



# MzProbE:

A real-time cloud-based microbial sensor platform.

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# The MiProbe Microbial Sensor

The MiProbe measures the electron potential on the electrode surface populated with a biofilm made up of endemic species of microbes.

Microbial Potential responds to changes in the environment from the perspective of the biofilm.

Redox changes, Photosynthesis, Biomass (e.g. Ash Free Dry Weight / MLSS / BOD / COD), Nutrient Loading, and the presence of biocidal compounds can be monitored in real-time.

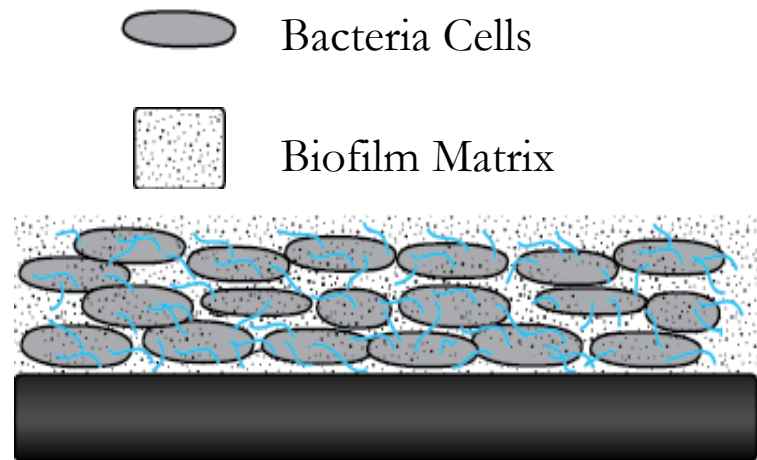
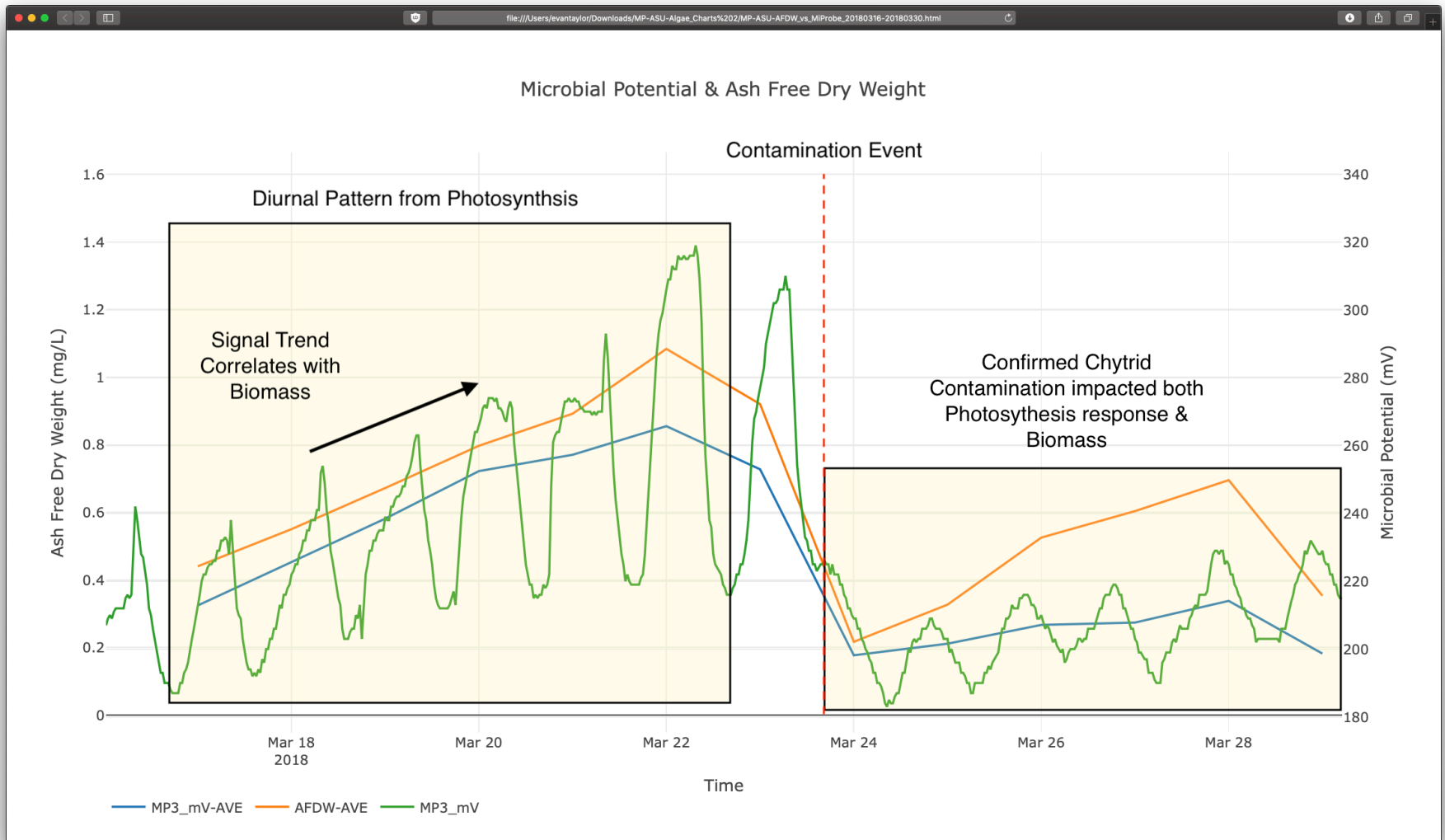


Figure: Sensing Electrode with populated biofilm.

US Patent 10,113,990 B2 & Others Pending

# Real-Time Data – Algae Cultivation

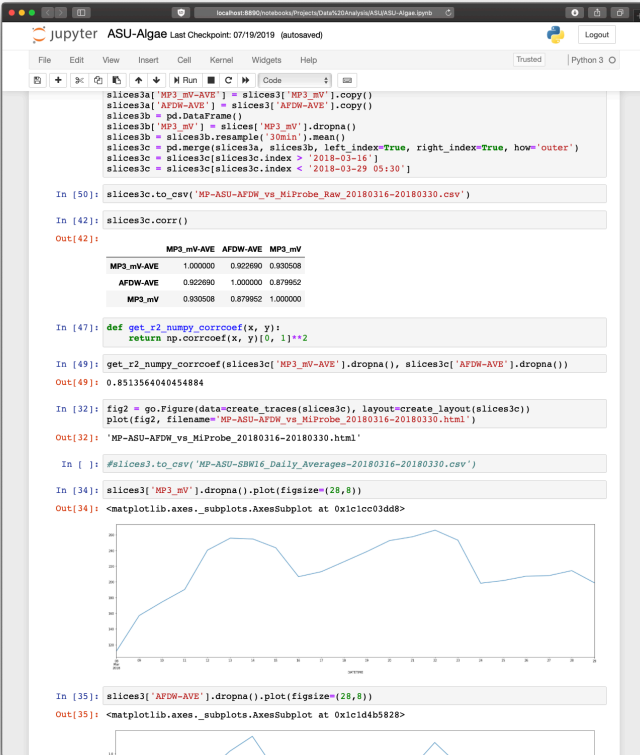


Preliminary Data from Arizona State University's AzCATI algal pond MiProbe test installation.

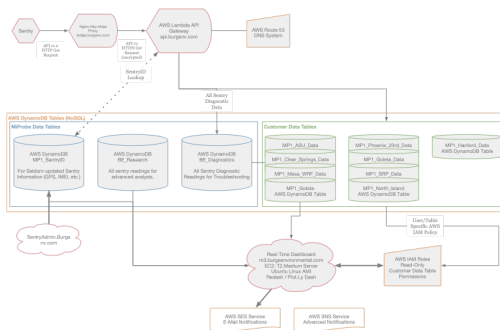
# Data Management

## Open Data Platforms & Tools

### Jupyter Notebook



### Cloud Data Platform:



NoSQL Scalable  
**Information-as-a-Service Business Model**  
 Machine Learning Artificial Intelligence

### Redash



Direct Access to Real-Time Data for advanced analysis

Open Source Tools

Easy to use Customizable Dashboards for Decision Making

# Thank You

## Questions?

MiProbe Technology, Collaboration,  
Ongoing R & D, Industry, Market, etc.

questions:

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Product Development

&

Business Development

Cloud Architecture, Big Data,  
Bioinformatics, Machine Learning, etc.

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