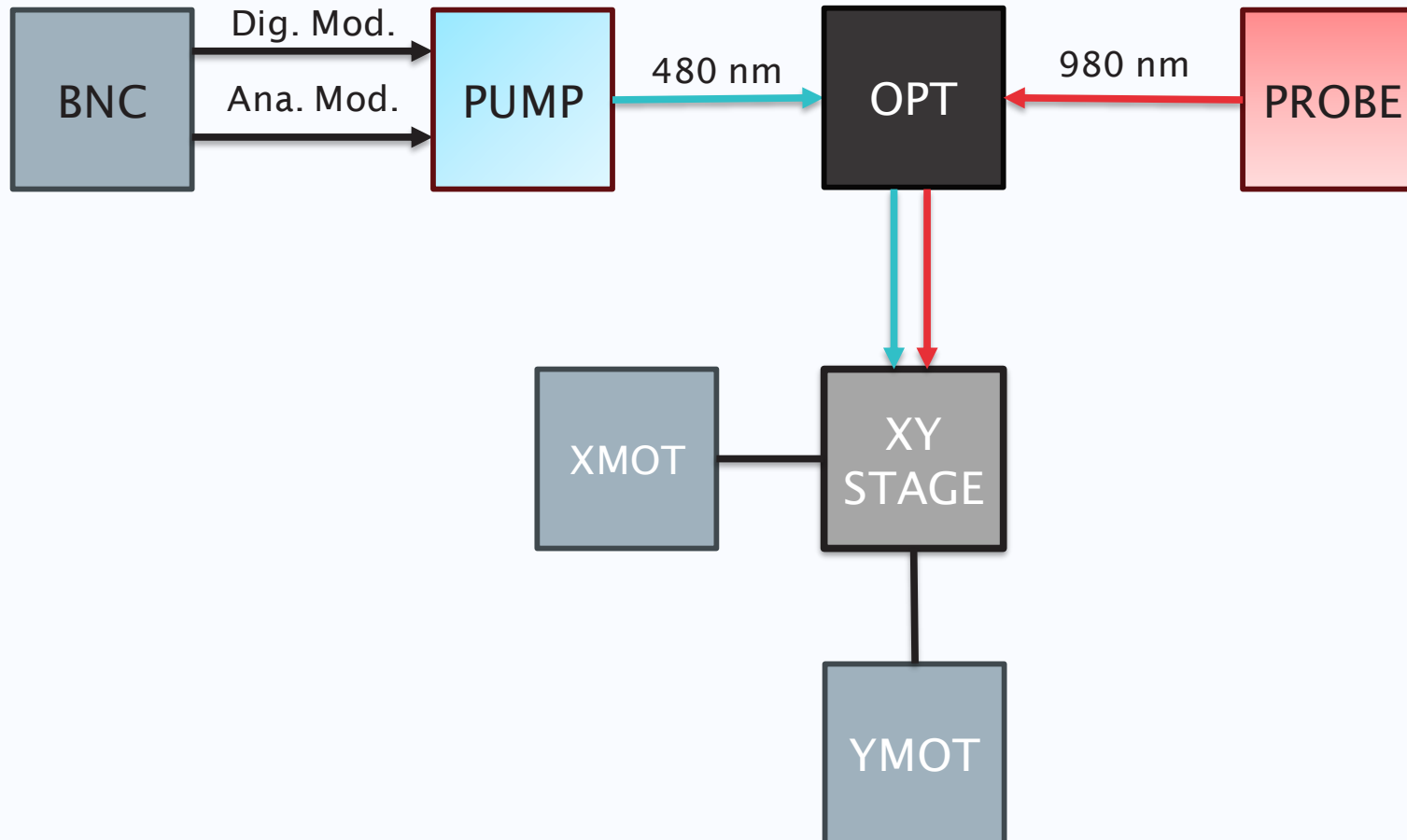




Python Integration of the Sb₂Se₃ Optical Switching Experiment

Daniel-Iosif Trubacs, Professor Otto Muskens

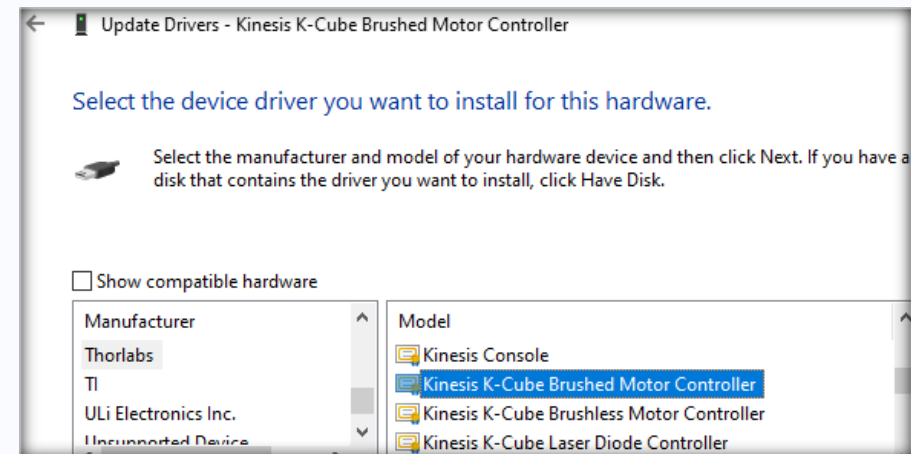
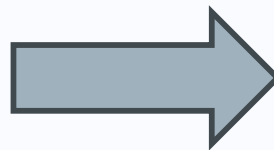
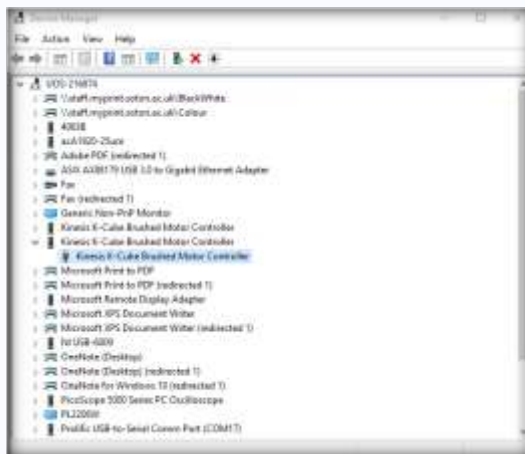
Technical Setup



- BNC – BK Precision 4063B. Controlled through python.
- PUMP – 480 nm laser. Controlled by BNC.
- OPT – Optical setup. Different optical elements (black box).
- PROBE – 980 nm laser. Always constant power.
- XMOT and YMOT - Thorlabs KDC101 Brushed Motor Controllers. Controlled through Python.
- XY STAGE. Controlled by motors.

Software Requirements

- All the code is written in Python and maintained on the GitHub repository: [pyphotonics](https://github.com/pyphotonics).
- To be able to use the code, you have to first install git: [git-scm](https://git-scm.com/)
- Connect all the instruments to the computer. Install the latest drivers for Thorlabs KDC101 [APT Drivers](#).
- Updated the devices corresponding to the KDC101 motors with the Thorlabs driver via Device Manager.



Programming Setup

- Create a conda environment with Python 3.11

```
conda create --name pyphotonics python=3.11
```

- Activate the environment and install all the packages in requirements.txt via pip. Open an IDE, create a project and choose `pyphotonics` as the interpreter. Open cmd, navigate to the directory where the project is located and initialize a git repository.

```
git init --initial-branch=main
```

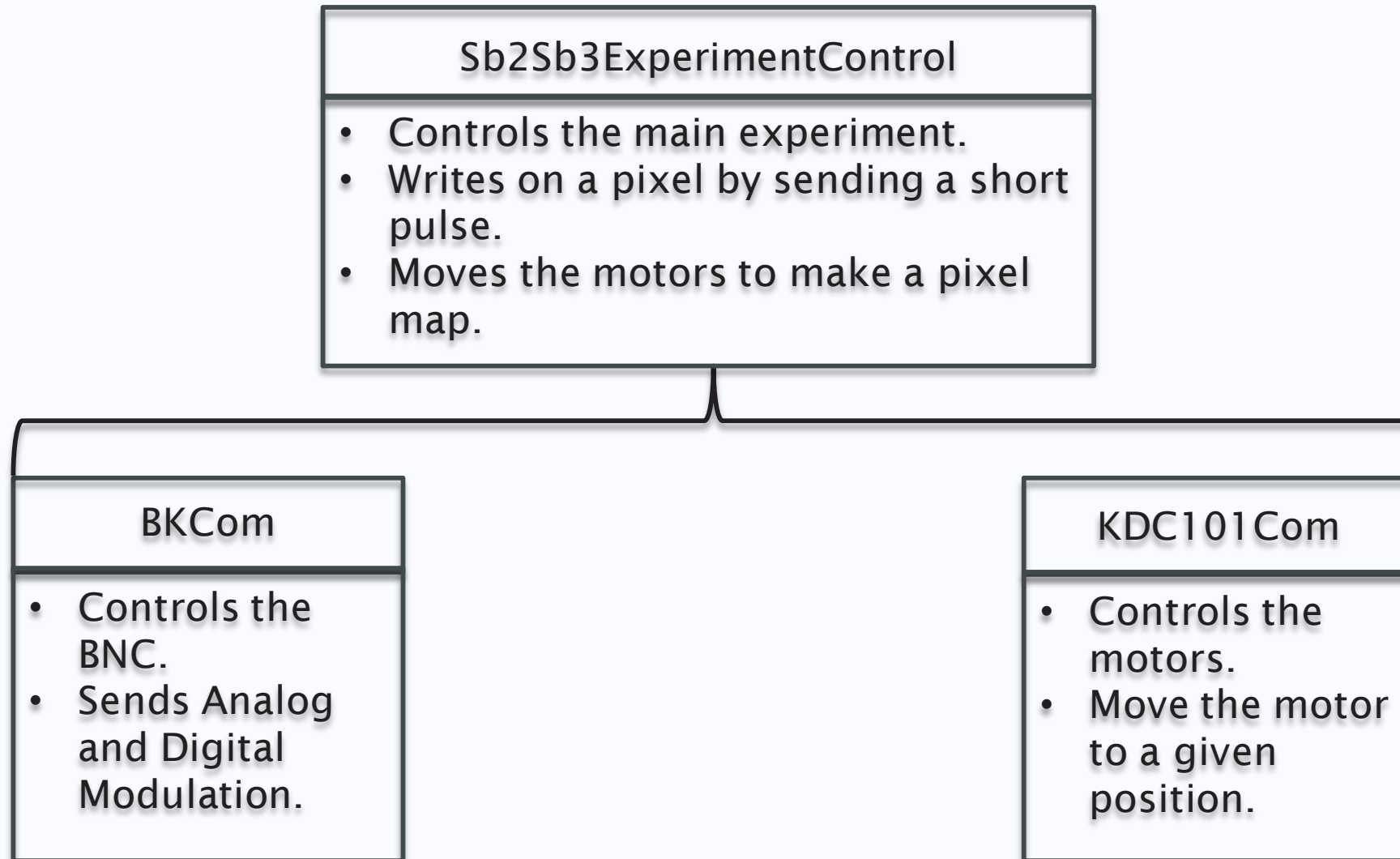
- Add the `pyphotonics` GitHub repo as the remote origin.

```
git remote add origin https://github.com/dntrubacs/pyphotonics.git
```

- Pull the latest version of the code.

```
git pull origin main
```

Code Structure



YOUR QUESTIONS