Supporting Information: SAM and Solution Resistance Data

Additional Impedimetric fitting data for the solution and SAM resistance used to determine the SAM capacitance are included below.

Table S1: Additional Electro-polished Dodecanethiol Impedance Fitting Data

Electrode:	A	B	C	D	E
Solution Resistance	1.19	1.15	1.23	1.18	1.20
	± 0.02	± 0.01	± 0.02	± 0.03	± 0.05
SAM Resistance	107.20	259.10	N/A*	638.97	309.90
	± 11.17	± 107.9	N/A*	± 412.76	± 158.25

*This SAM was fit with a Helmholtz instead of a Randles Circuit as its resistance approached infinity

Table S2: Additional Electro-polished Azacrown Impedance Fitting Data

Electrode:	A	B	C	D	E
Solution Resistance	1.33	1.32	1.31	1.26	1.28
	± 0.03	± 0.02	± 0.01	± 0.02	± 0.04
SAM Resistance	381.63	141.63	150.07	182.20	66.39
	± 87.24	± 23.72	± 16.58	± 21.06	± 7.13

Table S3: Additional Unpolished Azacrown Impedance Fitting Data

Electrode:	F	G	H	I
Solution Resistance	4.24	4.57	4.51	4.44
	0.04	0.03	0.02	0.05
SAM Resistance	3.77	67.89	53.31	46.18
	0.9	2.45	2.03	1.59