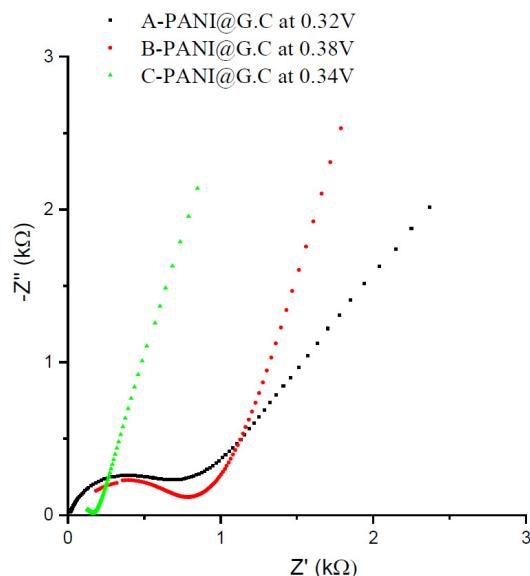


## Supporting Information

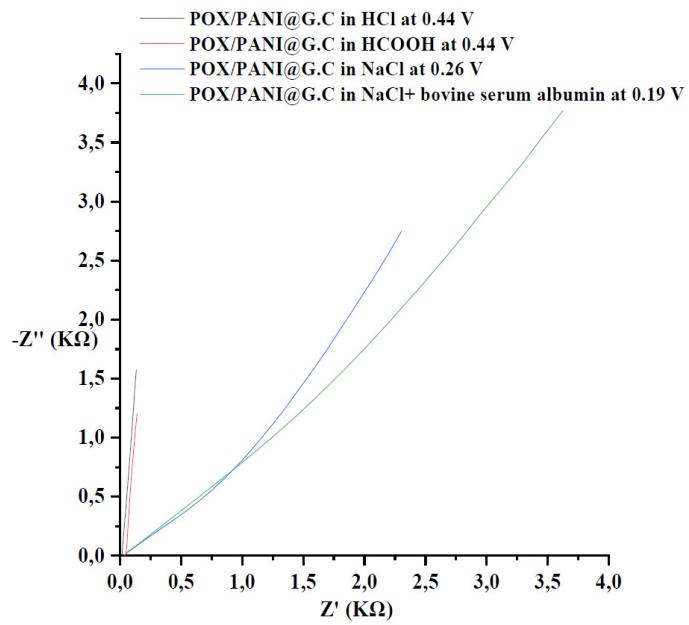
# Potentiometric performance of ion-selective-electrodes based on polyaniline and chelating agents: Detection of $\text{Fe}^{2+}$ or $\text{Fe}^{3+}$ ions

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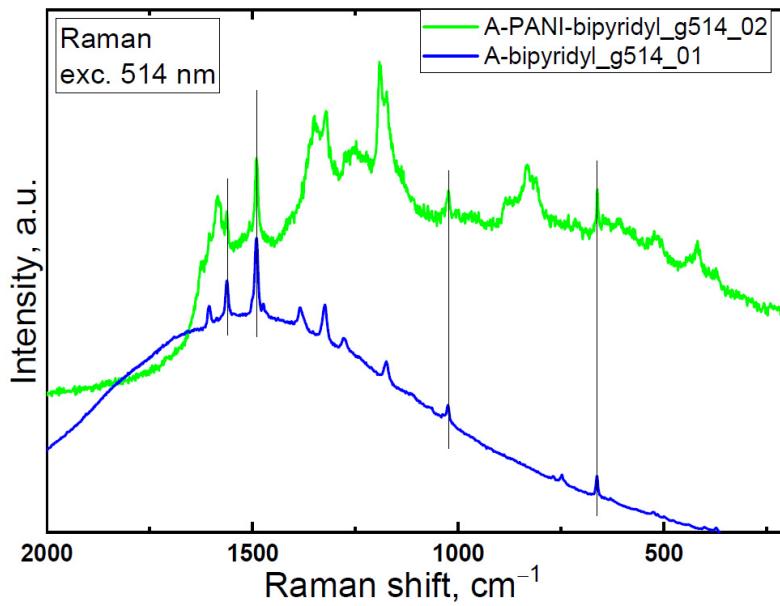
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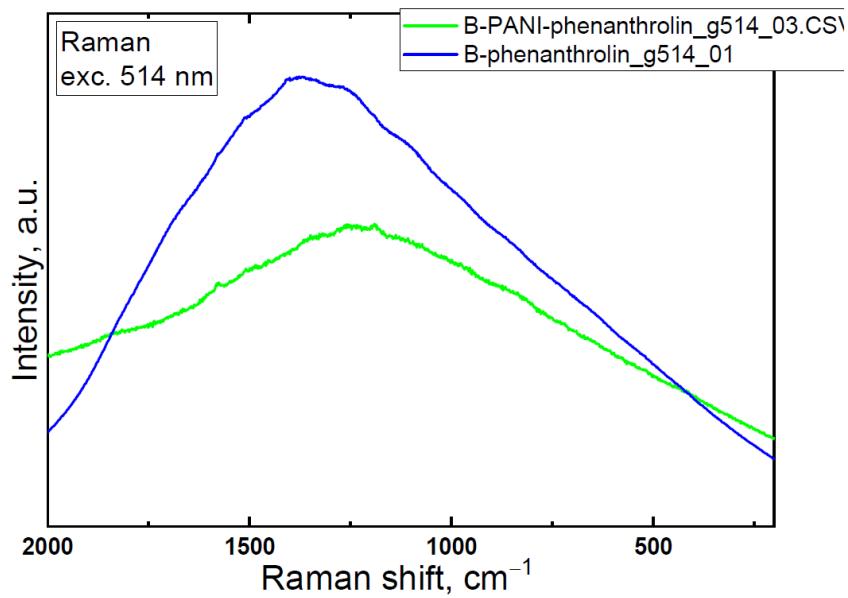
**Figure S1.** EIS in 0.1 M NaCl of A-PANI@G.C, B-PANI@G.C, and C-PANI@G.C.



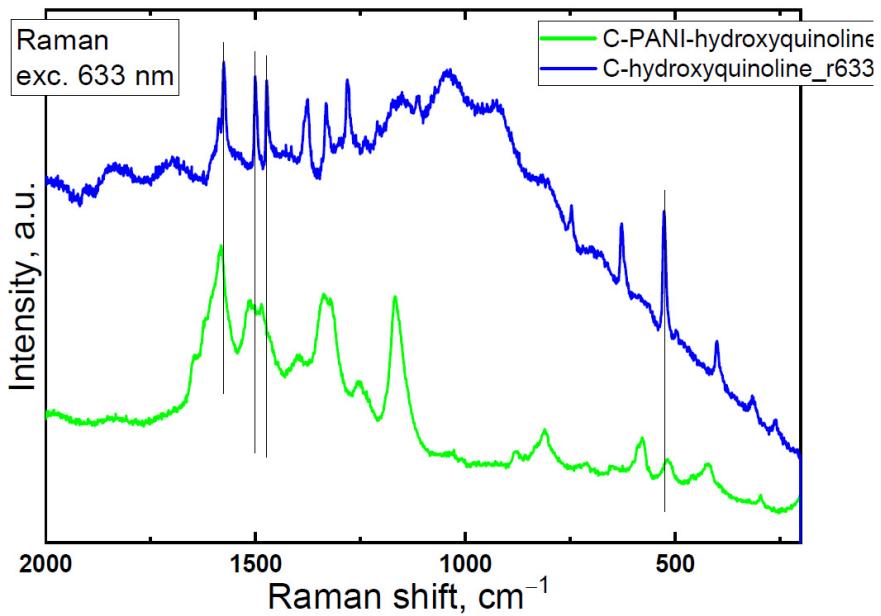
**Figure S2.** EIS POX/PANI@G.C in different electrolytes and with BSA.



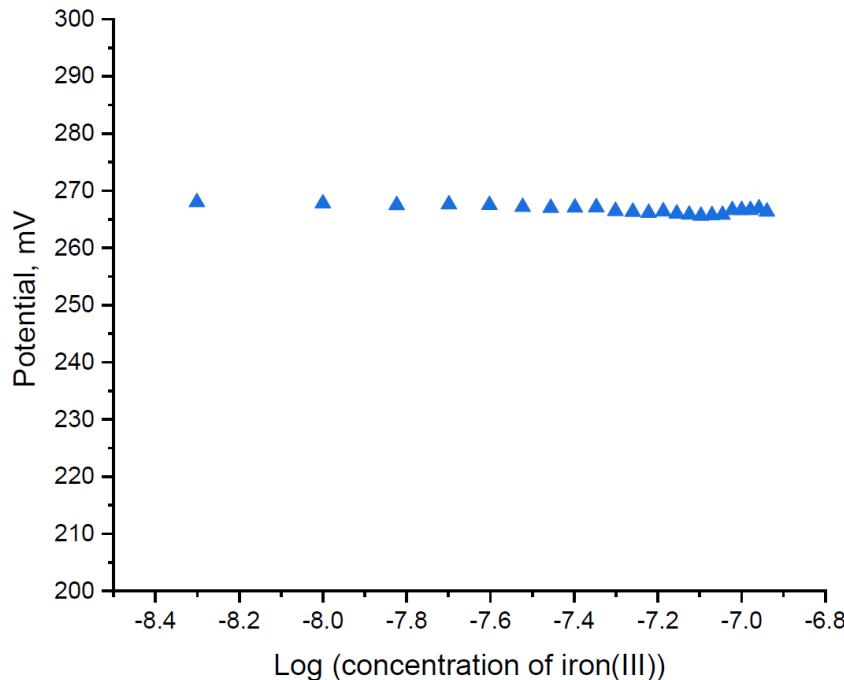
**Figure S3.** Raman spectra, excitation line 514 nm, of A-PANI @G.C.



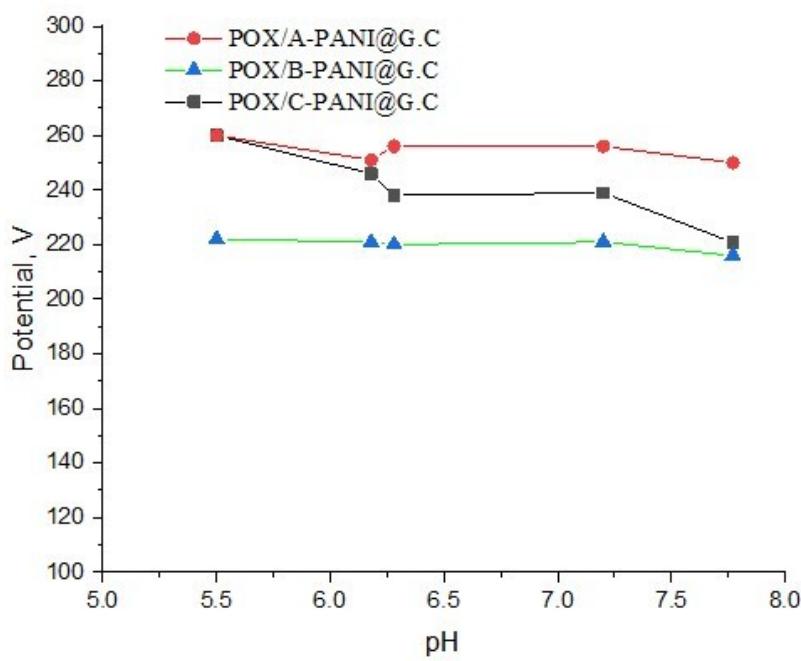
**Figure S4.** Raman spectra, excitation line 514 nm, of B -PANI @G.C.



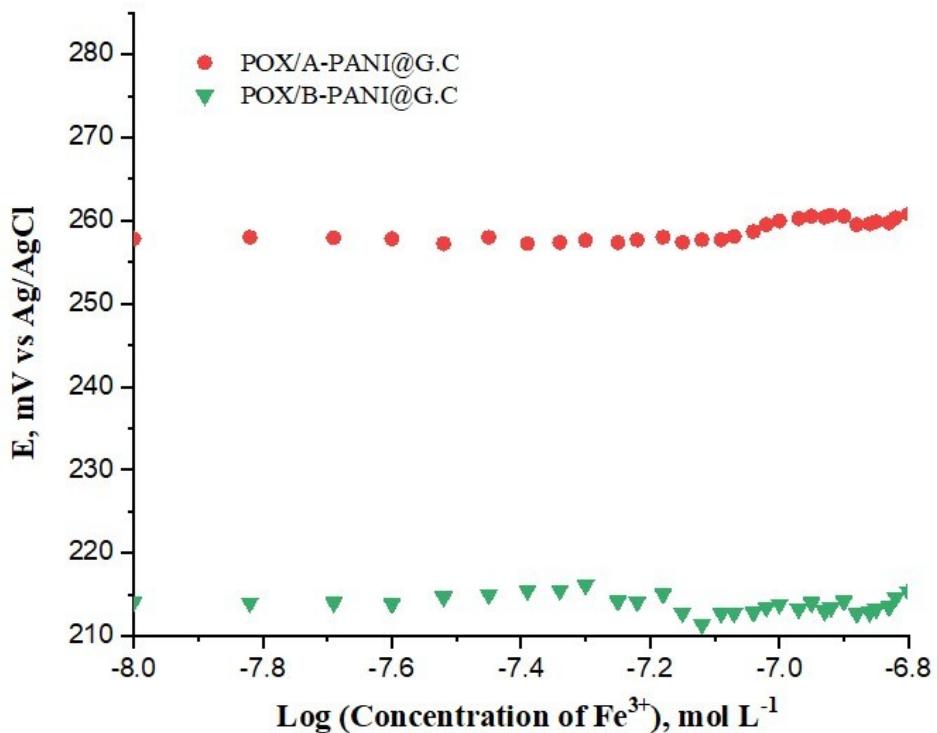
**Figure S5.** Raman spectra, excitation line 633 nm, of C-PANI@G.C.



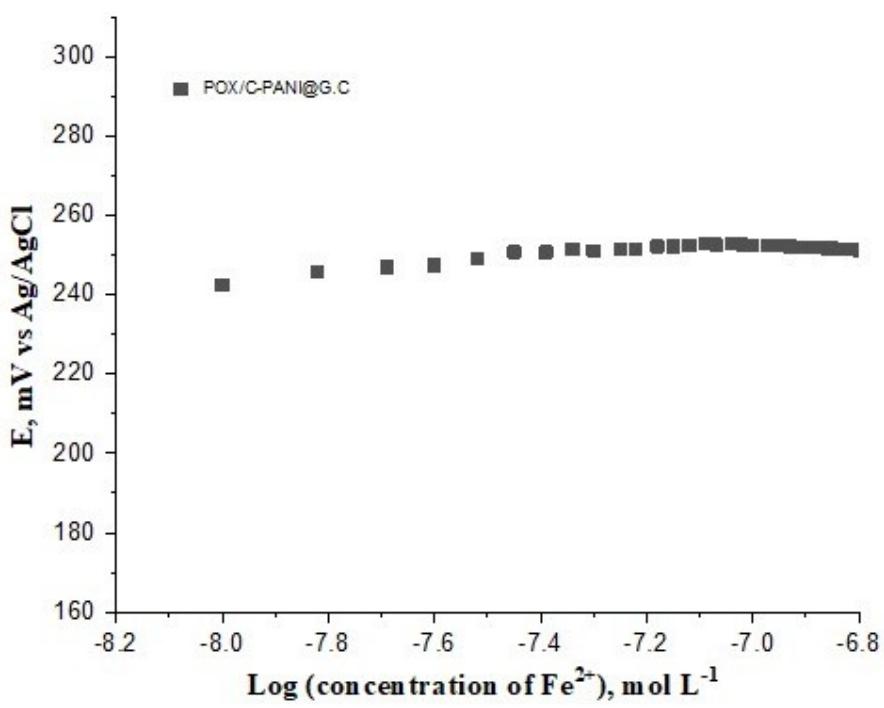
**Figure S6.** Potentiometric measurements of PANI@G.C layer without the presence of chelating molecules.



**Figure S7.** Potentiometric response of different sensing layers (different chelating agents) vs pH.



**Figure S8.** Potentiometric response ( $\text{Fe}^{3+}$  concentration vs  $E$ ) of POX/A-PANI@G.C and POX/B-PANI@G.C sensing layers in 0.1 M NaCl.



**Figure S9** Potentiometric response ( $\text{Fe}^{2+}$  concentration vs  $E$ ) of POX/C-PANI@G.C sensing layers in 0.1 M NaCl.