Response to Reviewer 2 Comments

Reviewer 2:

In this manuscript, modified ACs, especially Ce/AC, demonstrated a high removal efficiency of organics. The research approach is very systematic and manuscript being well written. A few comments as below:

1. Line 70, Give the full name of "TBA" when first introduced in the manuscript.
   **Response:** Thanks for the comment. The full name of "TBA", “Tert-Butanol”, has been added in Line 73.

2. Line 74, The TDS/conductivity is relatively LOW for RO concentrate. To me, it seems the secondary effluent might not need RO treatment, based on the water quality of the ROC presented.
   **Response:** Thanks for the comment and we might not introduce the background of RO treatment clear enough.
   The wastewater treatment plant in our manuscript is located in Beijing. Because of the lack of water resources, the secondary effluent will be used as the source water for drinking or the boiler water, which needs RO treatment. At the same time, the RO concentrate will be discharged into the river. In order to protect the environment of the river basin, the government in Beijing requires that the RO concentrate from WWTPs to meet III–level national standard of surface water, in which the limits of COD, BOD₅ and NH₄⁺-N are 20mg/L, 4mg/L and 1mg/L, respectively. Therefore, we tried to treat these RO concentrate with catalytic ozonation in our research.

3. Line 86, check the formula "NaBH₃", I believe it should be "NaBH₄".
   **Response:** Thanks for the comment. The error of "NaBH₄" has been corrected, which is shown in Line 89.
4. Line 155-157, interpretation of Figure 3 is not clear, suggesting paraphrase.

**Response:** Thanks for the comment. The suggestion has been taken.

The explanation of Figure 3 in the manuscript is not clear enough. Therefore, we have explained the data in **Line 162-167**. Please see “O₃+Catalysts shows the removal of p-CBA in catalytic ozonation processes. O₃ alone shows the influence of direct ozone oxidation and self-decomposition of ozone. O₂+catalyst, in which ozone was replaced by oxygen, shows the effect of catalyst adsorption. O₃+catalysts+TBA, the catalytic ozonation with the adding of TBA (20mmol/L) as free radical scavenger, reveals the contribution of ·OH in catalytic ozonation system.”

5. Figure 3 contains data of O₃+catalyst+TBA, but not explained. It should be mentioned/discussed for better understanding (not confusing readers) in section 3.2 and 3.4.

**Response:** Thanks for the comment. The suggestion has been taken.

To make the discussion of O₃+catalyst+TBA more clear, we have modified parts of 3.2 and 3.4, shown in **Line 186-185**: “After adding TBA, the removal rate of p-CBA decreased for all catalysts, proving the generation of ·OH in catalytic ozonation systems.” and **Line 221-228**: “According to the above discussion, all the four catalysts can improve the removal rate of organics in p-CBA solution and ROC. In particular, Ce/AC catalyzed ozonation shows a higher degradation rate of organic compounds than that of O₃/H₂O₂ process and of other catalytic ozonation processes. Therefore, it is significant to explore the mechanism of catalytic ozonation with Ce/AC. According to the data in Figure 3, the kinetics of p-CBA removal before and after adding TBA were analyzed to investigate the contribution rate of ·OH in catalytic ozonation.”