Supporting information for:

Electrochemistry in Flame Plasmas: Passive Films and Impedance Analysis

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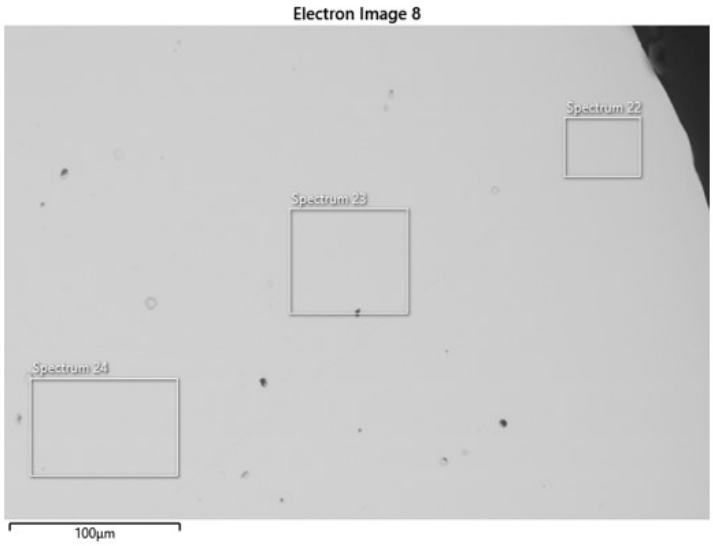
Platinum – clean and test sample (no oxidation layer)



Label	O	Pt	Total
Spectrum 22	2.24	97.76	100
Spectrum 23	1.45	98.55	100
Spectrum 24	1.3	98.7	100

Figure S1: Platinum post oxidation

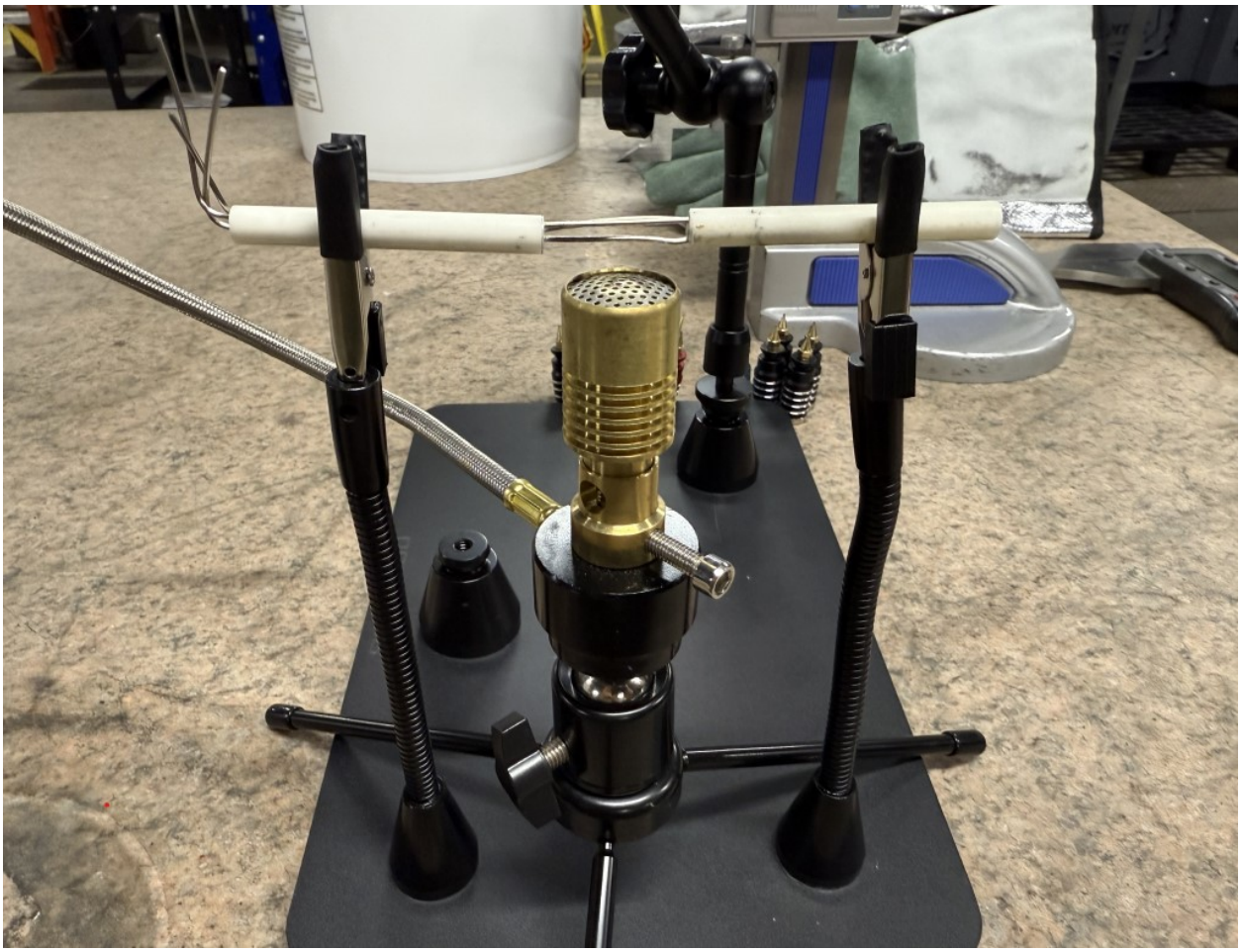


Figure S2. Flame EIS Apparatus.

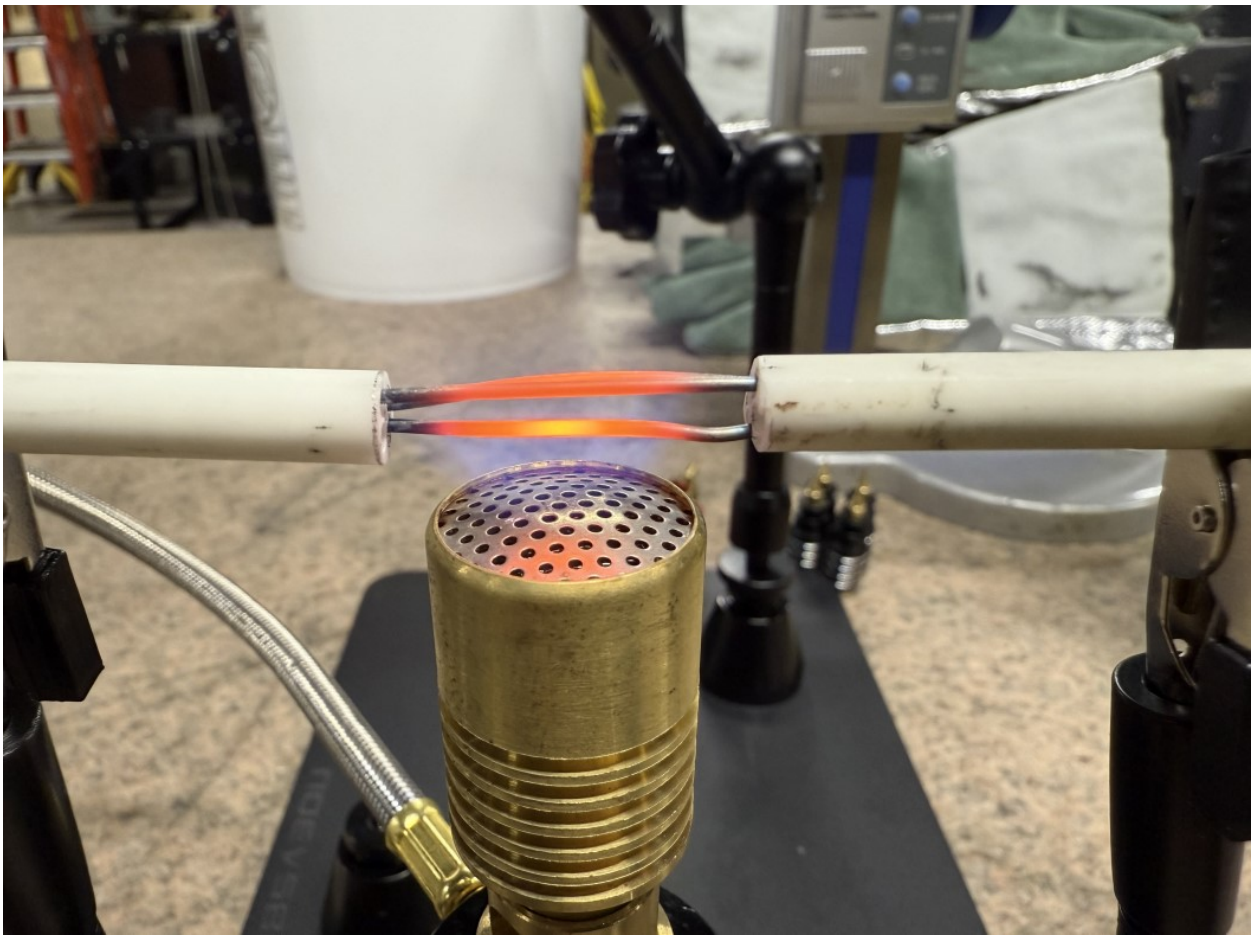


Figure S3. Electrodes exposed to flame plasma.

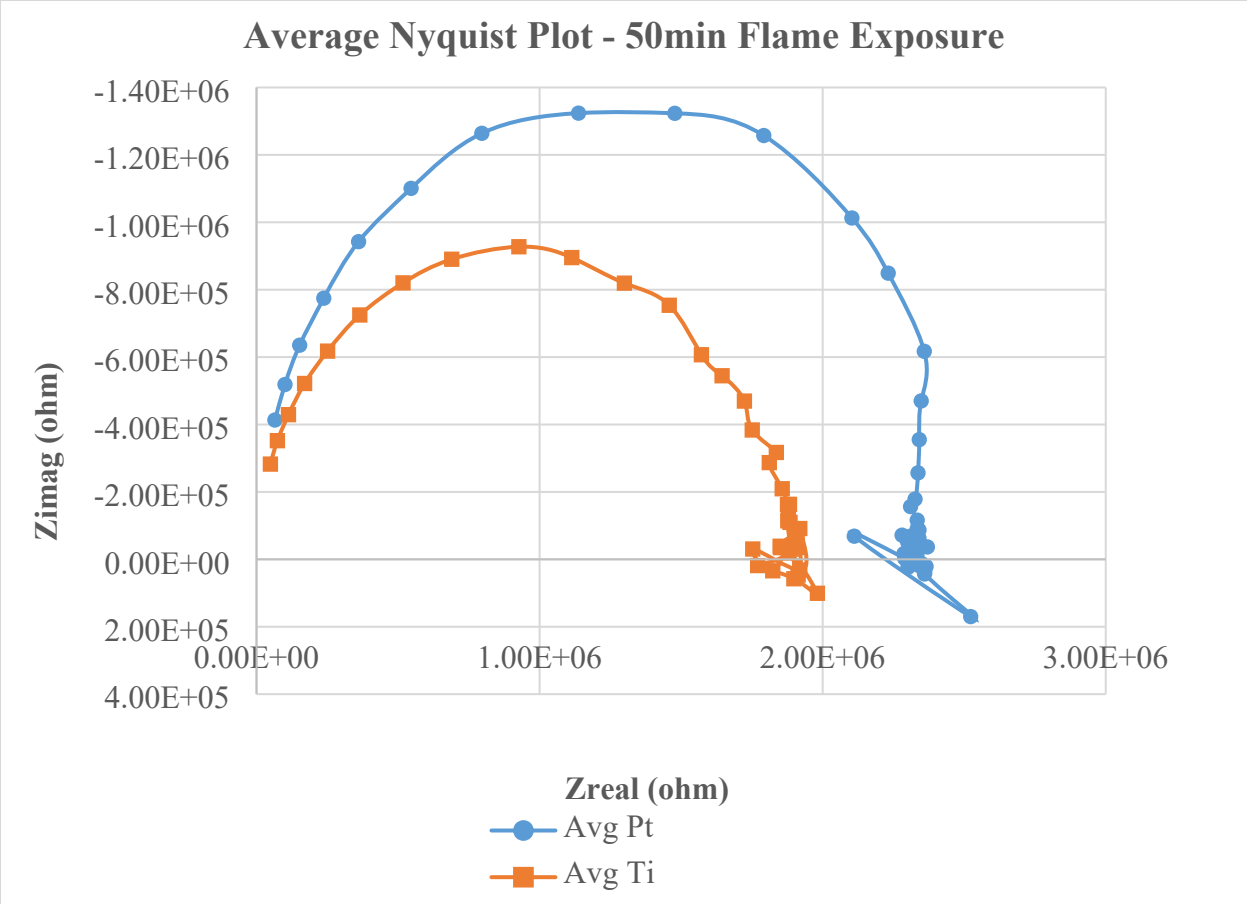


Figure S4: Average of 5 working electrodes at 50min of flame exposure.

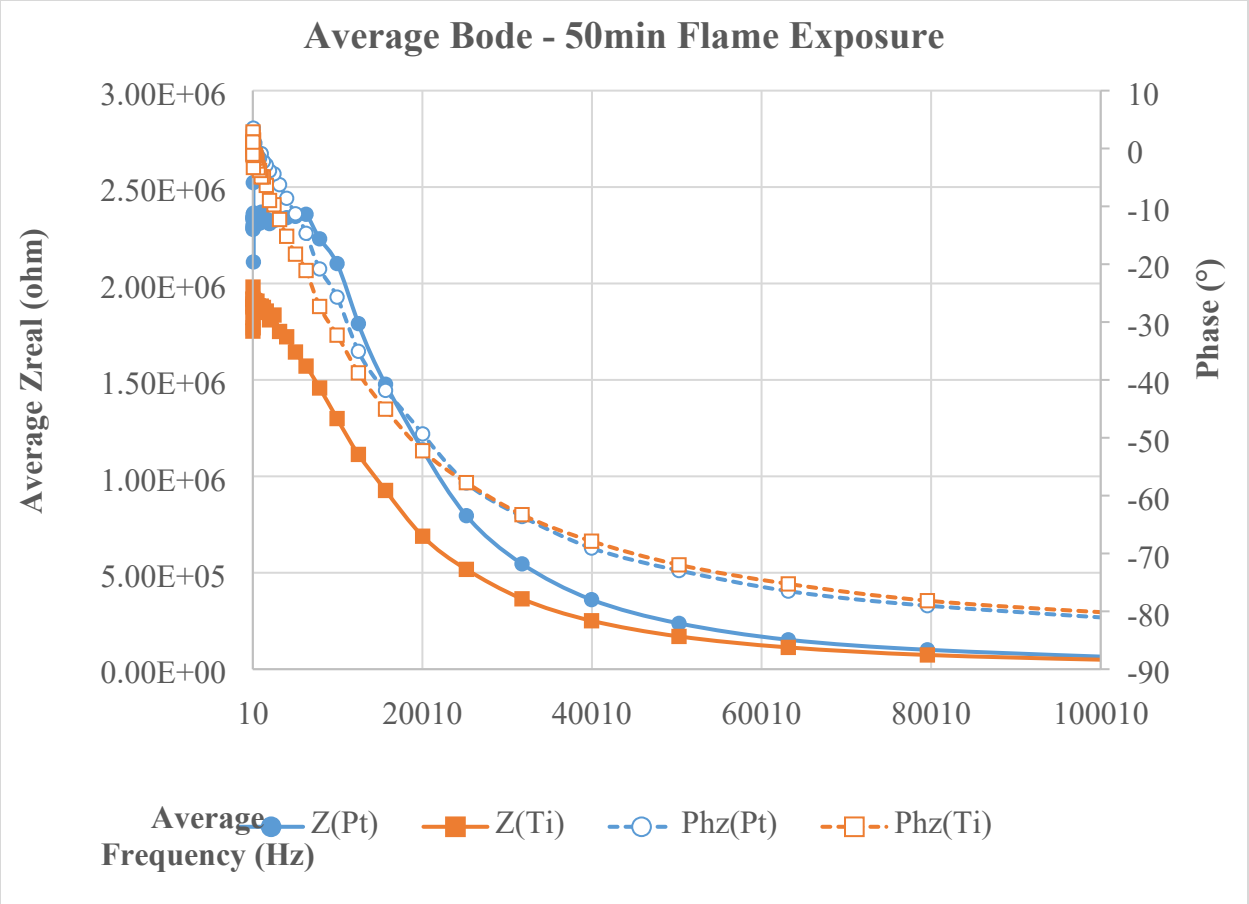


Figure S5: Average of 5 working electrodes at 50 min of flame exposure.