

Advisors: Meng Lu

Client:

Members (roles): Wenbing Ma (coding) , Jiangxiang Zhang, Xuan Zhang (Webmaster) , Zhikai Cui (Leader), Chenyin Liu(sample holder design)

Project Title: A high resolution two-dimensional ultrasonic detector using plasmonic crystals

Weekly Summary Members feel excited about the process so far, because the sensor is almost done. We can get some image from tested sensor. Next week, we will set up all equipment in lab. We will check what's going on when the water is added into the equipment.

Meeting notes:

11/3 Group Meeting with Advisor

Duration: 60min

Members Present: All

Purpose and Goals:

1. The sample will be made by Lee. he offer some help to hang the acoustic head above the water tank.
2. The website will be done and upload to internet.
3. test to sensor to make sure the sensor work properly.

Achievements:

1. We got some idea about making the sample holder, with the mechanical fabrication way, we thought we can finish the holder in next week.
2. The 3D diagram of optical setup has been finished. The image of design is attached at the end of this file.
3. half way done C# coding for motorize stage.

Pending issues

1. There is a problem during the process to make website, the php my admin fail to upload the website to school site, we will ask some expertizer to get some help.
2. How to make the optical setup remain upright would be a problem. The holder may be needed to make a few adjustments.

Plans for next week

Wenbing Ma & Zhikai Cui

- Try to setup DAQ device with computer and connect it with photo detector.
- finish C# coding for motorize stage.

Jiangxiang Zhang

- Finish the optical setup
- Explore setup of laser diode

Xuan Zhang & Chenyin Liu

- Help Jiangxiang set up the equipment of optical process.
- Use a speaker instead of the acoustic wave transducer to do the first experiment
- Test the sensor and try to collect the first version of data
- Wenbing and Zhikai will sketch the data into scope and figure
- Our website will be transferred from Weebly.com to signed web address located on IASTATE.COM domain

Individual Contributions (this week)

- Wenbing Ma attended the meeting(1hr), do C# coding for motorize stage. (6hr) Read datasheet of DAQ(1hr) Read user manual (1hr).
- Jiangxiang Zhang attended the meeting the meeting(1hr), Made a few adjustment of optical setup(2hr), Finish the 3D diagram of optical setup(6hr).
- Xuan Zhang attended the meeting.(1hr)
- Zhikai Cui attended the individual meeting (1hr), figure out how to design the sample holder and how to manufacture it with iron and steel.(1hr), build up the power cord for PCB board(2hr) Read online instructions of DAQ(2hr) Read datasheet of DAQ(1hr) Read user manual (2hr).
- Chenyin Liu attended the meeting.(1hr) , figure out how to design the sample holder and how to manufacture it with iron and steel.(5hr). Design the website, include download the website, categorize the website.(3hr)

Total contributions for the project

Wenbing Ma (9 hr)

Jiangxiang Zhang (9hr)

Xuan Zhang (hr)

Zhikai Cui (9hr)

Chenyin Liu (9hr)

