

液晶光電學

上課時間: Monday 1:20 pm – 3:10 pm

上課地點: Physics Building 304

Instructor: Prof. Chih-Yu Chao (趙治宇)

Office: Physics Building 418

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Office Hour: Friday 10:00 am – 11:00 am

Assistant: 陳君瑋

Office: Physics Building B-121

Tel: 3366-5197

Office Hour: Friday 11:00 am – 12:00 am

Textbooks:

1. 上課講義: 上課講義請參見 <http://www.phys.ntu.edu.tw/> 進入液晶實驗室網頁點選液晶光學講義。(帳號與密碼另行公布)
2. Optics of Liquid Crystal Displays, Pochi Yeh and Claire Gu, John Wiley & Sons, Inc.

Course Contents:

1. Introduction of Liquid Crystals
2. Introduction of Liquid Crystal Displays (LCDs) and Flat Panel Displays
3. Working Principle of TN-LCDs and Alignment Techniques
4. Different LCD Optical-Switching Modes and Their Optics
5. Assembly and Manufacturing of LCDs
6. Basic Optics of LCDs
7. LCD Optical Components (Polarizers, Diffusers, etc.)
8. Reflective LCoS TV and Microdisplays

9. Digital MEMs Displays
10. Electronics Papers Using SAMs
11. Photonics Crystals
12. Soft Lithography, Imprinting Lithography, and Others
13. Nanotechnology in Displays
14. OLED and CNT Displays
15. Polarization of Optical Waves*
16. EM Waves in Anisotropic Media*
17. Jones Matrix Method and Poincare Sphere*
18. Optical Calculations and Properties of LCDs*

* 如果時間允許.

Requirements:

Final Exam	50%
Final Report	50%