**Reply to Reviewer 2**

The authors would like to thank the reviewer for the positive feedback and for the constructive questions and suggestions.

It is well written manuscript.  However, there are something which may be better to revise.

1) There is an approach which detect all parameter of interferences simultaneously on the solid phase absorbance detection for gas analysis. This may be cited.  (Analytical Chemistry, 81, 4183-4191 (2019).)

2) It is not clear about the temperature.  Is this for sample gas, sensor , or whole system include sample gas?

3) Relative humidity may also be effects to the response. Did you concern about RH effects?

4) "AE" is described in the main text.  But it was not explained in figure caption. It is better the figure can be understand separately.

5) It is better to put the basic sensor performance after the optimization. LODs, reproducibility, and response speed?

6) Also the sensor resolution on the concentration should be shown. Because the tiny difference of the response by temperature was discussed.