

## Supporting Information

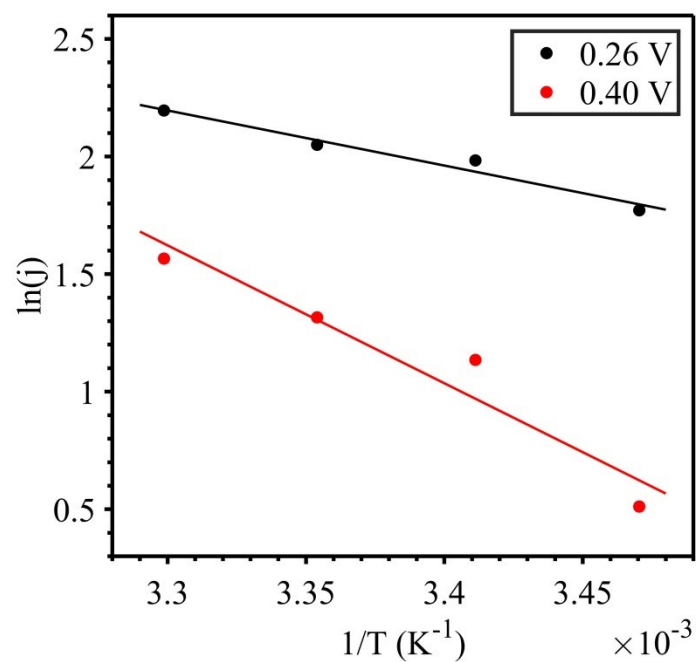
### **Quasiperiodic Behavior in the Electrodeposition of Cu/Sn Multilayers: Extraction of Activation Energies and Wavelet Analysis**

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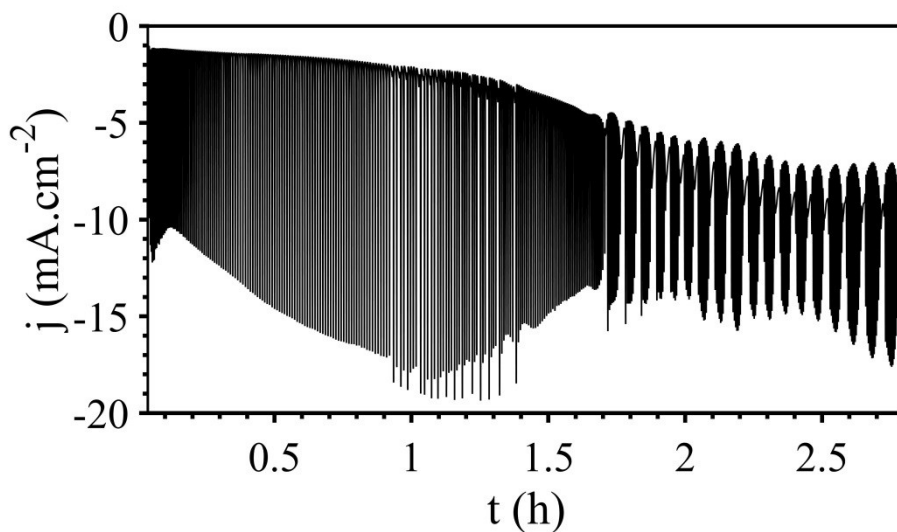
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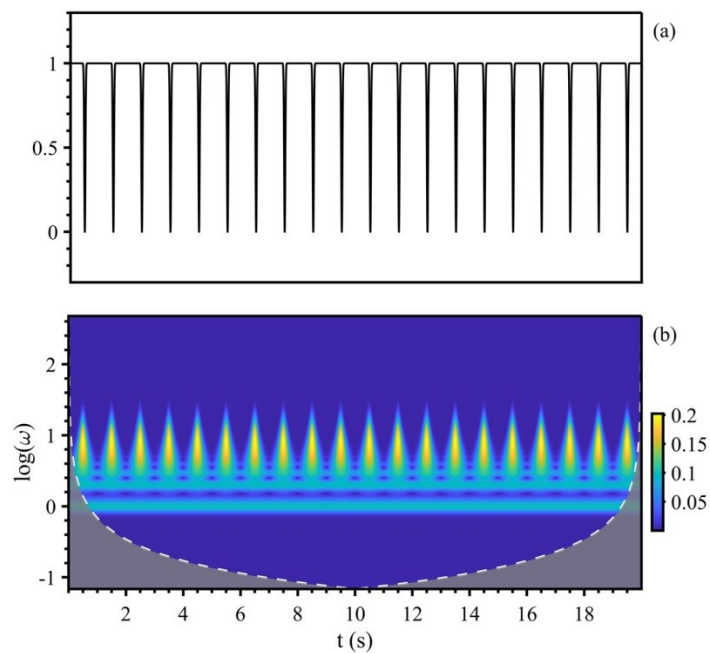
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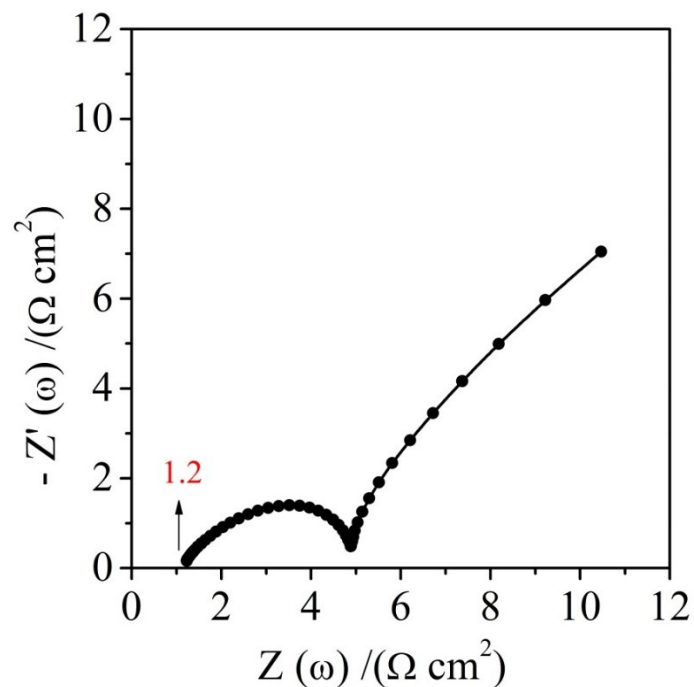
**Figure S1.** calculated apparent activation energy using the cyclic voltammetry data presented in Figure 1. The black curve refers to  $E_a = 19 \text{ kJ.mol}^{-1}$  and the red one to  $E_a = 49 \text{ kJ.mol}^{-1}$ .



**Figure S2.** complete time-series obtained at  $-0.46 \text{ V}$  and  $15 \text{ }^\circ\text{C}$  depicting the intrinsic drift from period-one to quasiperiodic behavior.



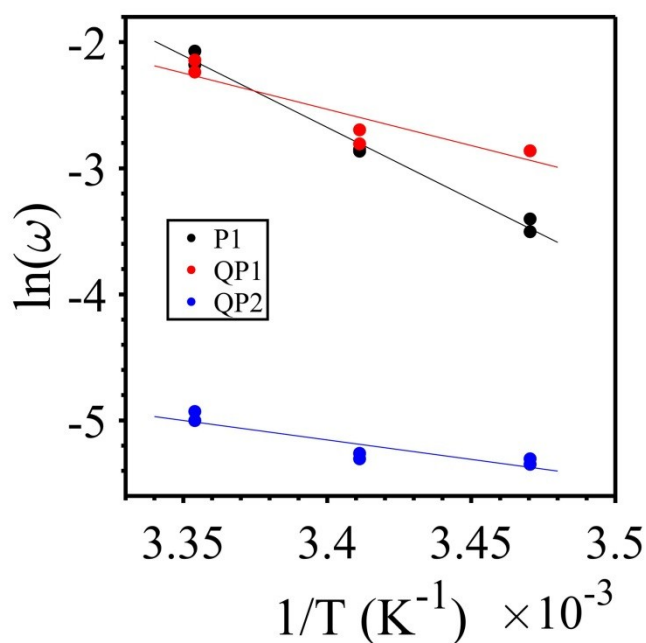
**Figure S3.** simulated time-series, made by the repetition of a Gaussian function, and its wavelet transform using the same procedure as the one employed for the experimental time-series. The shaded area in the lower part of the item (b) represents the cone of influence.



**Figure S4.** Nyquist plot from high (50 kHz) to low (1 Hz) frequencies of sine potential perturbation of  $\pm 10$  mV at  $-0.40$  V to determine the uncompensated resistance of the system ( $1.2 \Omega \text{ cm}^2$ ).

**Table S1.** The replicates of the oscillation frequencies (Hz) depicted in Figure 4 and the apparent activation energies ( $E_{a,osc}$ ) calculated in Table 1.

		15 °C	20 °C	25 °C	$E_{a,osc}$ (kJ.mol <sup>-1</sup> )
P1	1 <sup>st</sup>	0.030	0.057	0.126	$95 \pm 5$
	2 <sup>nd</sup>	0.033	0.057	0.113	
QP1	1 <sup>st</sup>	0.057	0.060	0.106	$48 \pm 10$
	2 <sup>nd</sup>	0.057	0.067	0.117	
QP2	1 <sup>st</sup>	0.004	0.005	0.006	$26 \pm 6$
	2 <sup>nd</sup>	0.005	0.005	0.007	



**Figure S5.** Arrhenius plots for the determination of the apparent activation energy under oscillatory regime ( $E_{a,osc}$ ) following Table S1. Each curve refers to a different temporal pattern, namely period-one (P1, black), higher (QP1, red) and lower frequency (QP2, blue) of the quasiperiodic oscillations.