

15- Fluid Mechanics

IV- Electron Transport

16- Dynamics of Bloch Electrons

17- Transport Phenomena and Fermi Liquid Theory

18- Microscopic Theories of Conduction

19- Electronics

V- Optical Properties

20- Phenomenological Theory

21- Optical Properties of Semiconductors

22- Optical Properties of Insulators

23- Optical Properties of Metal and Inelastic Scattering

V- Magnetism

24- Classical Theories of Magnetism and Ordering

25- Magnetism of Ions and Electrons

26- Quantum Mechanics of Interacting Magnetic Moments

27- Superconductivity

Appendices

A: Lattice Sums and Fourier Transforms

B: Variational Techniques

C: Second Question

Index

About the Author

Michael P. Marder :- is the Associate Dean for Science and Mathematics Education and Professor in the Department of Physics at the University of Texas, where he has been involved in a wide variety of theoretical, numerical, and experimental work. He specializes in the mechanics of solids, particularly the fracture of brittle materials. Dr. Marder has carried out experimental studies of crack instabilities in plastics and rubber and constructed analytical theories for how cracks move in crystals. Recently he has studied the way that membranes ripple due to changes in their geometry, and properties of frictional sliding at small length scales.