Table 1A | Equivalent-circuit parameter sets inferred by classical and quantum branches for MXene EIS. Fitted values of the 7-parameter circuit vector $\theta = \{R_s, L, R_{ct}, Q_1, \alpha_1, Q_2, \alpha_2\}$ obtained using (i) classical constrained nonlinear least squares (baseline), (ii) the continuous quantum branch (VQE/VQA with bounded decoding), and (iii) the discrete quantum branch (QUBO/QAOA with bit-encoded parameters). All methods use the same circuit topology $Z(\omega) = R_s + j\omega L + (R_{ct} \parallel CPE_1) + CPE_2$ and the same bound/decoding rules (Table S1) to ensure physically valid comparisons.

Method	R_s (Ω)	L (10^{-7}H)	R_{ct} (Ω)	Q_1 ($10^{-3}S \cdot s^{\alpha_1}$)	α_1	Q_2 ($10^{-3}S \cdot s^{\alpha_2}$)	α_2
Classical	0.8725	1.880	15	2.622	0.8017	2.117	0.9001
VQE/VQA	0.8725	1.880	15	2.622	0.8017	2.117	0.9000
QAOA	1.022	1.301	11.53	3.790	0.7780	2.232	0.8764