

# Review of: "Nanomaterials: History, Production, Properties, Applications, and Toxicities"

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Potential competing interests: No potential competing interests to declare.

## Nanomaterials: History, Production, Properties, Applications, and Toxicities

The article provides a thorough historical context for nanotechnology, from ancient uses to modern scientific advancements. Minor enhancements, such as including more recent examples and graphical content, could further improve its utility for researchers and industry professionals alike. I have the following suggestions to improve your article.

1. Consider expanding the history section by discussing more recent articles like nanomaterials and their applications in solar cells.
2. It is suggested to use clear subheadings to ensure ease of understanding and navigation.
3. Provide specific case studies for each application to offer readers practical insights into real-world applications, e.g., using carbon-based nanomaterials in environmental remediation. Cite the relevant references, i.e., <https://doi.org/10.1002/9781119866435.ch11>
4. The authors maintain a balanced view, discussing both the positive and negative environmental impacts of nanomaterials. The societal impact section touches on ethical issues and the importance of compliance with safety norms. Delve deeper into the regulatory challenges and current efforts by international organizations to establish guidelines for safe handling and disposal of nanomaterials.
5. The clear distinction between types of nanomaterials (metal-based, carbon-based, dendrimers, composites) aids understanding. Include graphical representations or diagrams illustrating the different nanomaterial types and their applications, enhancing the visual engagement of readers. As the cited references are low in number, it is suggested to cite the relevant references, i.e., <https://doi.org/10.1039/D2NJ03112D>  
<https://doi.org/10.3390/chemosensors11040212>
6. Highlight emerging areas like bio-nanotechnology and the development of sustainable synthesis methods to address environmental concerns.