SUPPLEMENTAL INFORMATION

Plasma-assisted ALD of IrO_2 for neuroelectronic applications

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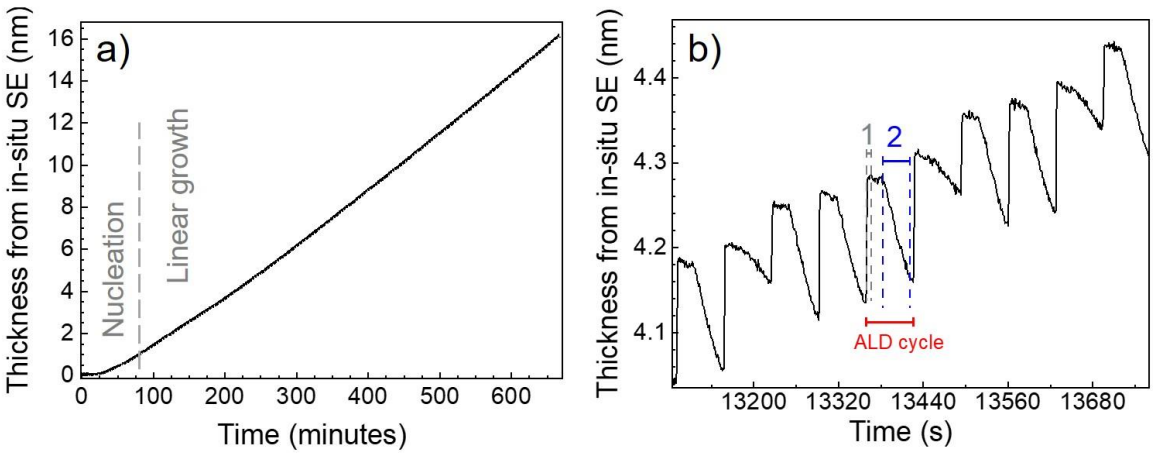

Figure 1: In-situ characterization via spectroscopic ellipsometry for ALD of IrO_2. a) Shows the nucleation of IrO_2 at the initial stages of the process and the subsequent linear growth. b) highlights the thickness change within the ALD cycle, characterized by the increase during the precursor dosing (1) and the decrease during the O_2 plasma dosing (2).

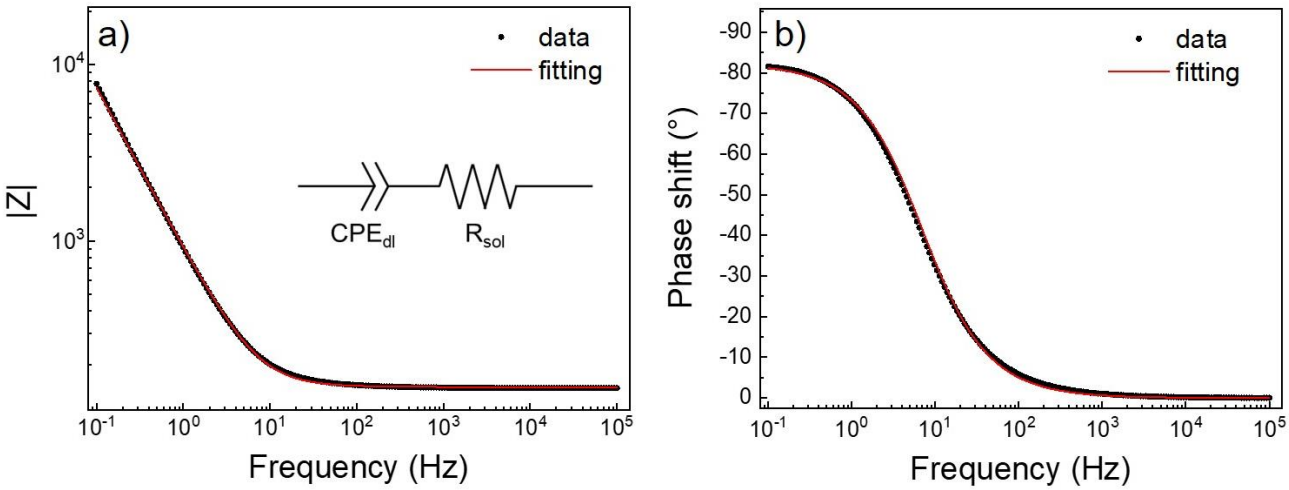

Figure 2: Characterization via electrochemical impedance spectroscopy of the interface IrO_2/PBS. In a) it is reported the magnitude while in b) the phase shift of the impedance measured. The inset in a) shows the equivalent circuit used for the fitting of the data. The results agree with a (pseudo-)capacitive coupling of the IrO_2 electrode with the solution.