

عنوان مقاله:

Nanoparticles: Characteristics, Applications, and Toxicological Concerns

محل انتشار:

نخستین کنفرانس ملی چالش های محیط زیست: صنعت و معدن سبز (سال: 1401)

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خلاصه مقاله:

This paper provides an in-depth examination of the characteristics and applications of nanoparticles that come in a variety of shapes and sizes. They are extremely small materials ranging in size from ۱ to ۱۰۰ nm can be classed according to their qualities, forms, or sizes. A few examples of the various types of nanoparticles are fullerene and metal nanoparticles as well as ceramic nanoparticles and polymeric nanoparticles. Due to their enormous surface area and nanoscale size, nanoparticles have unique physical and chemical characteristics. So, their flexibility makes them good candidates for a wide range of commercial and domestic application including catalysis and imaging, medicinal applications, energy-based research, and environmental applications, among others. Heavy metal nanoparticles (HMNPs) of lead, mercury, and tin have been reported to be so stiff and persistent that their disintegration is difficult to achieve, resulting in a wide range of environmental toxicities.

کلمات کلیدی:

Nanoparticles, Applications, Properties, Toxicity

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