Reviewer 1:

Thank you for reviewing our manuscript! Here are our responses:

**Feedback 1:** The manuscript considers interesting issues, but the results are limited to the presented experiment. I don't see any generalization of the presented issues.

**Author’s Response:** *Thank you for your feedback!*

*The proposed vision and olfaction fusion algorithm can improve odor source localization performance in diverse environments. We set up the presented experimental field to mimic indoor environments with obstacles and odor sources. Therefore, the experiment results can be generalized to other real-world indoor odor source localization scenarios, such as detecting indoor gas leaks in office or household environments with obstacles and potential gas sources. It is also possible to extend the proposed method to outdoor applications, such as detecting wildfire locations using both vision (flame detection) and olfaction (smoke or other fire-related gases).*

*According to your feedback, we have added lines 403-410 of Section 5.*

**Feedback 2:** Fig. 10 has a lot of data that is unclear and shows only variants of the recorded data. You must modify it.

**Author’s Response:** *Thank you for your feedback!*

*We have removed Fig. 10 and rewritten subsection 4.6 since Fig. 11 covers the necessary information.*

**Feedback 3:** You should point out at least a few more significant results than the general conclusions given in the final section of the manuscript.

**Author’s Response:** *Thank you for your feedback!*

*The result of our experiment indicates that vision sensing is a promising addition to olfaction sensing in Robotic Odor Source Localization research. We summarize the following significances of the proposed work:*

* ***Integration of Vision and Olfaction in Odor Source Localization Tasks****. Our proposed navigation algorithm integrates both vision and olfaction in odor source localization tasks. Compared to traditional olfaction-only navigation algorithms, the addition of vision advances the boundary of current OSL navigation algorithms.*
* ***Odor Source Localization in Complex Environments with Obstacles.*** *While most traditional olfactory-based navigation algorithms do not consider obstacles in the search environments, our proposed method can guide the robot to find the odor source in complex environments with obstacles. Thanks to the proposed hierarchical control algorithm, the robot can dynamically coordinate among vision-based navigation, olfaction-based navigation, and obstacle avoidance behaviors.*
* ***Real-world Experiments and Results.*** *Many prior works only validated their algorithms in simulation environment without validating them in real-world environments. However, simulation environments cannot always represent real-world scenarios due to the gap between the simulation and real-world environments. In this work, we implemented the proposed Odor Source Localization algorithm in real-world settings and validated its effectiveness in real-world environments with obstacles and turbulent airflow.*

*We have added lines 411-432 of Section 5 on the significance of our result.*