

Table S2A | Run-level robustness diagnostics across noise levels for MXene EIS parameter inference. Summary of the extended robustness protocol for the 7-parameter circuit $\theta = \{R_s, L, R_{ct}, Q_1, \alpha_1, Q_2, \alpha_2\}$ under controlled complex measurement noise, where $Z_{noisy} = Z_{clean} + \eta | Z | \varepsilon$ with $\varepsilon \sim \mathcal{CN}(0,1)$. For each noise level η (reported as Noise %), bounded refits are repeated for n random starts, and the table reports the success rate, boundary-hit rate, and the distribution of clean-spectrum error after refitting (SSE_{clean} ; median and 95th percentile), providing a practical measure of convergence reliability and robustness versus noise.

