**Hardware set up instructions:**

* Connect Keithley to computer using GPIB to USB extension located beneath the PLIV box.
* Contact sample using alligator clips in optical box.
* Ensure laser is turned off.
* Remove laser from PLQY integrating sphere using Allen key and place in clamp.
* Align sample beneath laser.

**Software instructions:**

Type the following into the command prompt/terminal:

ipython

cd /into your directory/

from pJV import PJV

c = PJV.pJV()

c.take\_pjv(sample\_name = "sample", min\_current = 300, max\_current = 780, step = 20, direction = "fwdrev", n\_wires = 2, num\_measurements = 5, stabilize\_time = 3)

# These are the default arguments

# Set sample name

# Modify direction to fwd, rev, or keep as fwdrev

# Adjust min\_current, max\_current as needed

If connection issues:

1. check for available addresses

import pyvisa

rm = pyvisa.ResourceManager()

rm.list\_resources() #prints a list of available GPIB addresses

2. connect to address of your choice

Currently set to connect to this address:

# Connect to the Keithley

try:

self.JVcode = control3.Control(address='GPIB2::22::INSTR')

self.JVcode.wires = 2

print("Keithley connected and set to 2 probe sensing.")

except Exception as e:

print("Error while trying to connect to the Keithley: ", e)

print("Please ensure the Keithley is connected to 'GPIB1::22::INSTR' and try again.")

raise self.CustomError("Keithley Connection Error")