

Supplementary Material

Low-Cost Nitric Oxide Sensors: Assessment of Temperature and Humidity Effects

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Figure S1. Two position, three way electrically controlled solenoid valve.

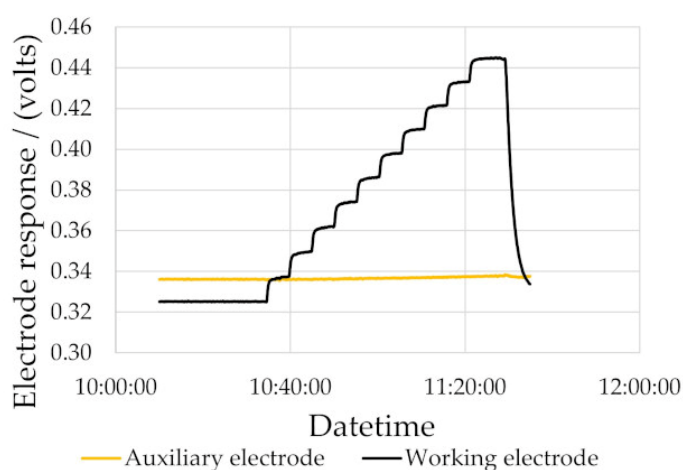


Figure S2. Typical electrode responses to 20 ppbV stepwise nitric oxide addition (chamber conditions 25 °C/50% relative humidity).

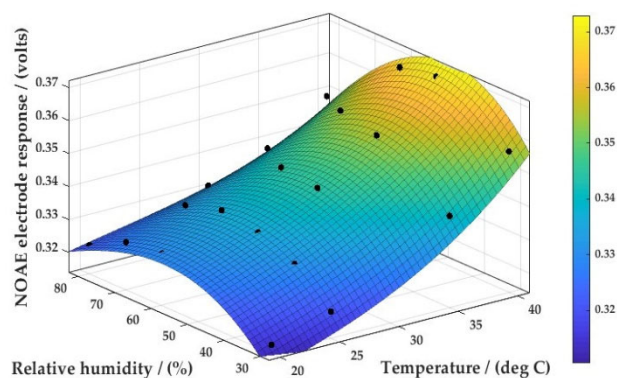


Figure S3. Nitric oxide auxiliary electrode surface function.

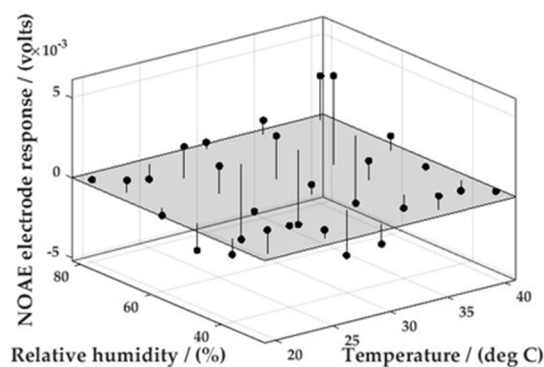


Figure S4. Nitric oxide auxiliary electrode residuals plot for Figure S4.

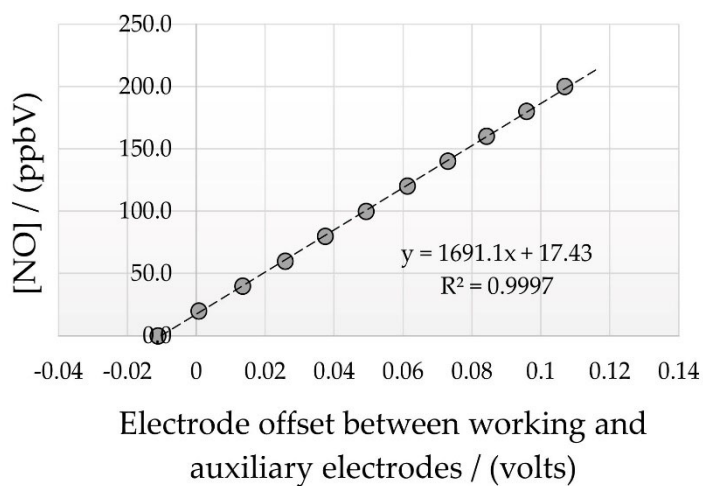


Figure S5. Typical calibration curve for 20 ppbV stepwise nitric oxide addition (chamber conditions 25 °C/50% relative humidity).

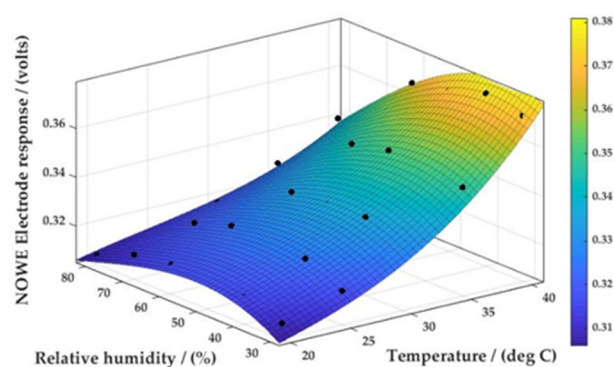


Figure S6. Nitric oxide working electrode surface function.

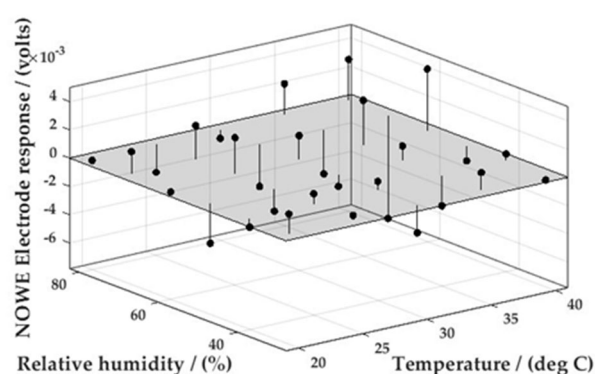


Figure S7. Nitric oxide working electrode residuals plot for Figure S6.

Table S1. Coefficients for Figure S4.

P00 =	0.2386	(-0.08908, 0.388)
P10 =	0.0010025	(-0.01234, 0.01439)
P01 =		(-0.001014, 0.00592)
P20 =	0.002453	(-0.0005005, 0.0003649)
P11 =	-6.782×10^{-5}	(-3.976×10^{-5} , 0.0001705)
P02 =	6.537×10^{-5}	(-8.907×10^{-5} , 1.746×10^{-5})
P30 =	-3.581×10^{-5}	(-3.122×10^{-6} , 6.324×10^{-6})
P21 =	1.601×10^{-6}	(-1.91×10^{-6} , 8.949×10^{-7})
P12 =	-5.057×10^{-7}	(-1.044×10^{-6} , 9.203×10^{-6})
P03 =	-4.76×10^{-7}	(-1.423×10^{-7} , 4.674×10^{-7})

Table S2. Coefficients for Figure S6.

P00 =	0.2348	(0.07281, 0.3967)
P10 =	23B0.001371	(-0.01311, 0.01585)
P01 =	0.002362	(-0.001395, 0.006119)
P20 =	-8.706×10^{-5}	(-0.0005559, 0.0003818)
P11 =	7.532×10^{-5}	(-3.86×10^{-5} , 0.0001892)
P02 =	-4.378×10^{-5}	(-0.0001015, 1.39×10^{-5})
P30 =	2.626×10^{-6}	(-2.492×10^{-5} , 7.74×10^{-6})
P21 =	-1.312×10^{-7}	(-2.832×10^{-6} , 2.075×10^{-7})
P12 =	-2.743×10^{-7}	(-8.898×10^{-7} , 3.412×10^{-7})
P03 =	2.106×10^{-7}	(-1.197×10^{-7} , 5.41×10^{-7})

Table S3. Coefficients for Figure 8a.

P00 =	-0.003784	(-0.1039, 0.09635)
P10 =	0.0003459	(-0.008609, 0.009301)
P01 =	-9.039 × 10⁻⁵	(-0.002413, 0.002232)
P20 =	-1.924 × 10⁻⁵	(-0.0003091, 0.0002706)
P11 =	9.943 × 10⁻⁶	(-6.049 × 10 ⁻⁵ , 8.038 × 10 ⁻⁵)
P02 =	-7.973 × 10⁻⁶	(-4.366 × 10 ⁻⁵ , 2.771 × 10 ⁻⁵)
P30 =	1.024 × 10⁻⁶	(-2.14 × 10 ⁻⁶ , 4.189 × 10 ⁻⁶)
P21 =	-8.046 × 10⁻⁷	(-1.744 × 10 ⁻⁶ , 1.349 × 10 ⁻⁷)
P12 =	2.017 × 10⁻⁷	(-1.788 × 10 ⁻⁷ , 5.823 × 10 ⁻⁷)
P03 =	4.804 × 10⁻⁸	(-1.562 × 10 ⁻⁷ , 2.523 × 10 ⁻⁷)

Table S4. Coefficients for Figure 9a.

P00 =	2696	(303.3, 5636)
P10 =	-3.785	(-242.2, 234.6)
P01 =	-37.56	(-99.41, 24.29)
P20 =	1.838	(-5.88, 9.556)
P11 =	-2.749	(-4.642, -0.8735)
P02 =	1.142	(0.1922, 2.092)
P30 =	-0.03087	(-0.1151, 0.05338)
P21 =	0.02883	(0.003811, 0.05384)
P12 =	0.007405	(-0.002728, 0.01754)
P03 =	-0.006482	(-0.01192, -0.001044)

Table S5. Coefficients for Figure 9b.

P00 =	34.4	(-106.2, 175)
P10 =	1.271	(-1.991, 4.532)
P01 =	-4.532	(-17.11, 8.042)
P20 =	-0.0144	(-0.0645, 0.0357)
P11 =	-0.001114	(-0.1, 0.09778)
P02 =	0.1303	(-0.2767, 0.5373)
P30 =	0.0001344	(-0.0001524, 0.0004211)
P21 =	-0.0005955	(-0.00113, -6.114 × 10 ⁻⁵)
P12 =	0.001585	(0.0002659, 0.002904)
P03 =	-0.00273	(-0.007173, 0.001713)