Comments:

R. Li and Z. Yuan, submitted the review article entitled “Approaches to the improvement of gas sensing properties: A review” to publish in Sensors. In this paper, author described the device based sensing approaches 1D, 2D and 3D semiconducting Nanomaterials. Overall, the review was organized in a proper way, but a few points need to addressed before publication.

1. Author can modify the title as “Approaches of semiconductor nanomaterials for the improvement of gas sensing properties: A review”.

2. The introduction section need to be improved by providing the hint of information on nanomaterials and morphology etc.

3. In section 2.1.1., Nanorod section, discussion on nanorod based CO detection studies also need to be included from 1. Adv. Mater., 2003, 15, 997-1000; (2) Talanta, 2010, 81, 37-43.

4. In section 2.1.2. the sentence “Besides, nanosheets could also be employed to assemble nanospheres[11], hollow spheres[12, 13], nanosheet arrays[14], thin film[15], etc.” seem to be unnecessary at this point of discussion.

5. Nanoflower section should be improvised with enhanced explanation with recent reports.

6. The gas sensing approaches of carbon nanotubes (ACS Sens. 2016, 1, 354–357; Nanoscale Res. Lett. 2011; 6, 605) and nanocomposites are missing in the current manuscript.

7. Points representing the advantages and limitations of gas sensing approaches should be delivered for the readers of sensors.

8. The best suitable nanomaterial based gas sensing approaches should be hinted for upcoming researchers. The comments on approaches are missing, which is essential for review article

9. The cost-effectiveness and modification requirements of those approaches could be hinted.
11. Many sections have insufficient of explanation, which should be rectified. Future possible directions of gas sensing approaches should be mentioned in conclusion section.