

Response to Reviewers

Dear Editor and Reviewers:

On behalf of my co-authors, I thank you very much for giving us the opportunity to revise our manuscript entitled “**Magnetic separation reveals overestimation of soil organic matter due to undecomposed particulate residues**” (Manuscript Number: **egusphere-2025-5686**).

We appreciate the positive and constructive comments from the reviewer. We have studied the comments carefully and tried our best to revise our manuscript accordingly. Revised portions are marked in **red** in the paper. Our point-by-point responses to the comments are attached, and the submitted manuscript has been improved and revised according to the comments. We hope that our responses and revisions are satisfactory and that our manuscript will now be acceptable for publication in Journal of “**SOIL**”. Again, we greatly appreciate your time and effort with the manuscript. Should you have any further questions regarding the revised manuscript, please contact me by e-mail (dousen1959@126.com).

Best regards

Dou Sen

Corresponding author

Response to Editor

Response to Editor and revisions made accordingly (Italic words are the comments from the reviewer):

Response: We appreciate your thorough review of our work and the constructive comments provided to enhance the quality of our manuscript. Below are our point-by-point responses to your feedback. We sincerely hope the updated manuscript now meets the standards for publication in **SOIL**.

Dear authors,

both reviewers now agree that the manuscript now should be published.

However, there is one final thing:

Reviewer 1 pointed out that the title should probably be changed to better reflect the revised manuscript.

To allow you to make this adjustment, I selected "minor revision".

Additionally, reviewer 2 pointed out the following few minor things, which you can also correct in this last minor revision.

L98: 'used to turn'

L204-205-206: careful with subscript in equations and text, same L332.

Additional private note (visible to authors and reviewers only):

Sorry for this additional round of "revision" but I agree that the changes made in the manuscript should also reflect in the title.

This round should really not take you long.

Response:

1. Title Revision

As suggested by Reviewer 1 and yourself, we have revised the manuscript title to better reflect the revised content and core findings. The new title is: “Operational POM increases are over-interpreted as SOM stabilization: Quantifying untransformed straw and biochar residues via magnetic separation”

This revised title directly incorporates the key perspective raised by the reviewers, emphasizes the quantitative nature of our study, and accurately reflects the core contribution of using magnetic separation to quantify untransformed organic residues in operational POM fractions. We believe this title is more precise and consistent with the revised manuscript.

2. Response to Reviewer 2's Minor Comments

We have thoroughly addressed all minor comments from Reviewer 2:

Comments 1: *Line 98: 'used to turn'*: We sincerely appreciate the reviewer's careful attention to language precision. After re-evaluating the context of this sentence (describing the conversion of raw straw and biochar into magnetized materials via chemical coprecipitation), we have retained the phrase “used to turn” after confirming its appropriateness. This phrasing accurately conveys the fundamental transformation of material properties (from non-magnetic to magnetic) through the coprecipitation process, and is widely used in soil science and materials science literature to describe such qualitative changes in material characteristics. We have verified that this expression conforms to the formal writing standards of the journal and is semantically precise in this specific context.

Comments 2: *Subscript formatting in equations and text (Lines 204-206, 332)*: We have conducted a comprehensive check of all subscripts throughout the manuscript, including equations, in-text variables, and chemical formulas. All subscript formatting errors have been corrected to ensure consistency and compliance with the journal's formatting guidelines.

Once again, we sincerely thank you and the reviewers for your constructive comments and support throughout the review process. These comments have significantly improved the quality and clarity of our manuscript. If there are any further adjustments needed, please do not hesitate to contact us.

Sincerely,
Yuhan Xia