Electromagnetism is a branch of physics involving the study of the electromagnetic force, a type of physical interaction that occurs between electrically charged particles. The electromagnetic force is carried by electromagnetic fields composed of electric fields and magnetic fields, and it is responsible for electromagnetic radiation such as light. It is one of the four fundamental interactions (commonly called forces) in nature, together with the strong interaction, the weak interaction, and gravitation.[1] At high energy, the weak force and electromagnetic force are unified as a single electroweak force.Electromagnetic phenomena are defined in terms of the electromagnetic force, sometimes called the Lorentz force, which includes both electricity and magnetism as different manifestations of the same phenomenon. The electromagnetic force plays a major role in determining the internal properties of most objects encountered in daily life. The electromagnetic attraction between atomic nuclei and their orbital electrons holds atoms together. Electromagnetic forces are responsible for the chemical bonds between atoms which create molecules, and intermolecular forces. The electromagnetic force governs all chemical processes, which arise from interactions between the electrons of neighboring atoms. Electromagnetism is very widely used in modern technology, and electromagnetic theory is the basis of electric power engineering and electronics including digital technology.

In the present book, fifteen typical literatures about Electromagnetism published on international authoritative journals were selected to introduce the worldwide newest progress, which contains reviews or original researches on Electromagnetism. We hope this book can demonstrate advances in Electromagnetism as well as give references to the researchers, students and other related people.[1]

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[1] https://en.wikipedia.org/wiki/Electromagnetism