Magnetic Materials and Their Applications-Carl Heck 2013-10-22 Magnetic Materials and their Applications discusses the principles and concepts behind magnetic materials and explains their applications in the fields of physics and engineering. It introduces the fundamentals of magnetic materials and gives an overview of the properties of magnetic materials. The book covers magnetic materials in detail, including magnets, magnetic anisotropy, magnetic domain walls, magnetic moment, magnetic domain walls, magnetic susceptibility, and magnetic properties. Magnetic Materials and their Applications also covers the practical aspects of magnetic materials, such as magnetizing and demagnetizing, magnetic hysteresis, magnetic losses, and magnetic anisotropy. The book covers the magnetic properties of materials, such as ferromagnetic, antiferromagnetic, ferrimagnetic, and paramagnetic materials. The book also covers the fundamental concepts of magnetic materials, such as magnetic moments, magnetic forces, and magnetic fields. The book concludes with a discussion of the applications of magnetic materials, such as magnetic recording, magnetic memories, magnetic sensors, magnetic switches, magnetic motors, and magnetic bearings. The book is written in a clear and concise manner, with a focus on the fundamentals and practical aspects of magnetic materials. It is an excellent resource for students, researchers, and engineers who are interested in magnetic materials and their applications.