

Review of: "Effect of daylight and air oxygen on nanozymatic activity of unmodified silver nanoparticles: Shelf-stability"

Ilya Sterin¹

1 Clarkson University

Potential competing interests: No potential competing interests to declare.

The paper entitled " Effect of daylight and air oxygen on nanozymatic activity of unmodified silver nanoparticles: Shelf-stability" has clear objective and experimental points

However, is it really true that silver nanoparticles have advantage over enzymes in terms of stability? For example, lyophilized powder of an enzyme can be kept for years, still giving active formulations upon dissolution.

Please, specify the reason for the use of sodium borohydride.

Recheck pH used: "acetate buffer (0.3 M; pH, 0.4)"

Also, spelling of the paper must be rechecked (see some exmples below):

- 1. there is a lot of repeating words (e.g. "alternative toenzyme-based catalysis");
- 2. badly/unclear written sentences ("In this regard, the biosynthesis of AgNPs, biological materials such as microalgae extract [21], chitosan [22], Artemisia 'scoparia extract [23], and Laurencia caspica macroalgae [24] have been used as both stabilizers for surviving silver nanoparticles from the significant decrease of optical absorbance during their storage via enhancing their stability against environmental conditions."
- 3. Another example of badly written text: "to investigate their stability uponexposure the daylight. The results shown in Figure 3 reveal that the peroxidase-like activity of the as-prepared nanozymes was decreased after exposing daylight and reached about 75% after 7 days of storage. This reduction of activity can be contributed to particle aggregation of nanoparticles by light. The aggregation of the nanoparticles leads to an increase in their size and consequently, their catalytic performances will reduce. Besides, daylight can catalyze the surface oxidation of these nanoparticles which cause to reduce of their catalytic activity."
- 4. Instead of using "in order" use "respectively".