

EE 491 Weekly Report

Week 12: 11/11-11/17

Group: *May14-03*

Advisors: *Dr. Sumit Chaudhary, John Carr*

Client: *ISU NanoLab*

Members: *Andersen, Martin; Diallo, Mouhamadou; Rodriguez, Nicholas; Straquadine, Joshua (Leader)*

Project Title: *“Design and implementation of cryogenic current measurements on organic photovoltaic cells”*

Weekly Summary

This week we hit a roadblock by running out of temperature sensors. We were fairly confident with our last one, but an unforeseen issue caused it to break. We didn't have the hardware to keep moving forward, so we focused instead on some other aspects of the project.

Meetings

11/14 Strategy Meeting

Duration: *2 hours*

Members Present: *All*

Purpose and Goals:

At this meeting, we planned to discuss several different aspects of the project, in the hopes that we can hit the ground running when parts come in next week.

Achievements:

- Discussed our options and requirements for ordering a new current meter
- Laid out the basis of the automation software
- Discussed a better probe assembly design to avoid the breakage issues we are experiencing.

Pending issues

Parts had been ordered, but we were stuck until those came in. We did make progress, but not quite as much as we had hoped and not in the fields we felt were most necessary. Next week, once we get those parts in, will work much better for us.

Plans for next week

We hope to begin reassembling a new probe assembly with our new parts. We also received some tips from another researcher here at ISU about how to improve our cryostat assembly, so we plan to use some of that information to improve our design. We also need to set up a meeting with a 492 group to fulfill the course requirements.

Individual Contributions

- Andersen, Martin: Attended the meeting, suggested new design solutions, designed software (5 hr)
- Diallo, Mouhamadou: Attended the meeting, suggested new design solutions, designed software (5 hr)
- Rodriguez, Nicholas: Attended the meeting, suggested new design solutions, designed software (5 hr)
- Straquadine, Joshua (Leader): Attended the meeting, suggested new design solutions, designed software and wrote and tested the basic code structure (9 hr)