

Article

A Storage-Dependent Platinum Functionalization with a Commercial Pre-Polymer Useful for Hydrogen Peroxide and Ascorbic Acid Detection

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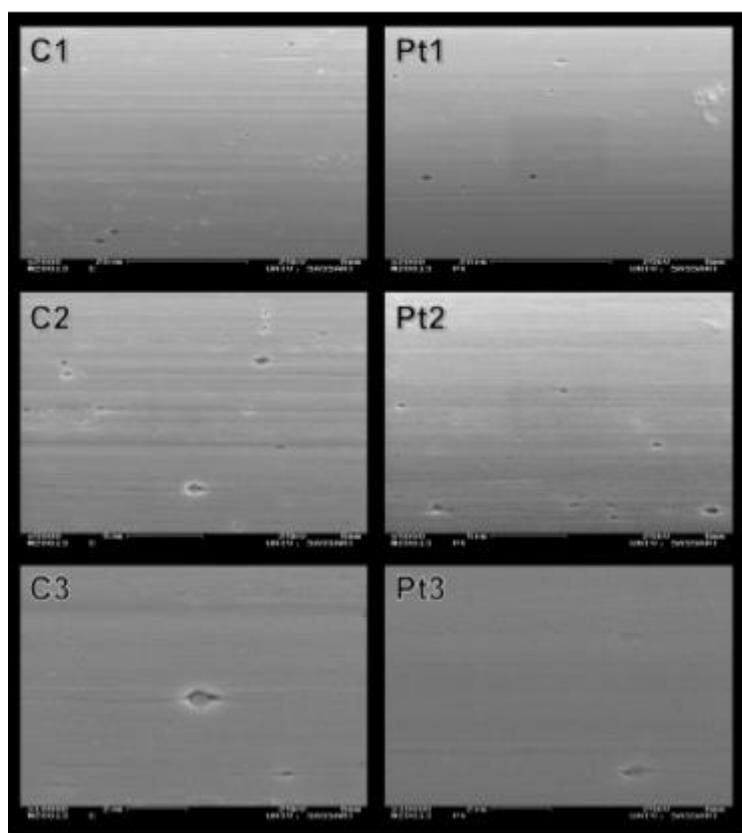


Figure 1. micrographs obtained with a conventional scanning electron microscope of sensor surface functionalized with ChemiPlus 2 DS HB at 2000x (C1), 5000x (C2) and 10000x (C3) of magnification compared with a bare Platinum-Iridium surface at 2000x (Pt1), 5000x (Pt2), and 10000x (Pt3).

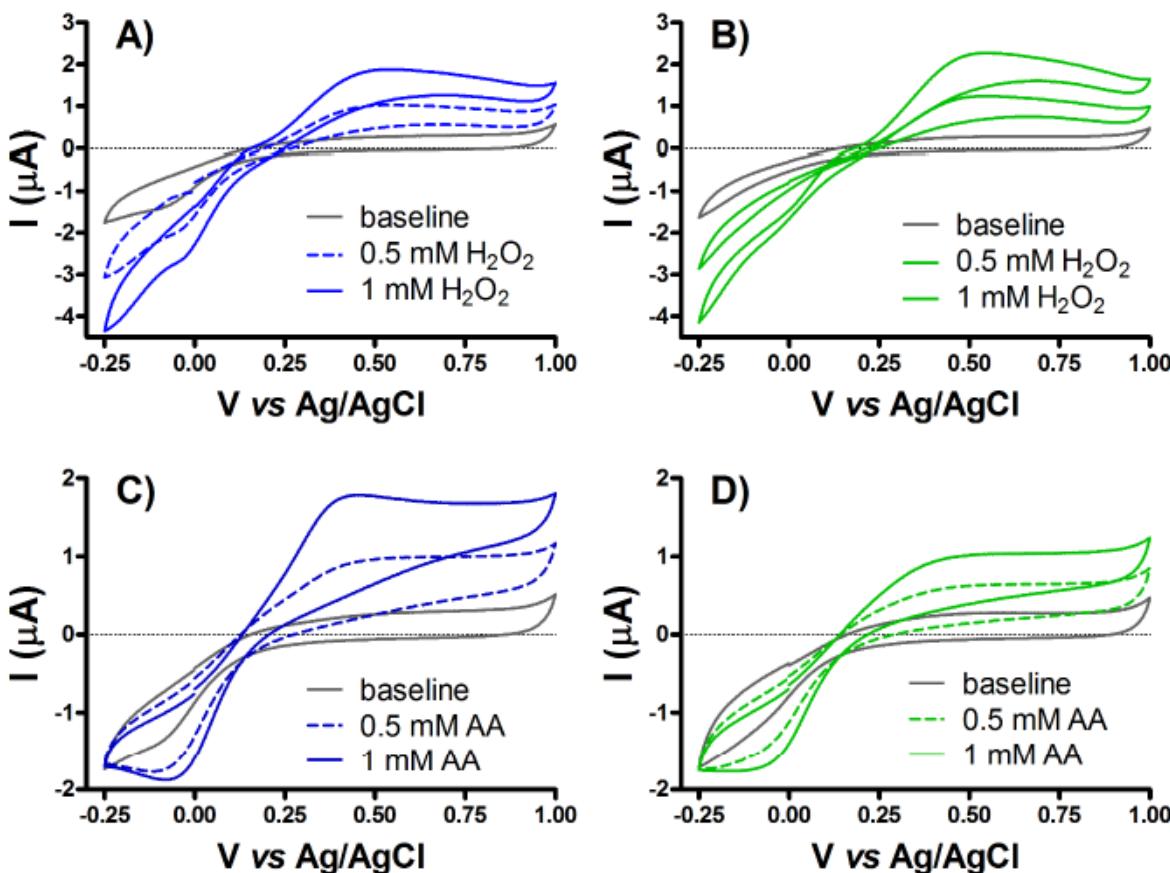


Figure 2. cyclic voltammograms (range: -0.25 until 1 V, scan rate of 100 mV s^{-1}) performed in 50 mM phosphate buffer as electrolyte on unmodified Pt electrodes (blue lines, part A and C) and sensor modified with Chemiplus 2DS HB (green lines, part B and D) using different electrochemical probes 1 mM of H_2O_2 (part A and B) and 1 mM of ascorbic acid (part C and D).

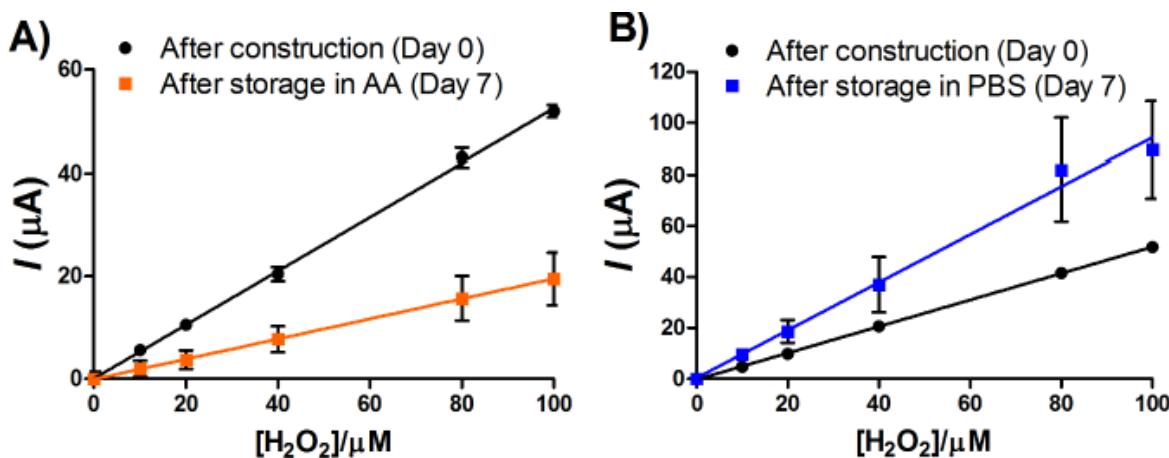


Figure 3. constant potential amperometry calibration plots for of H_2O_2 performed at day 0 on sensors modified with Chemiplus 2DS HB (black lines) and performed ad day 7 after storage in 1 mM ascorbic acid (AA) (orange line in part A) and after 7 days of storage in PBS (blue line in part B). These graphics correspond to values reported for H_2O_2 behavior of Table 1 in the main manuscript. ($n = 4$ for each experimental group, solid line comes from linear regression of currents, and vertical bars are standard error of the mean; each storage group was subjected at a +0.7 V of potential applied).