

THE WORLD OF NANOMATERIALS

Physicist Richard Feynman said, "There is Plenty of Room at the Bottom" that is, when we start reducing the size of materials, the same volume will hold more elements. Nanomaterials have at least one nanometer-scale dimension. The characteristics of these materials change significantly from bulk to nanoscale. As the particle size reduces, its properties change, such as melting point, band gap, and surface area increase, or colour change. Gold, for example, has a yellow colour in bulk but a pink colour at the nanoscale. There are numerous ways for synthesizing nanomaterials, including sol-gel, wet chemical, chemical vapour deposition, and so on. Nanomaterials are used in a variety of fields, including medicine and drugs, fabrics, mobile phones, electronics, computers, food and agriculture safety, cosmetics, and sports.

Despite the numerous applications of these materials, there are certain disadvantages, such as excessive contact with these particles causing cell damage and the solution is to be more cautious when handling nanoparticles. Nanotechnology is making atomic bombs more powerful and devastating, which could lead to a world of terror. The combination of our ability to view and manipulate matter on the nanoscale, as well as our understanding of atomic-scale interaction, is what makes Nanoscience really innovative. If we utilize it carefully, it will lead to incredible technology; nevertheless, if we use it incorrectly, it will also lead to the destruction of our world.

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