

## PHYS 644: Photo conduction processes in semiconductors

### عمليات التوصيل الضوئية في أشباه الموصلات

1. Energy states in semiconductors
2. Absorption
3. optical constant
4. absorption spectroscopy
5. Radiative Transitions
6. Non-Radiative Recombination
7. processes in p-n junction
8. Stimulated Emission
9. Semiconductor Lasers
10. Excitation of luminescence and lasing in semiconductors
11. Photoelectric emission
12. Photovoltaic effect

#### References:

- 1- Jacques i. Pankove, *Optical Processes in semiconductors*, 1971 Printice Hall
- 2- Ben G. Streetman and S. K. Banerjee, “*Solid state electronic devices*”, 6<sup>th</sup> edition, 2006 Prentice-Hall, Inc. (now known as Pearson Education Inc.), Upper Saddle River, New Jersey, U.S.A.