

Lecture 6: Band Structure

Continue to explore the consequences of the Bloch theorem. The concept of N^{th} Brillouin zone is introduced. The Fermi surface is defined. The breakup of the free electron Fermi surface is illustrated by a two-dimensional divalent metal. The use of group theory to simplify band calculation is briefly discussed. Two theorems concerning the symmetry of the band structure of nonsymorphic lattices are stated without proof and illustrated by the hcp example.