

**ESPS Peer-review Report**

**Name of Journal:** World Journal of Radiology

**ESPS Manuscript NO:** 4712

**Title:** Nano/Micro-particles and Ultrasound Contrast Agent

**Reviewer code:** 00225358

**Science editor:** Wen, Ling-Ling

**Date sent for review:** 2013-07-18 15:05

**Date reviewed:** 2013-08-19 17:33

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
<input type="checkbox"/> Grade A (Excellent)	<input checked="" type="checkbox"/> Grade A: Priority Publishing	Google Search:	<input checked="" type="checkbox"/> Accept
<input type="checkbox"/> Grade B (Very good)	<input type="checkbox"/> Grade B: minor language polishing	<input type="checkbox"/> Existed	<input type="checkbox"/> High priority for publication
<input checked="" type="checkbox"/> Grade C (Good)	<input type="checkbox"/> Grade C: a great deal of language polishing	BPG Search:	<input type="checkbox"/> Rejection
<input type="checkbox"/> Grade D (Fair)	<input type="checkbox"/> Grade D: rejected	<input type="checkbox"/> Existed	<input type="checkbox"/> Minor revision
<input type="checkbox"/> Grade E (Poor)		<input type="checkbox"/> No records	<input type="checkbox"/> Major revision

**COMMENTS TO AUTHORS**

Good mini-review. I suggest accepting it in the present form.

**ESPS Peer-review Report**

**Name of Journal:** World Journal of Radiology

**ESPS Manuscript NO:** 4712

**Title:** Nano/Micro-particles and Ultrasound Contrast Agent

**Reviewer code:** 00289418

**Science editor:** Wen, Ling-Ling

**Date sent for review:** 2013-07-18 15:05

**Date reviewed:** 2013-09-01 15:11

CLASSIFICATION	LANGUAGE EVALUATION	RECOMMENDATION	CONCLUSION
[ ] Grade A (Excellent)	[ ] Grade A: Priority Publishing	Google Search: [ ] Existed	[ Y] Accept
[ ] Grade B (Very good)	[ Y] Grade B: minor language polishing	[ ] No records	[ ] High priority for publication
[ Y] Grade C (Good)	[ ] Grade C: a great deal of language polishing	BPG Search: [ ] Existed	[ ] Rejection
[ ] Grade D (Fair)	[ ] Grade D: rejected	[ ] No records	[ ] Minor revision
[ ] Grade E (Poor)			[ ] Major revision

**COMMENTS TO AUTHORS**

**Review report for manuscript: wjr/20130717235157**

**Minireview: Nano/Micro-particles and Ultrasound Contrast Agent**

**GENERAL COMMENTS**

This mini review serves quite well the purpose described in the end of the text, which is to present some basic information and relevant literature concerning the use of nano/micro particles and microbubbles in medicine and stimulate the readers' interest for further reading.

However, though the text is very short it needs considerable editing. I have the feeling that in many points throughout the text (starting from the header) singular form is used instead of plural. Some suggestions concerning specific corrections needed are described in the following (with red letters).

Therefore, my proposal is **"Accept with minor revisions"**

## SPECIFIC COMMENTS

### Title

Minireview: Nano/Micro-particles and Ultrasound Contrast Agents

### Abstract

Microbubbles have been used for many years now in the clinical practice, as contrast agents in ultrasound imaging. However, recently, their therapeutic applications have also attracted more attention. More multifunctional and theranostic nanoparticles with some special advantages over the traditional microbubbles have been widely investigated and explored for biomedical applications. In this minireview the trends and the advances of the multifunctional and theranostic nanoparticles are briefly discussed.

### Main Text

- Conventionally, the ultrasound contrast agents (UCAs) commercially used are microbubbles with sizes in the micrometer range.
- Recently, microbubbles and their associated cavitation ...
- in both diagnostic and therapeutic applications of ultrasound [4]
- as drug carriers and enhancers of drug and gene delivery, and have been widely investigated for these applications ...
- Fortunately, with the development of nanotechnology, nanomaterials have been evolved also and now are widely recognized as a novel type of biomaterial, with very promising applications in the field of drug delivery [5, 8-11].

- In theory, nanomaterials can overcome the aforementioned shortcomings of microbubbles, due to their smaller sizes (in the nanometer range).
- The National Cancer Institute has defined the nanoparticle as any particle with at least one dimension under 100 nm, while in many articles some sub-micrometer particles have been regarded also as nanoparticles [1].
- The way to synthesize an ideal ultrasound contrast agent based on nanoparticles, in order to achieve an expected effect on contrast imaging is a key technique.
- ... most of researchers were able to enhance the acoustic backscatter by using nanomaterial equipped with gas (perfluorocarbon), though the nanoparticle-based contrast agents for the imaging modalities ...
- The use of nanomaterials as carriers for drug delivery, represents the mainstream in the field ...
- However, recently, multifunctional and theranostic (\*) nanoparticles ...

**What is “theranostic” (you have written it many times as *theranositc*)? Can you please give a brief definition (within parentheses) the first time this word appears in the text?**

- For instance, Lammers et al[14] discussed the principles, pitfalls and (pre-) clinical progress of drugs (including those with nanoparticles) used for tumor-targeting.
- ... reported a magnetic/silica nanocomposite as dual-mode contrast agents for combined MRI and US, ...
- ... proposed that Au-nanoparticle ...
- We hope that the information presented in this minireview will stimulate the readers' interest regarding the field of nano/microparticle and ultrasound contrast agents.

Good luck with the revisions.