Introductory Condensed Matter Physics (I)

鄭靜

Department of Physics at National Cheng Kung University
Outline of the course

Condensed Matter Physics v.s. Solid State Physics

◆ Structures (I)
◆ Thermal properties (I)
◆ Mechanical properties (I)
◆ Electrical properties (I) (II)
◆ Magnetic properties (II)
◆ Optical properties (II)
◆ Superconductivity (II)
◆ Soft condensed matter (II)

◆ Theories -- Experiments
References:

◆ Structure and dynamics
  M. T. Dove (Oxford University Press)

◆ Band theory and electronic properties of solids
  J. Singleton (Oxford University)
References:

- **Magnetism in Condensed Matter**
  Stephen Blundell (Oxford University Press)

- **Optical Properties of Solids**
  Mark Fox (Oxford University Press)
References:

◆ **Superconductivity, Superfluids and Condensates**
  James F. Annett

◆ **Soft Condensed Matter**
  Richard A. L. Jones
References:

◆ *Introduction to Solid State Physics*
  C. Kittel (J. Wiley & Sons)

◆ *Solid-State Physics*
  H. Ibash and H. Luth (Springer)

◆ *Solid State Physics*
  J. R. Hook and H. E. Hall (J. Wiley & Sons)

◆ *Solid State Physics*
  N. W. Ashcroft and N. D. Mermin (Holt-Saunders)
Grading

- **Ex1**: 25th Oct. 2012
- **Ex2**: 6th Dec. 2012
- **Ex3**: 17th Jan. 2013
- Grade = (Ex1 + Ex2 + Ex3) / 3

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