Work Log

Yankun (Alex) Meng

8/28/2025 Thursday

- Tidy3D Huygen's metasurface simulation redo
- Read Fundamentals of Photonics Ch 1, 2, 6
- Read Boyd NLO Ch 1

8/27/2025 Wednesday

- Tidy3D Python Tutorial 1 and 2
- Nonlinear Optics course
- Advanced Optics course

Tidy3D Learning

FDTD 101:

1. Introduction to FDTD Simulation

2. Using FDTD to compute transmission spectrum

3. Mode Injection

4. Modeling Dispersive materials in FDTD

5. Introduction to PML

6. Timestep size and CFL conditions

7. Numerical Dispersion in FDTD

8. Dielectric constant assignment on Yee Grids

9. Subpixel Averaging

Tidy3D Python: