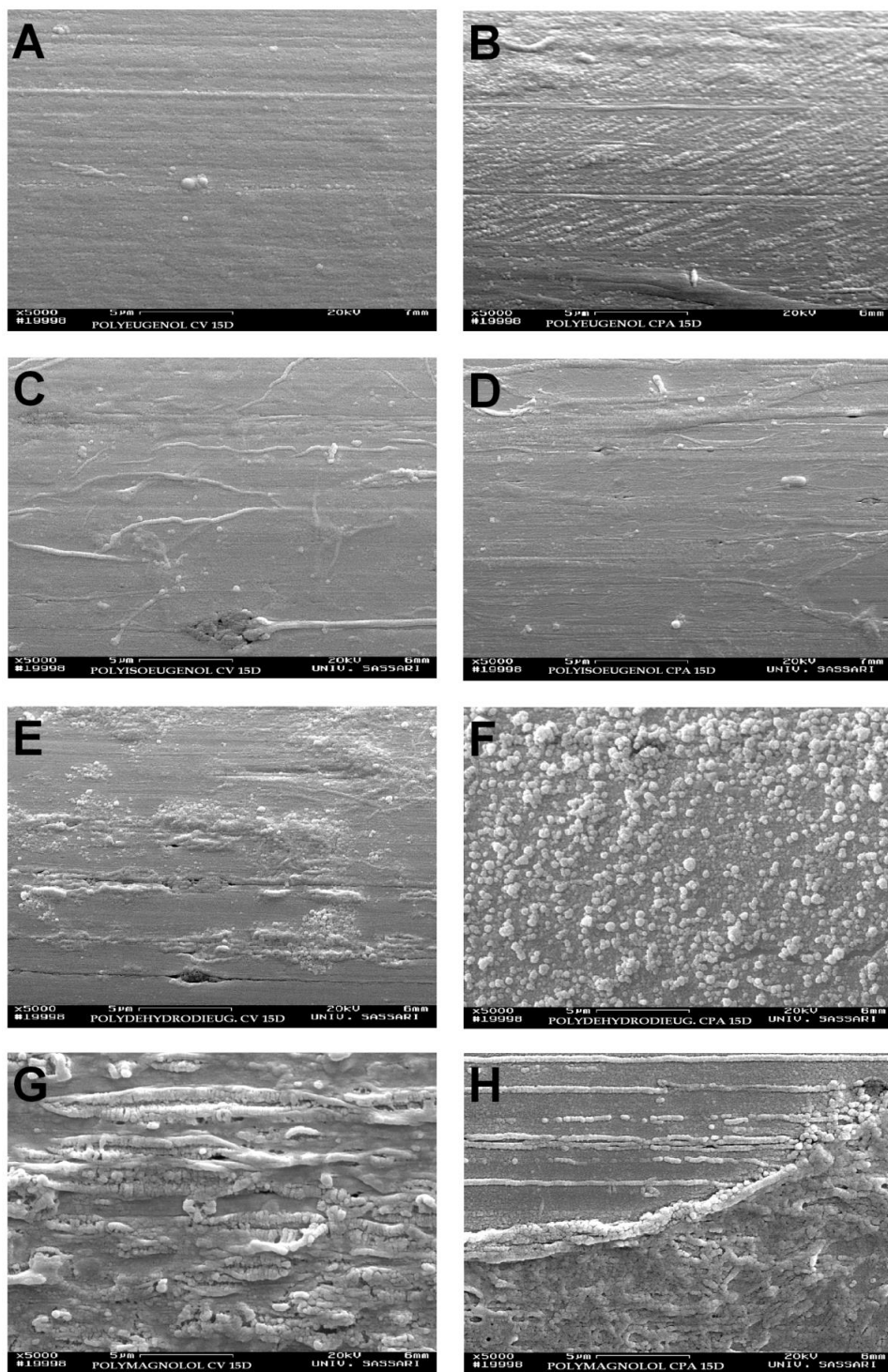


Figure S-5. ^1H NMR (A) and ^{13}C NMR (B) spectra of synthesised dehydrodieugenol recorded in CDCl_3 solution at 399.93 MHz and 100.57 MHz, respectively (Varian Mercury Plus, Palo Alto, USA). a Varian VXR 5000 spectrometer.

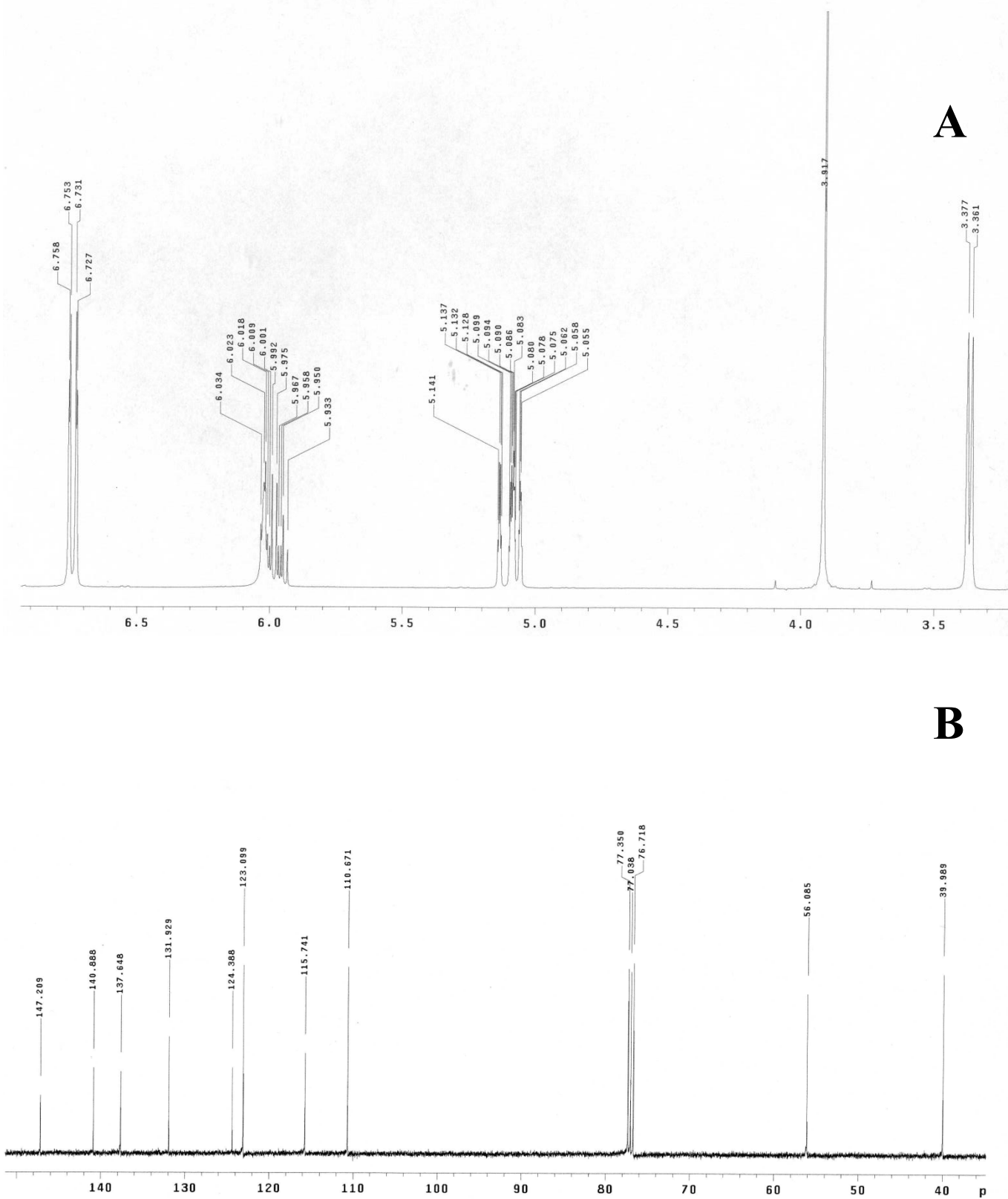


Figure S-6. Effect of pH on the AA / H₂O₂ and DA / H₂O₂ permselectivities (S%) of polyisoeugenol film electrosynthesised by means of CV.

