

Response to Reviewer 3

1. Summary

Dear editor,

Thank you for the comments. We carefully checked and improved the manuscript, using green highlights in the manuscript where changes were made. We responded to reviewer comments, below, using red text.

Comment 1: The manuscript has been revised substantially as per the comments/suggestions given earlier. However, there are still a few points which need to be clarified. Specifically, authors are advised to include the details of the previous experiments conducted on the contaminants containing boxes and provide the initial and final data related to metal contamination. Also, reduce the introduction section by 10% and present it in 4-5 paragraphs only. Keywords can be modified by replacing the words already present in the title. See the attached pdf file for more details. (line 33; The introduction starting at line 35)

Response 1: *The issue we're having with attempting to reduce the introduction length is simply based on all reviewer comments. Here, reviewer #3 would like us to reduce the introduction length. However, a previous reviewer wanted us to add information that strengthened the introduction. There is a contradiction between reviewers. We feel the introduction flows well as-is and definitely leads the reviewer to the point studied in our project. No change was made.*

Comment 2: as said earlier, replace the words already present in the title with other relevant keywords! (Line 33)

Response 2: *Thank you for the comment. The "deterioration" was replaced with "degradation".*

Comment 3: can be reduced by 10% (The introduction, starting at line 35)

Response 3: *Please see our response to comment 1 above.*

Comment 4: this is for basic soil or related to all the soils contaminated three years earlier and/or later? better to include the data related to both the stages for more clarity! (line 139)

Response 4: *Table 1 represents the basic soil properties when the soil was first collected (i.e., 3 years prior to the current experiment). These basic soil properties did not significantly change over the 3 year soil incubation period. One can compare Table 1 information with that presented in Figure 1 and not that differences did not exist. The way we wrote the materials and methods section, we were clear with the order in which we performed the experimental setup, stating in the first paragraph of the M+M that we collected and analyzed the soil for constituents presented in Table 1. It is not until paragraph #2 in the M+M that we describe placing soils in the wooden boxes. Hopefully this would make logical sense to a reader. To make this clearer to everyone reading this manuscript, in the Table 1 caption, we added "at time of collection of both materials".*

Comment 5: As mentioned in the response, the boxes were used for Cd related study and the leftover boxes are used for pesticide metal interaction study. However, there emerge a few questions like how much Cd was available in the soil, each treatment? was the soil conditions similar for all?

Provide details of the previous experiment! (Line 154)

Response 5: *The total Cd concentration did not significantly change during three years, as illustrated in Fig.3B (note the Cd concentration on the y-axis). We never quantified available Cd in the soil, unfortunately. The soil conditions were similar for all, as noted in our response to comment #4.*

Comment 6: give space! (line 294, 330)

Response 6: *Space is now provided at the beginning of and in between all Figure numbers and captions.*

Comment 7: mention the names of these degradation products! (line 358)

Response 7: *The listed degradation products were one of the possible degradation products with the same molecular weight, so the names were not shown here. We have addressed this comment from a previous reviewer in the last round of revisions.*

Comment 8: Discuss about the peaks observed around 2350 nm? Also check the unit if it is nm?

Response 8: *That peak is simply CO₂ stretching asymmetrically. The CO₂ molecule is broken, the bond dipoles no longer cancel during vibration, and thus the peak appears. This really doesn't have much to do with the solid phase and thus was not discussed. The units are correct.*