

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

Manuel Costa¹

¹ Universidade do Minho

Potential competing interests: No potential competing interests to declare.

This is an interesting, easy-to-read, and rather light review paper where authors give their personal views about a part of the historical evolution of the development and production of nanomaterials, some of the main properties (and an even more limited view on characterization methods or systems) of some of the most common nanomaterials, a few applications, as well as some of the benefits and dangers that can be associated with their use. I suggest a change in the title: If I may suggest... "Nanomaterials: a brief overview on some relevant aspects of History, Production, Properties, Applications, and Toxicities" or "Nanomaterials: a brief insight on aspects of their History, Production, Properties, Applications, and Toxicities." As previous reviewers pointed out, the abstract must also be re-written. As well, many references, even considering the range of topics considered, should be added throughout the text. It's also fundamental that a search is done on recent publications. Many important papers were published this decade already (some this year, in fact...) that are very meaningful and should be considered. Water-related applications are rather important, indeed, but many others related to environmental pollution (air, health...,...) and sustainability should be included. Especially over the last half decade, the use of a wide range of photocatalytics came out from the lab to "real" life applications and should be more than simply mentioned. As other reviewers pointed out, please do revise carefully the characterization techniques you presented and what they are used for (and there are many more of extreme importance, well established, and widely known). SEM, an extremely useful technique, does not allow a measure of the surface microtopography or texture; in fact... Despite some typos, the writing style is nice and easy to read, and so it would be nice to see published an extensively revised version of the paper featuring a truly comprehensive review of this important subject.