Introduction

Nanotechnology is a fascinating branch of science and engineering that focuses on the design, production, and utilization of structures, devices, and systems at the nanoscale level. At this tiny scale, atoms and molecules are manipulated to create innovative materials and technologies with remarkable properties. In nature, we can find numerous examples of structures with nanometer dimensions, showcasing the existence of nanoscale phenomena. Interestingly, many existing technologies have unintentionally incorporated nanostructures for years, but it is only in recent times that scientists have gained the ability to intentionally manipulate and harness the power of nanotechnology. This emerging field holds great promise for advancements in various industries, from medicine and electronics to energy and materials science, paving the way for exciting possibilities and groundbreaking discoveries.