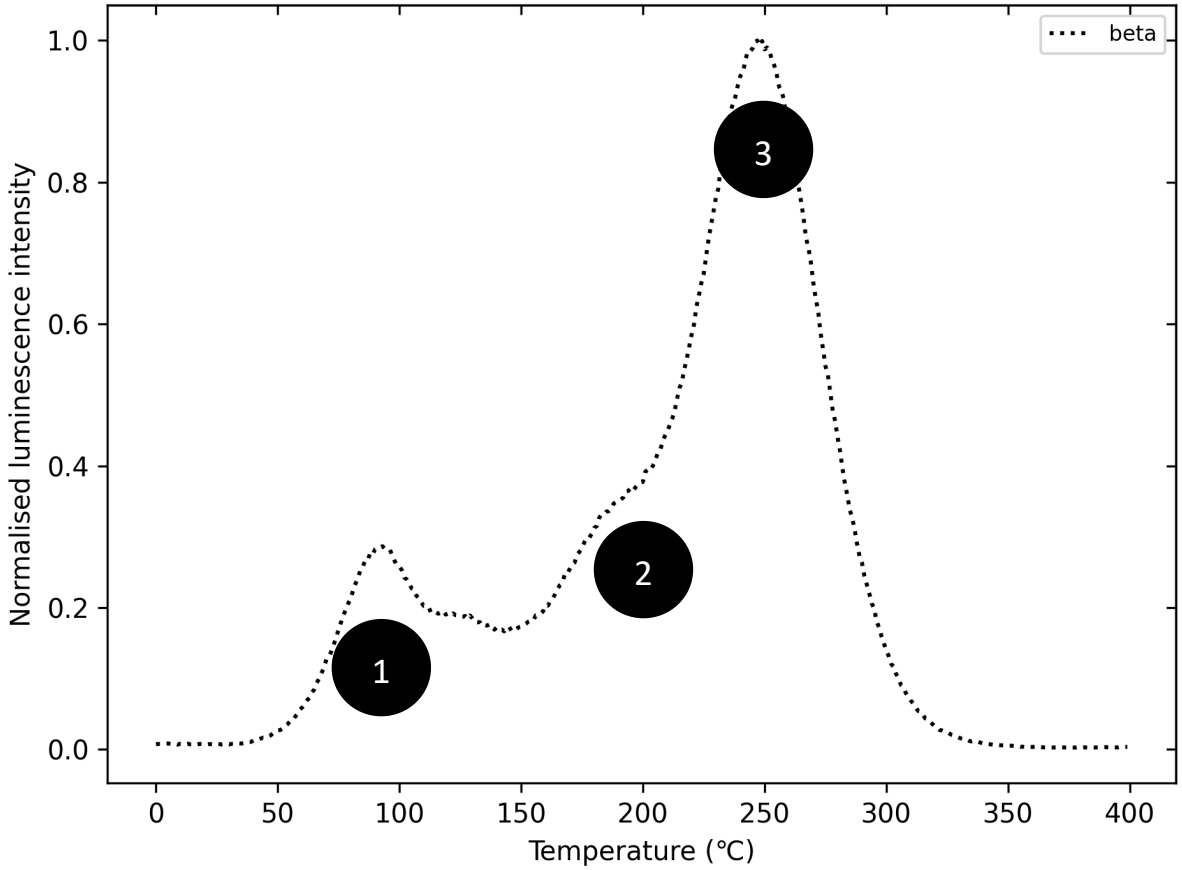
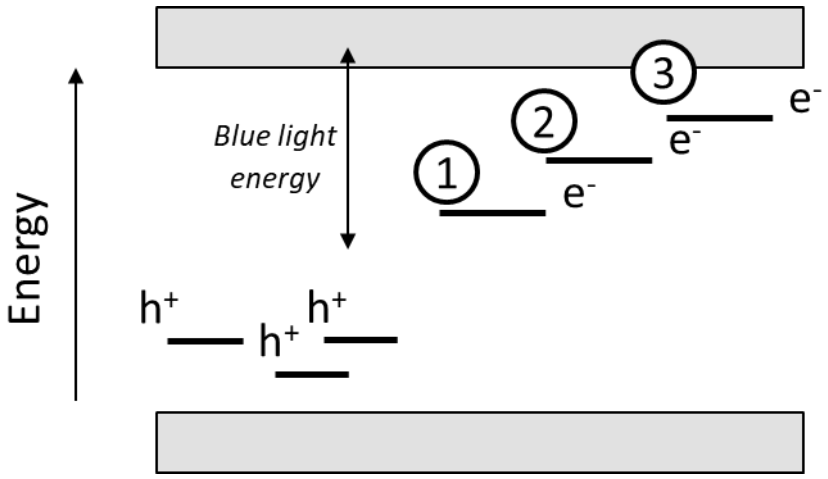
1. Do the following techniques offer a destructive or non-destructive readout?
    a. Optically stimulated luminescence (Destructive)
    b. Radio-photo-luminescence (Non-destructive)
    c. Thermoluminescence (Destructive)
2. Consider the Thermoluminescence glow curve below. Which peak (1, 2, or 3) is less likely to be stable at room temperature? Why? (1, lower temperature of luminescence indicates a lower activation energy of the trap)



3. Name three applications of luminescence techniques.
    a. Emergency Dosimetry
    b. Personnel dosimetry
    c. Radiotherapy Dosimetry
    d. Material Age Estimation

4. Consider the following band gap diagram. During an OSL readout using blue light stimulation, which of the traps will be read out? How could you adjust the readout protocol so that only Trap 3 is readout? (All three traps will be excited, i.e., read out. To read out only trap3, one would need to reduce the photon energy of the stimulating light, i.e., use red light or infrared)



5. Draw the electronic transition of the different stages of the stimulated luminescence process:

Solution: See slides Lectures, e.g. Week 11