

## Objectives for Quiz #2:

- Mechanisms of non-photochemical quenching (photoprotection) and the xanthophyll cycle
- Dynamic versus chronic photoinhibition
- Chlorophyll fluorescence measures including how to calculate NPQ
- Basic concepts of image processing and analysis
  - Processing
  - Calibration
  - Measuring
- Purpose and process for using a microtome
  - Why use a microtome?
  - How to prepare the samples
  - How to use the microtome
- Purpose and process for using a light microscope
  - Why use a light microscope, i.e. what can it show you?
  - How to prepare the samples
  - How to use the microscope (a general description)
- Purpose and process for using a SEM
  - Why use a SEM, i.e. what can it show you?
  - How to prepare the samples
- The epidermis (including trichomes and stomata)
- Boundary layers and the transfer of energy and mass
- Ground tissues: description (appearance) and function of the three major types
  - Parenchyma
  - Collenchyma
  - Sclerenchyma
- Vascular tissues: description (appearance) and function of the type types
  - Xylem
  - Phloem