

Stabilization of [poly(allylamine)-tannic acid]_n multilayer films in acidic and basic conditions after crosslinking with NaIO₄.

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Supporting Information.

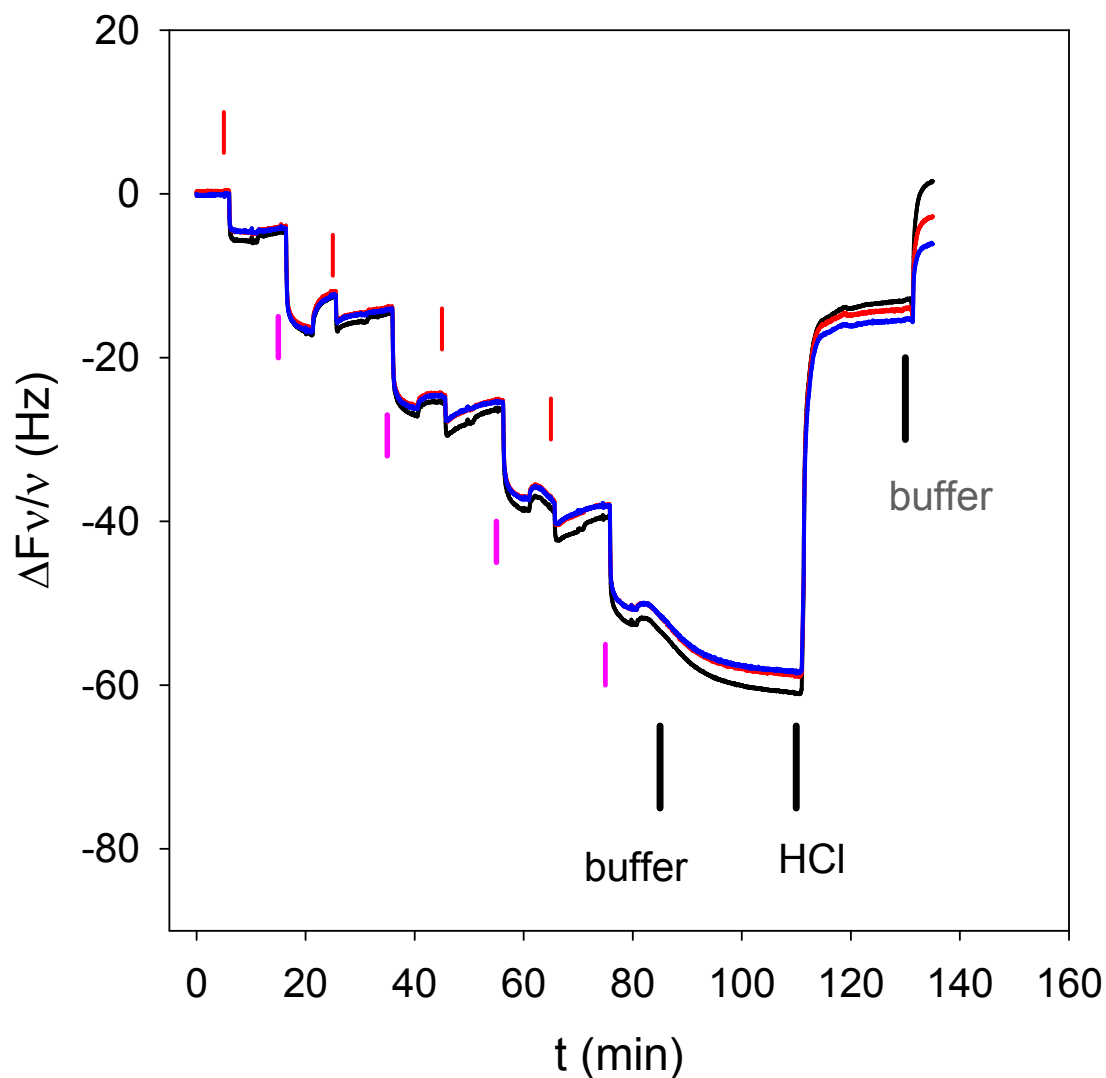


Figure SI1: Deposition of a (PAH-TA)₄ film on a gold modified quartz crystal in the presence of 50 mM sodium acetate buffer at pH=5.0, followed by the injection of 50 mM sodium acetate buffer, 0.1 M HCl solution and final rinse with the 50 mM sodium acetate buffer as indicated with vertical black lines. Each injection step of PAH and TA is indicated with a red and purple

vertical line respectively. The reduced frequency changes are plotted for the third (____), the fifth (____) and the seventh (____) overtone of the quartz crystal.

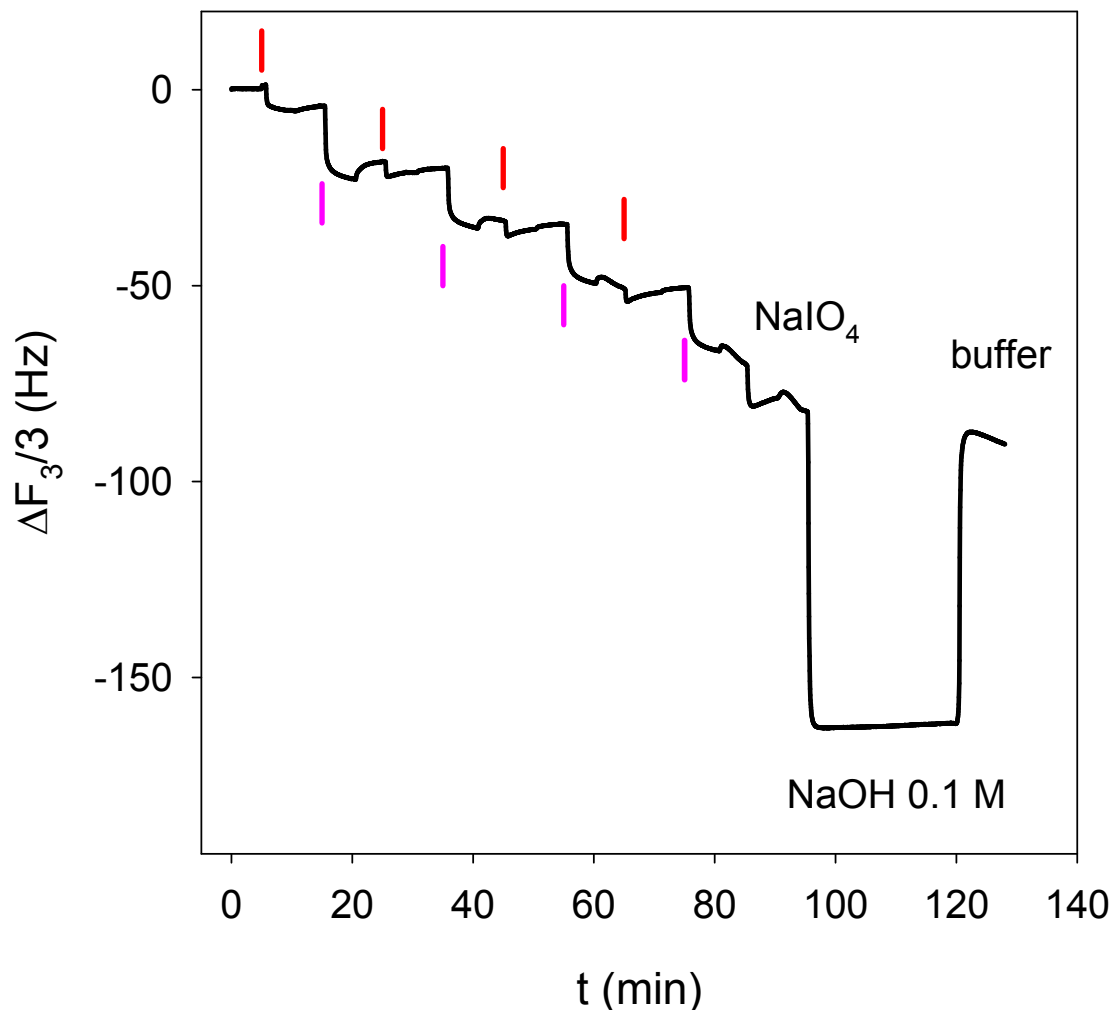


Figure 2 of SI: deposition of a (PAH-TA)₄ films on a gold modified quartz crystal in the presence of 50 mM sodium acetate buffer at pH=5.0. The film was further exposed to 10 mM NaIO₄ and to NaOH at 0.1 M as indicated. The final rinse with sodium acetate buffer is also indicated whereas the buffer rinsing steps after the contact with NaIO₄ and HCl are omitted for clarity. Each injection step of PAH and TA is indicated with a red and purple vertical line respectively. Only the frequency changes monitored at the third overtone of the quartz crystal are represented.

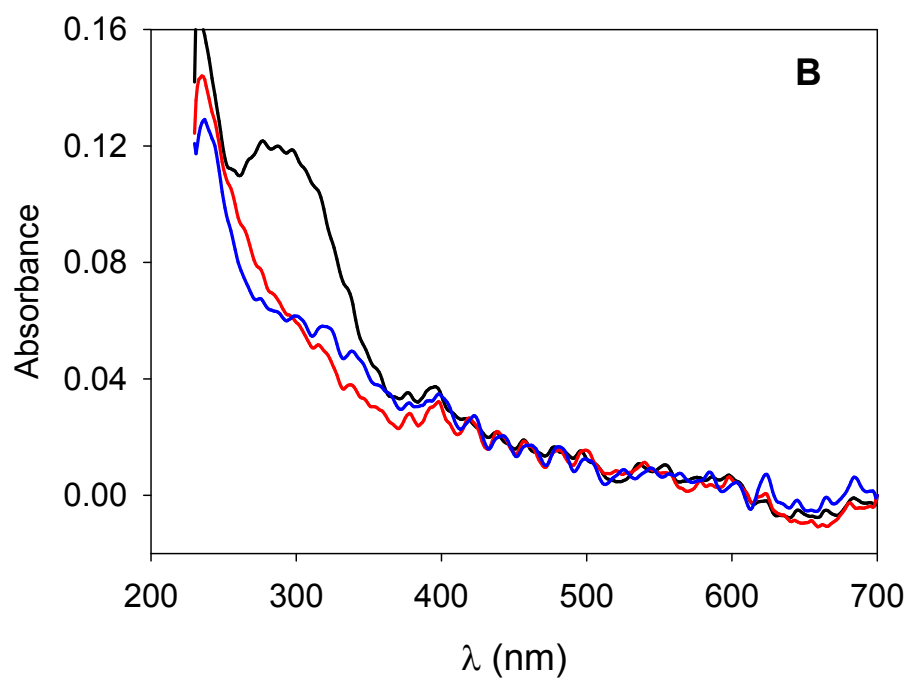
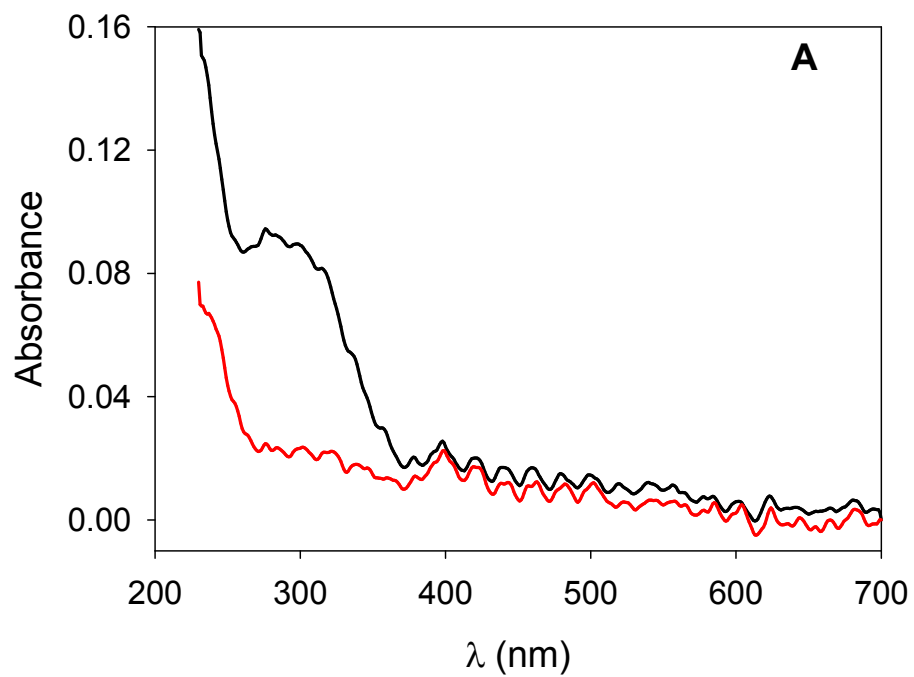


Figure 3 of SI: A: Absorption spectra of a (PAH-TA)₄ film deposited on a quartz slide (____) and of the same slide after its exposure to a 0.1 M NaOH solution during 10 min (____).

B: Absorption spectra of a (PAH-TA)₄ film deposited on a quartz slide (____) and of the same slide after its exposure to a 10 mM NaIO₄ solution during 5 min (____) and finally after exposure to a 0.1 M NaOH solution during 10 min (____).

The quartz slides were rinsed with distilled water and blown dry with a filtered flow of air before spectral acquisition.



Figure SI4: From the left to the right: digital pictures of a PAH-TA mixture, the PAH-TA mixture put in the presence of a 1 M NaCl-1M urea containing sodium acetate buffer, and the PAH-TA mixture put in the presence of 10 mM NaIO₄ (during 5 min) before subsequent addition of the NaCl-urea containing buffer. The total concentration of TA and PAH was the same in the three bottles. For more details see the Materials and Methods section in the main article.

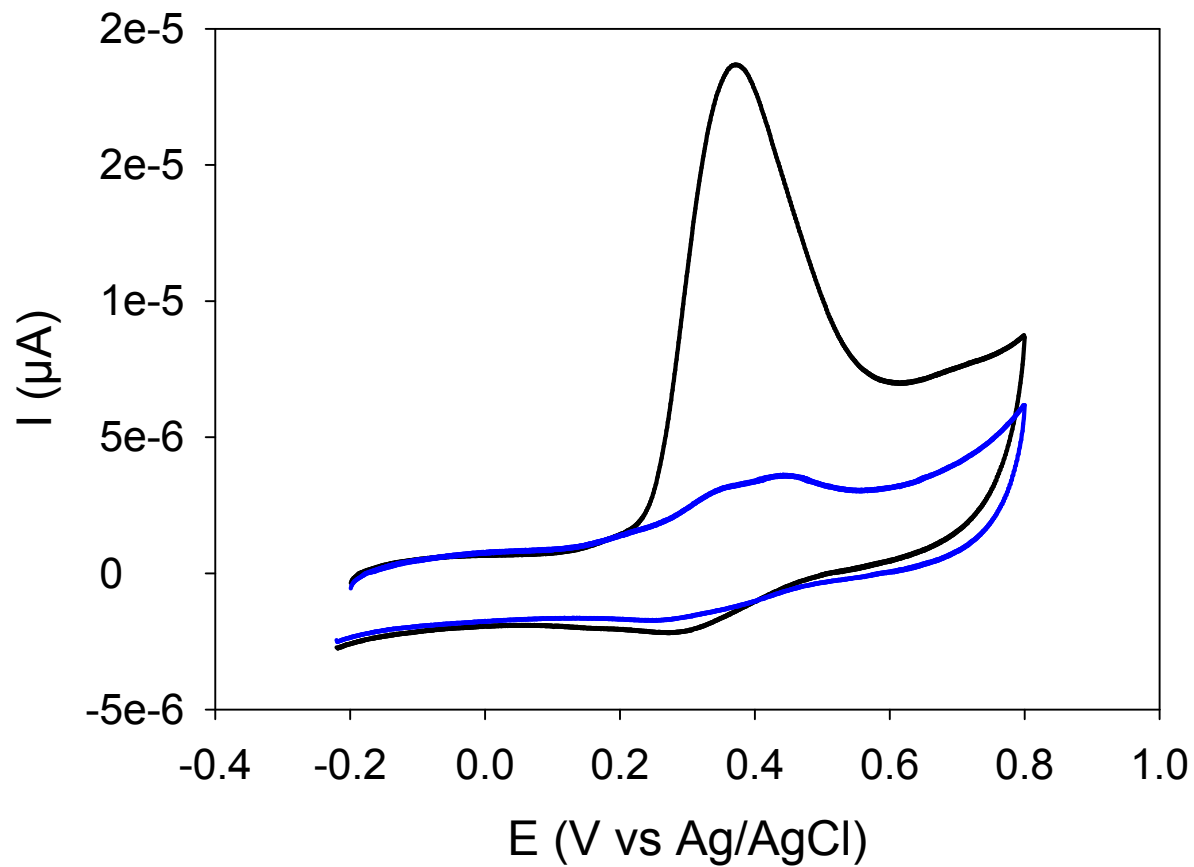


Figure 5 of SI: CV curves of a (PAH-TA)₄ film deposited on an amorphous carbon electrode in the presence of 50 mM sodium acetate buffer at pH=5.0. First (____) and second (____) scan measured at a scan rate of 100 mV.s⁻¹ vs an Ag/AgCl reference electrode.