***ds*DNA Sensing Capabilities of Metallopolymers Electrochemically Deposited from Ruthenium-Pyrrole and - Thiophene Complexes**

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In the current work, a study is presented based on the variation of the monomer unit (thiophene or pyrrole) at electrochemically polymerizable ruthenium complexes, evaluating their possible applications in the field of biosensors to detect *ds*DNA. For both complexes ([Ru(p-cymene)(C₄H₄S)₂]²⁺ and [Ru(p-cymene)(C₅H₄NH)₂]²⁺), the metallopolymer is deposited on platinum electrodes displaying voltamperometric responses consistent with expected polymer including the corresponding Ru^{III→II} redox signal. The subsequent evaluation of these electrodeposits, in the presence and absence of *ds*DNA, demonstrated the essential role that monomer play when an application of these modified electrodes is needed. The use of thiophene as a polymerizable produces a more intense analyte-electrode interaction, with an electrode about 1.7 more sensitive to *ds*DNA compared to that of pyrrole.

Keywords: conducting metallopolymers; poly(thiophene); poly(pyrrole); ruthenium complexes; modified electrodes; *ds*DNA.

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