

Authors' Response

Dear Dr. Kaiser,

Thank you very much for accepting our manuscript for publication in *Atmospheric Chemistry and Physics*. We are also truly honored that our work has been selected as a *Highlight paper*, and we are grateful to you and to Prof. Carslaw for this recognition.

After acceptance, we carefully checked the final version of the manuscript and made a few very minor changes aimed solely at improving clarity and presentation. These adjustments do not affect any of the scientific results, analyses, or conclusions. For transparency, we summarize them below:

1. **Addition of references**

- In Sect. 2.6, we added the reference “Wang et al. (2022a)” to support that coal $\delta(^{13}\text{C})$ signatures exhibit remarkable regional stability in China (page 9, line 212).
- In Sect. 3.6, we included the reference “Niu et al. (2024)” with respect to the achievement of peak emissions in Beijing (2010) and Xi’an (2013) (page 26, line 641).

2. **Deletion of text**

- We removed the word “first” in the first sentence of Sects. 3.5.1 and 3.5.2 (page 20, line 488; and page 21, line 520).

3. **Minor figure and table adjustments**

- In Fig. 4a, we shifted the label “Xi’an” slightly so that it does not overlap with the lines.
- In Tables H1 and H2, we adjusted the formatting for improved readability.
- These changes are purely cosmetic and do not alter any numerical values or the interpretation of the results.

Apart from these small editorial refinements, the content remains identical to the accepted version that underwent peer review.

We are very grateful to you and the reviewers for the careful handling of our manuscript and for the constructive comments that helped us improve the paper. It is a great pleasure to see our study published in ACP and highlighted in the journal.

We also added the sentence “We also thank the handling editor and the anonymous reviewers for their helpful and constructive comments on the manuscript.” as the last sentence in the Acknowledgements.

Sincerely,

Gan Zhang

on behalf of all co-authors