Supporting Information

Flexible Printed Gel Electrodes: Towards Living Plant Sensors for Nature-Based Environmental Monitoring

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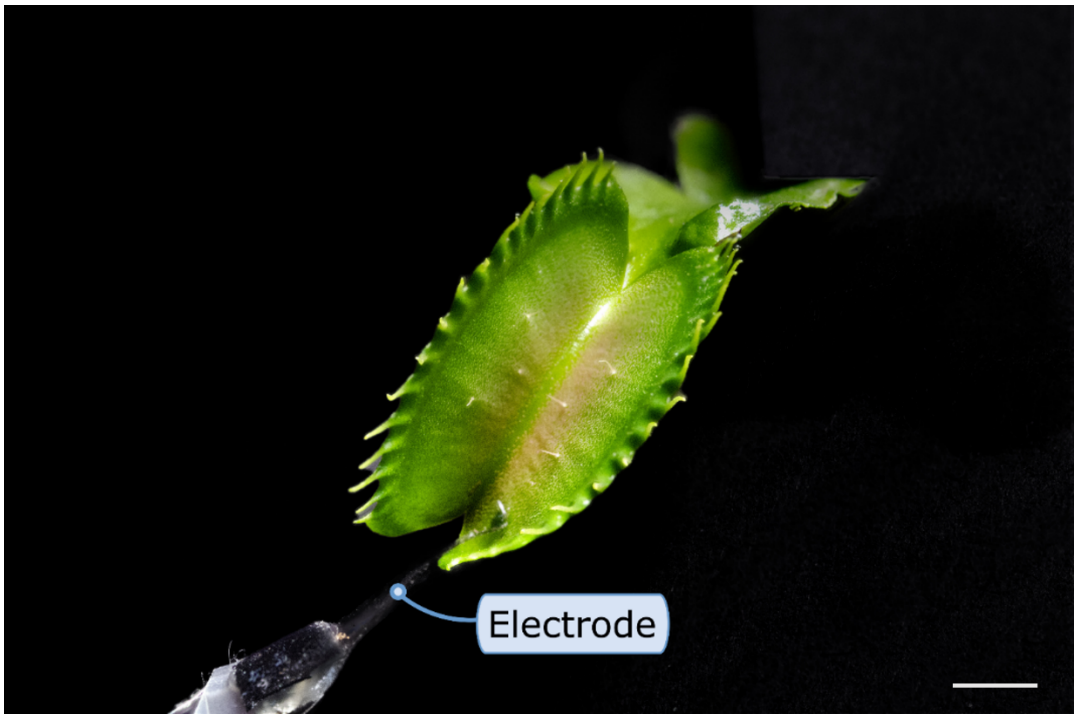

Figure S1. Image of an adhesive gel electrode adhered to the inside of the Venus flytrap (*Dionaea muscipula*) lobe (scale bar is 5 mm).

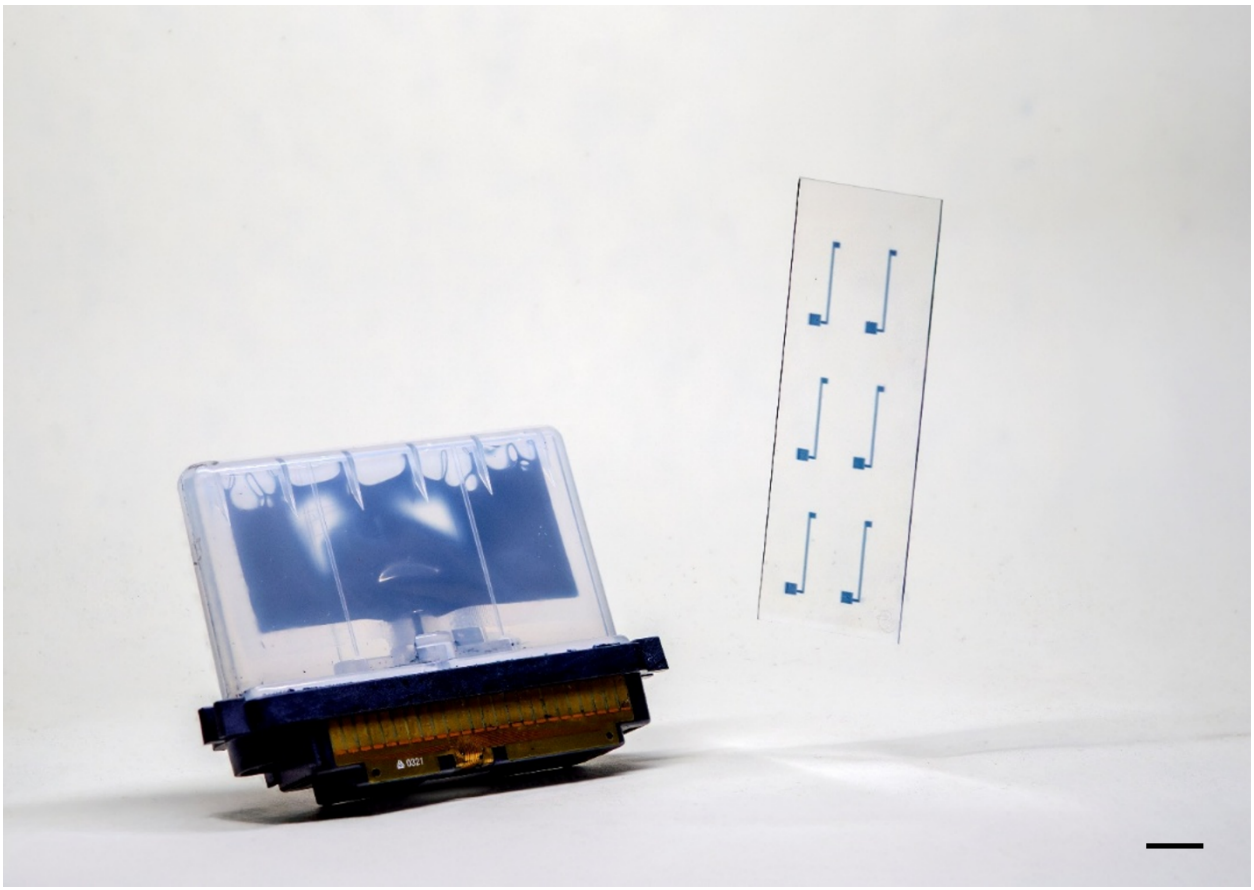

Figure S2. Image of a Dimatix Materials Cartridge and inkjet printed PEDOT:PSS traces on a glass slide prior to drop casting the PVA gel (scale bar is 10 mm).

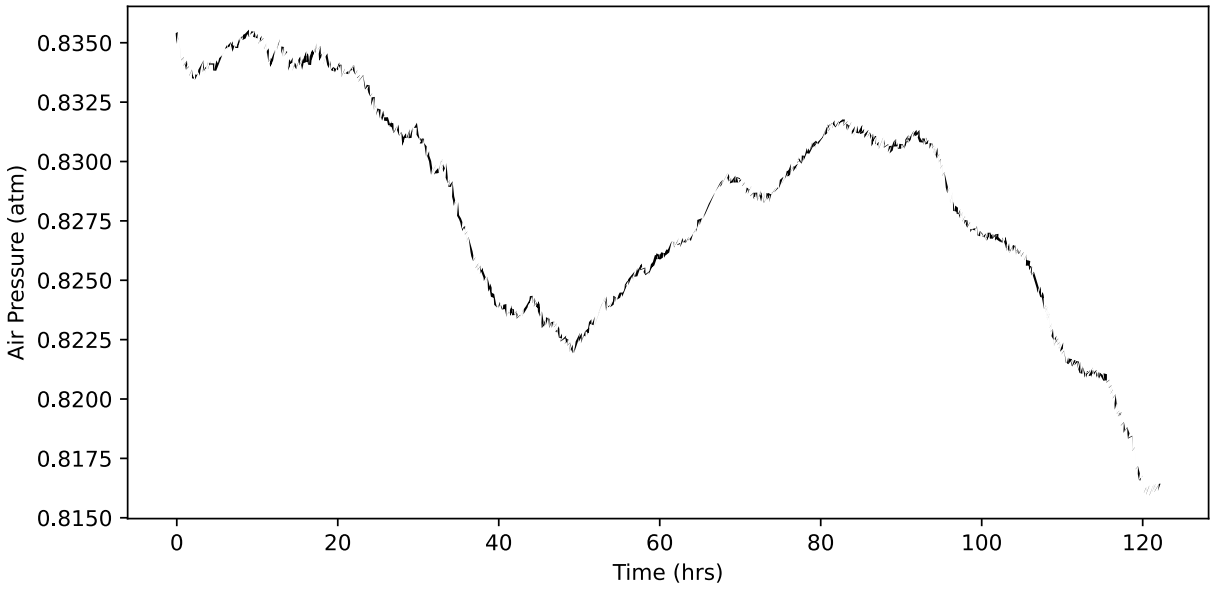

Figure S3. Air pressure as a function of time recorded during the EIS experiment referenced in Table 1.

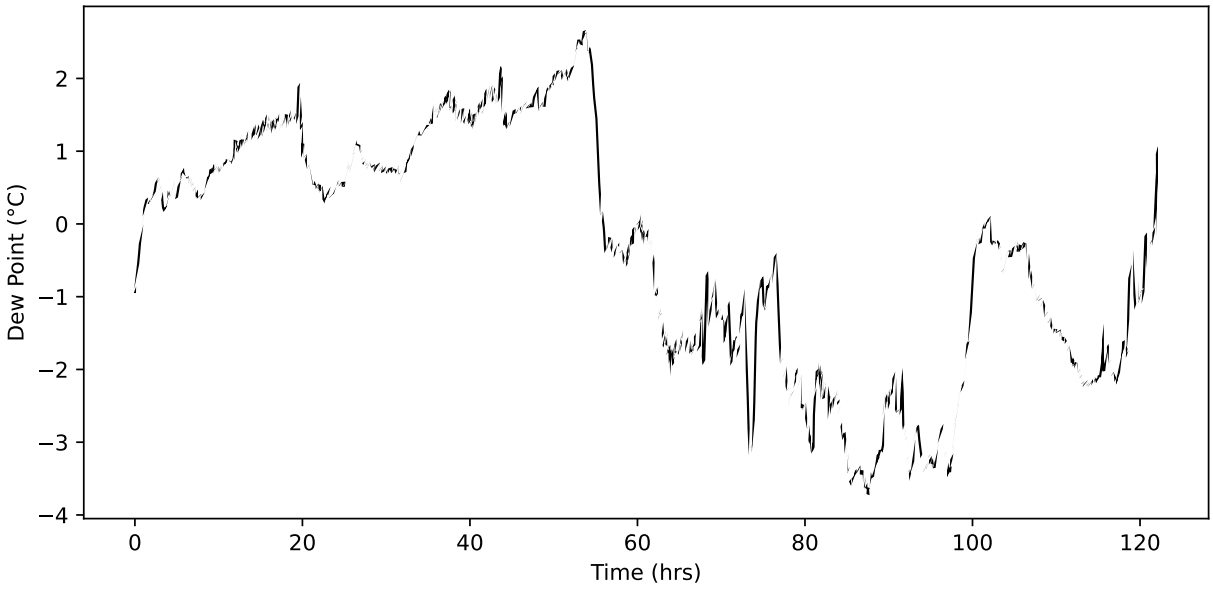

Figure S4. Dew point as a function of time recorded during the EIS experiment referenced in Table 1.

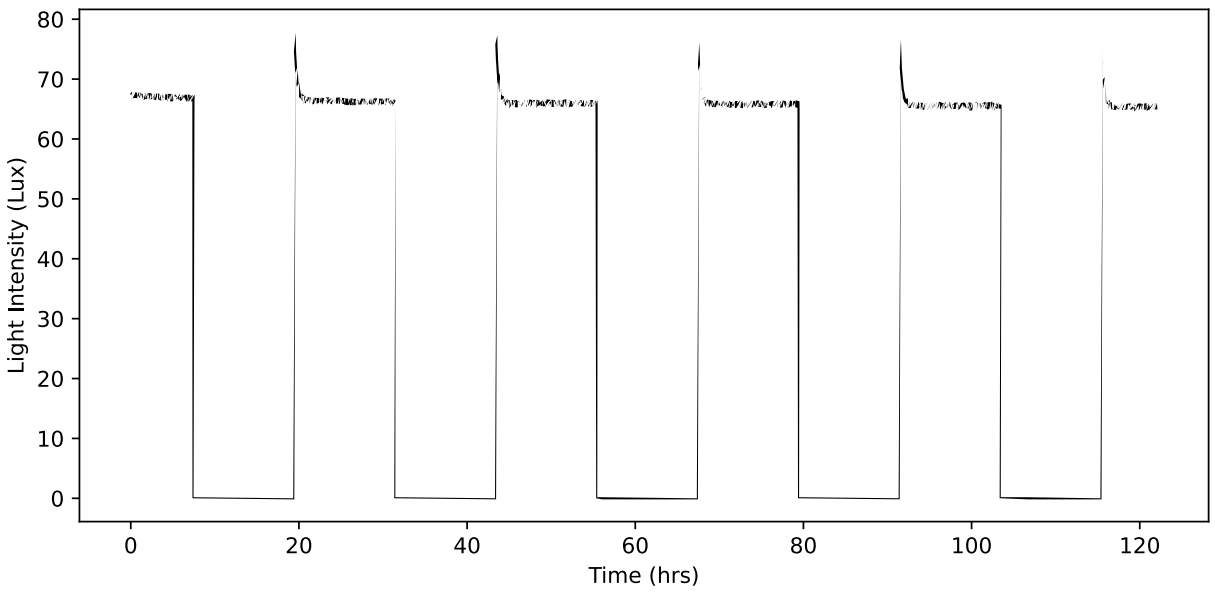

Figure S5. Light intensity as a function of time recorded during the EIS experiment referenced in Table 1.

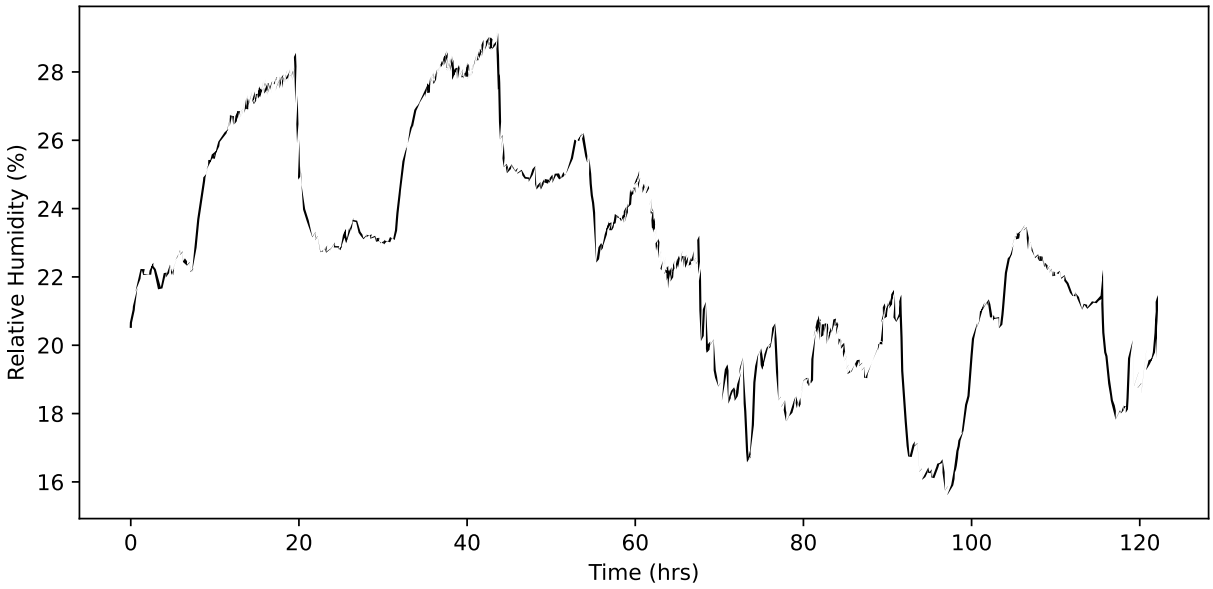

Figure S6. Relative humidity as a function of time recorded during the EIS experiment referenced in Table 1.

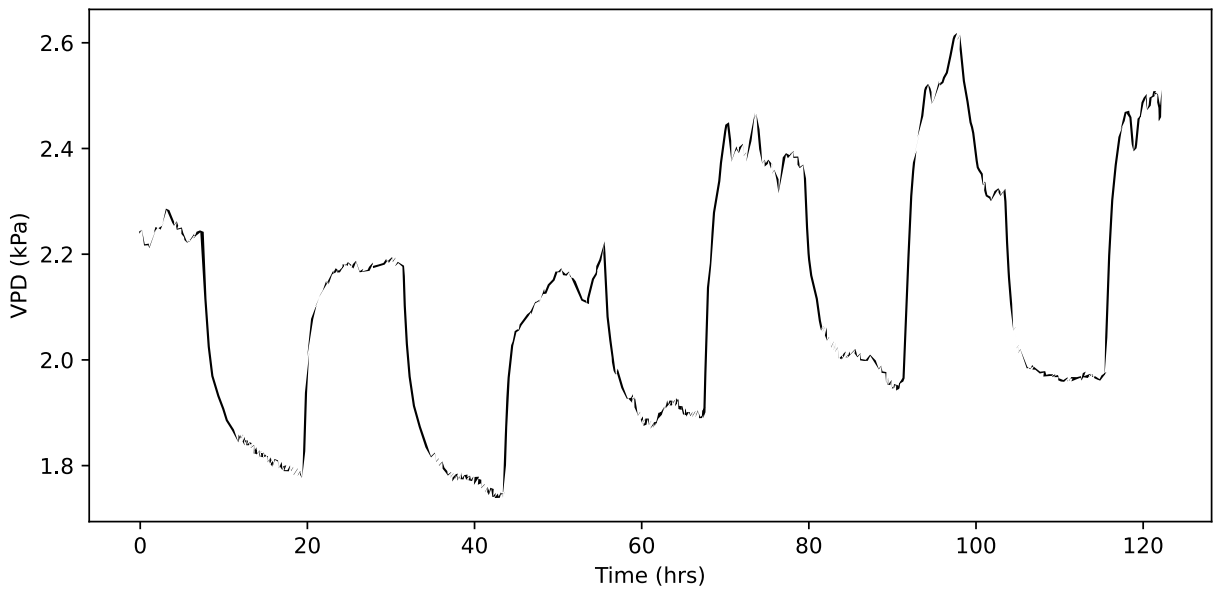

Figure S7. Vapor pressure deficit (VPD) as a function of time recorded during the EIS experiment referenced in Table 1.

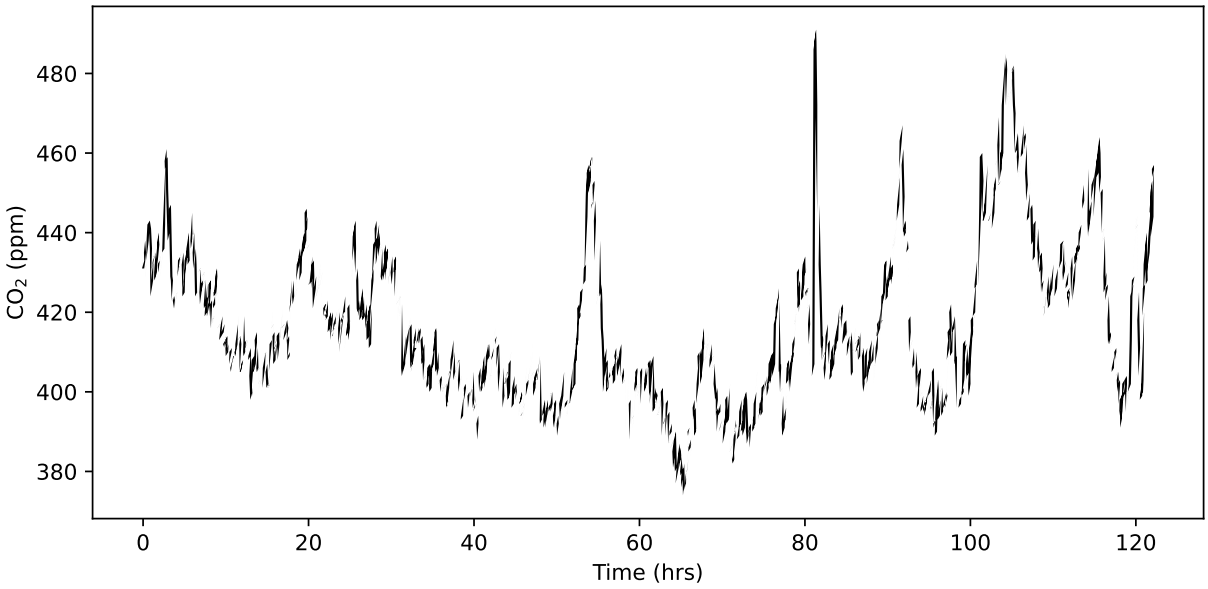

Figure S8. Carbon dioxide as a function of time recorded during the EIS experiment referenced in Table 1.

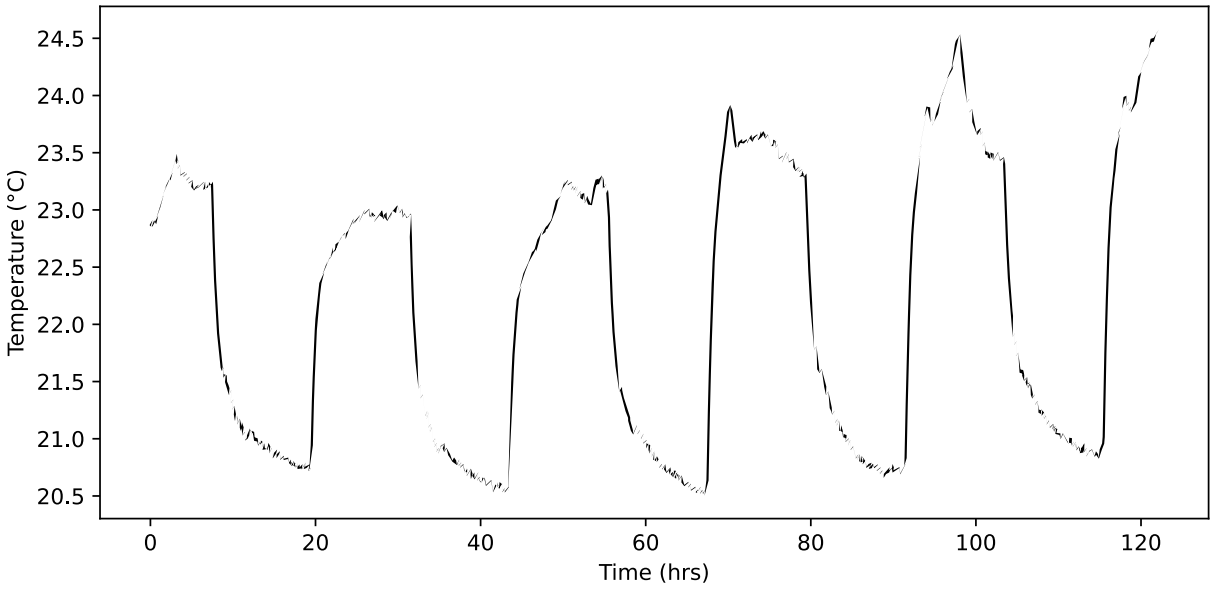

Figure S9. Temperature as a function of time recorded during the EIS experiment referenced in Table 1.

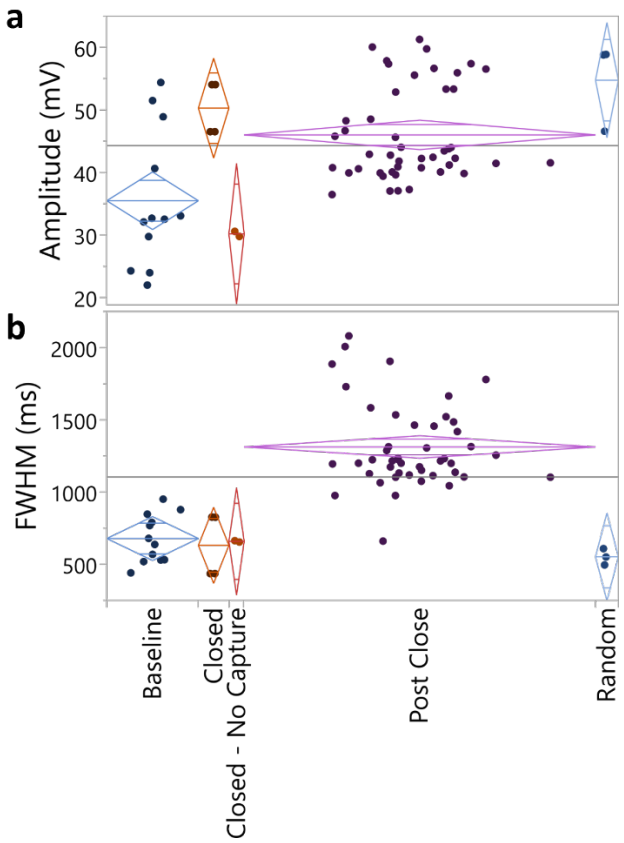

Figure S10. The results from an ANOVA analysis of the (a) amplitude and the (b) the full width at half maximum for the APs generated under different conditions in the insect activity experiment.

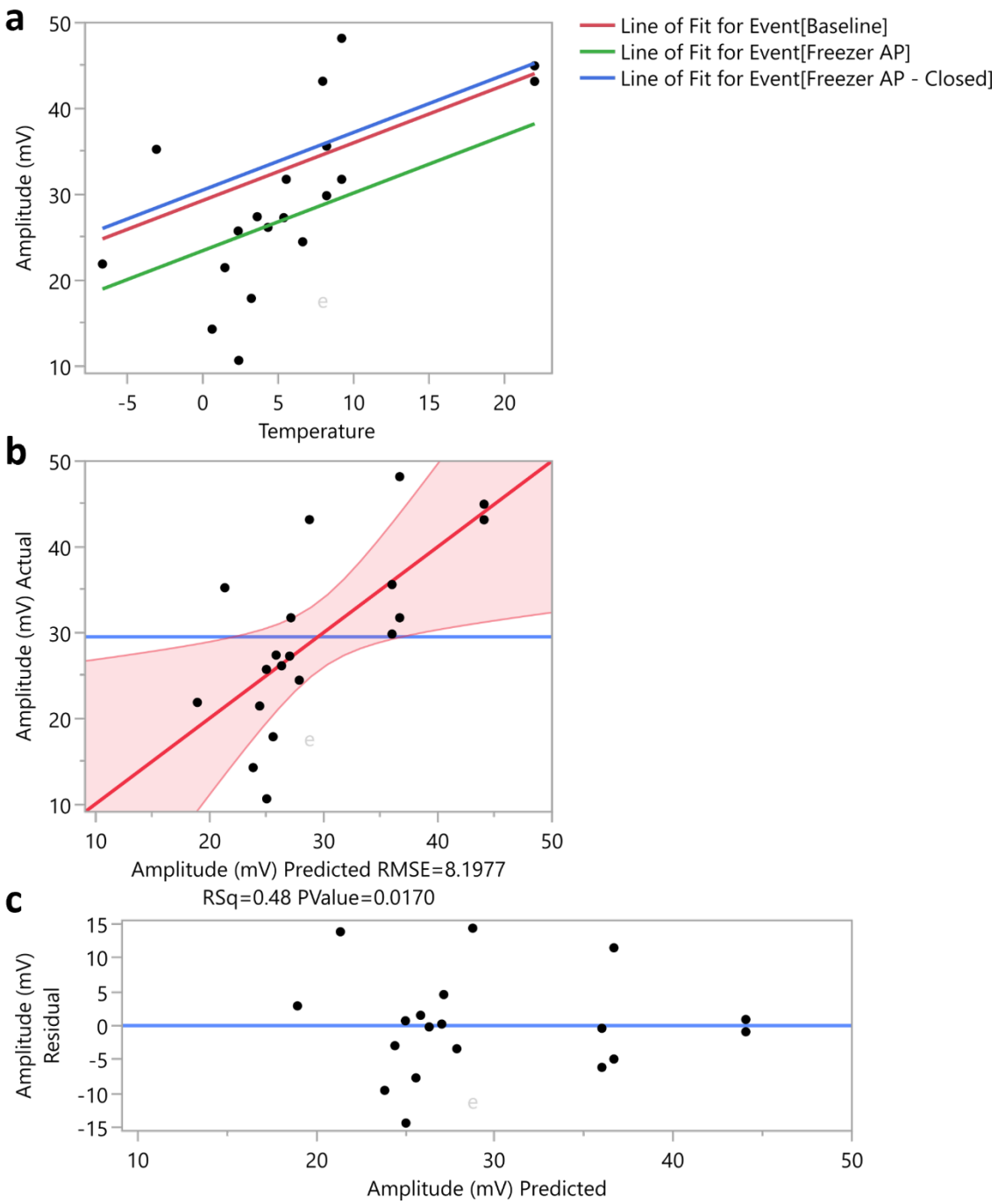

Figure S11. (a) Regression analysis of action potential amplitude as a function of temperature and event type from the temperature variation experiment. (b) Actual versus predicted amplitude plot and (c) residuals of the amplitude regression model.

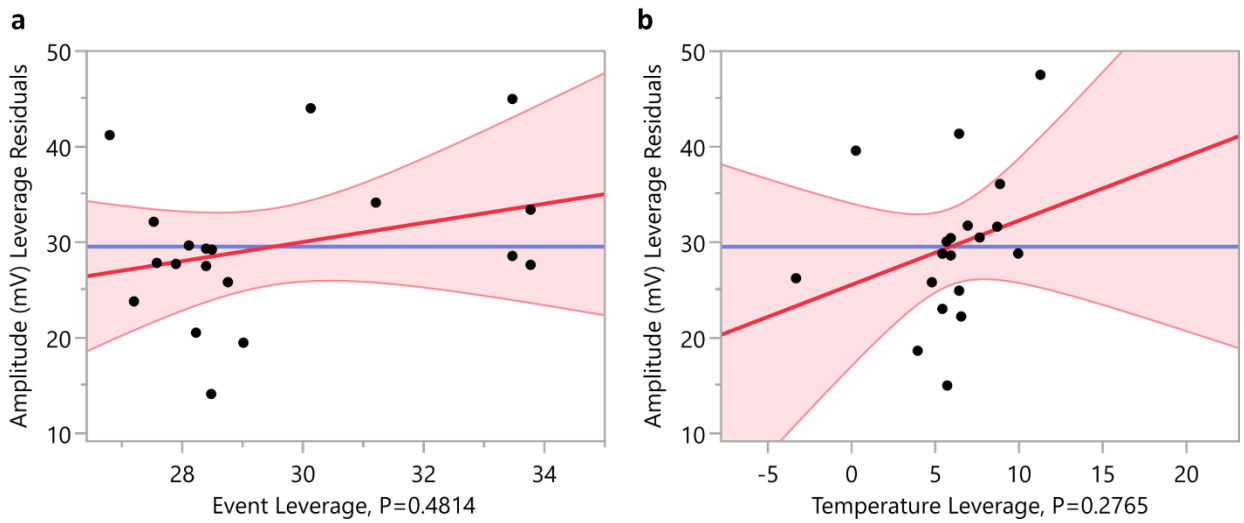

Figure S12. (a) Leverage plot for event and (b) leverage plot for temperature for amplitude regression residuals in the temperature variation experiment.

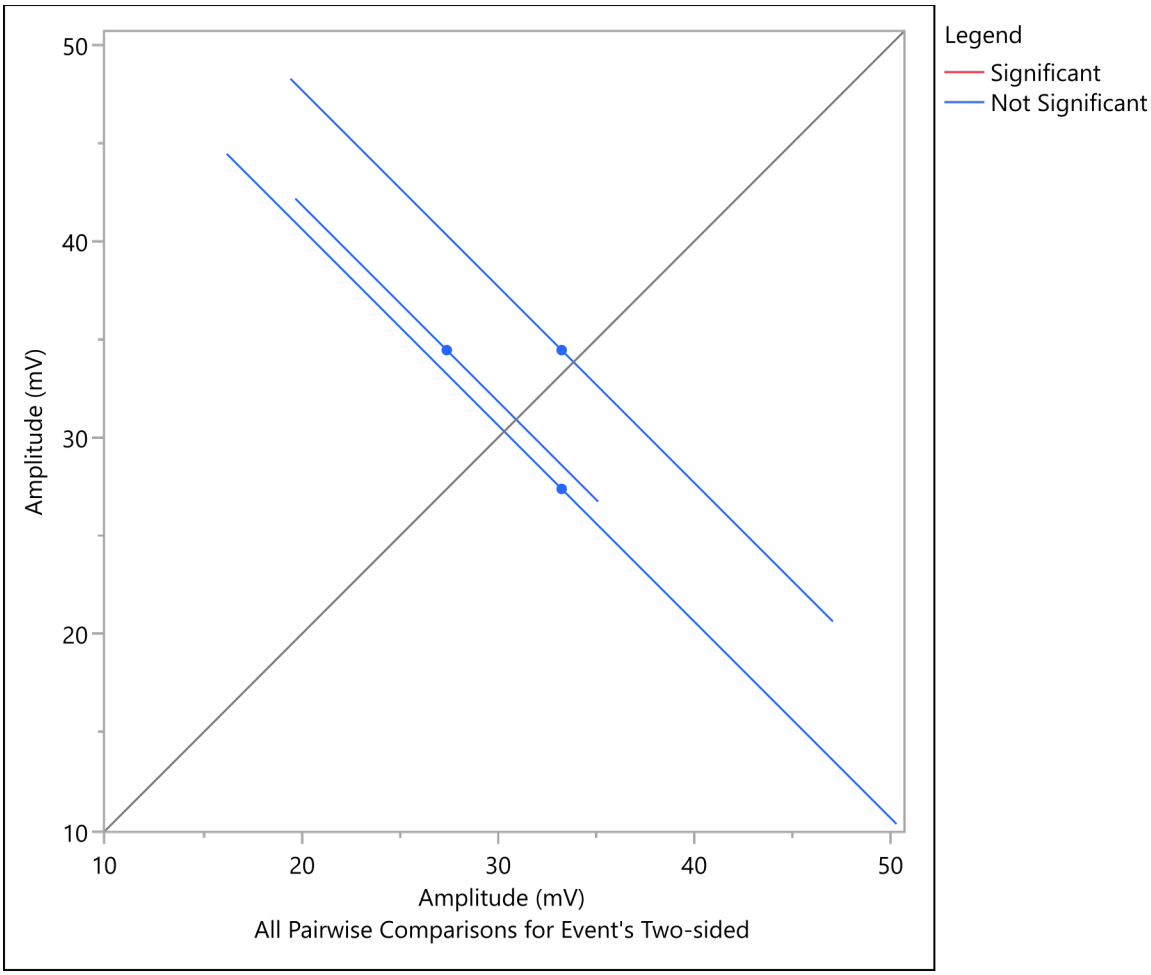

Figure S13. Tukey's Honestly Significant Difference (HSD) pairwise comparison of action potential amplitude across different events in the temperature variation experiment.

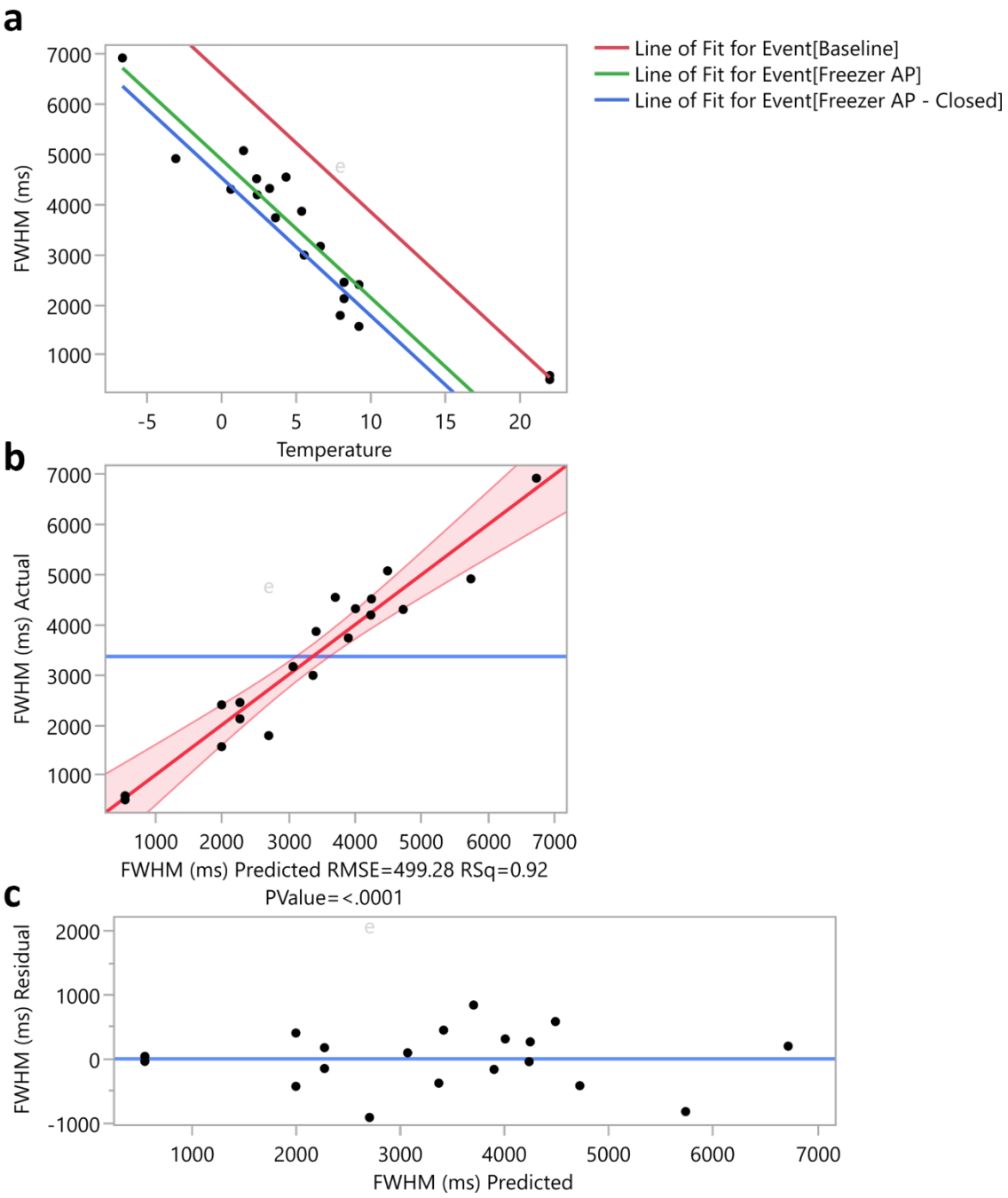

Figure S14. (a) Regression analysis of action potential full width at half maximum (FWHM) as a function of temperature and event type from the temperature variation experiment. (b) Actual versus predicted FWHM plot and (c) residuals of the FWHM regression model.

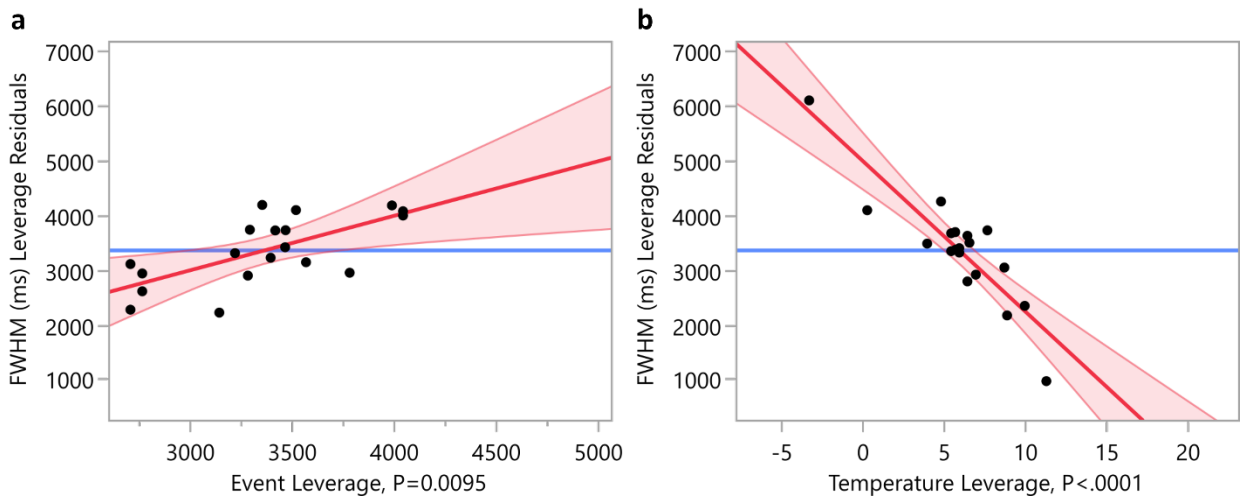

Figure S15. (a) Leverage plot for event and (b) leverage plot for temperature for FWHM regression residuals in the temperature variation experiment.

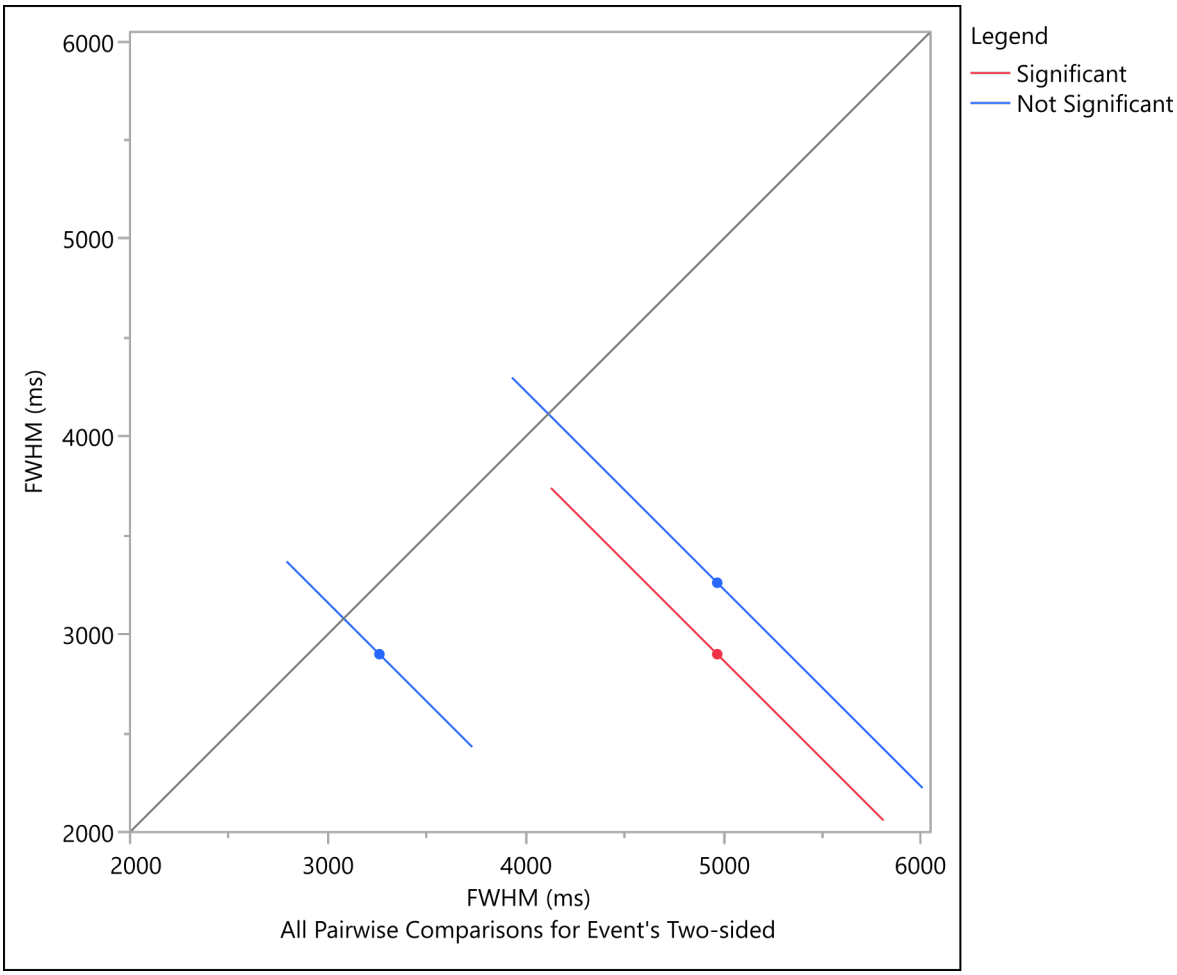

Figure S16. Tukey's Honestly Significant Difference (HSD) pairwise comparison of action potential FWHM across different events in the temperature variation experiment.