



Nanotoxicology: Unveiling the Risks of Nanomaterials

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Introduction

Nanomaterials exhibit unique physical and chemical properties compared to their bulk counterparts due to their small size and large

and minimizing adverse health effects.

for standardized testing methods to assess the toxicity of various nanomaterials consistently. Additionally, the potential for interactions between nanomaterials and other environmental or biological factors requires further investigation. Research into the long-term effects of nanomaterial exposure, as well as the development of strategies for mitigating potential risks, is essential for advancing the field.

Future research in Nano toxicology will likely focus on understanding the interactions between nanomaterials and biological systems at a more detailed level. Advances in imaging and analytical techniques will provide new insights into the behavior and effects of nanoparticles within living organisms. Moreover, interdisciplinary approaches that integrate toxicology, nanotechnology, and regulatory science will be crucial for addressing the complex challenges associated with nanomaterials.

Conclusion

Nanotoxicology is a critical field dedicated to understanding the potential risks associated with nanomaterials. By studying the unique properties of nanoparticles, their routes of exposure, mechanisms of toxicity, and long-term effects, researchers can develop effective risk assessment and management strategies. As nanotechnology continues to advance, ongoing research and collaboration will be essential for ensuring the safe use of nanomaterials and protecting human health and the environment.

References

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