

**Response to editor's revisions on "Chlorine oxidation of VOCs at a semi-rural site in Beijing: Significant chlorine liberation from ClNO<sub>2</sub> and subsequent gas and particle phase Cl-VOC production" by Michael Le Breton et al.**

**Main text:**

- Page 1, lines 5 and 6: Should the full stop (".") after "Chak" and "Carl" not be removed? **Error removed**
- Page 1, line 6: The comma after "Zhu<sup>9</sup>" should not be in superscript. **Error removed**
- Page 1, line 17: Replace "(School" by "School". **Error corrected**
- Page 1, line 25: Replace "were" by "was". **Error corrected**
- Page 1, line 26: Abbreviations and acronyms, here "HPLC" should be defined (written full-out) when first used. **Now abbreviated**
- Page 1, line 27: Replace "maxima" by "maximum". **Replaced**
- Page 1, line 30: Abbreviations and acronyms, here "RH" should be defined (written full-out) when first used. **Replaced**
- Page 1, line 32: Replace "analysed" by "measured". **Replaced**
- Page 1, line 33: Replace "representing" by "represented" and replace "Anthropogenic" by "anthropogenic". **Replaced**
- Page 1, line 34: Abbreviations and acronyms, here "PAH" should be defined (written full-out) when first used. **Now abbreviated**
- Page 2, line 4: Replace "significant" by "a significant". **Replaced**
- Page 2, line 15: "Pope et al. (2011)" is missing in the Reference list. **Pope 2011 removed from text**
- Page 2, line 17: Replace "remains" by "remain". **Replaced**
- Page 2, line 18: Replace "its chemical" by "their chemical". **Replaced**
- Page 3, line 2: Replace "e.g." by "e.g.,". **Replaced**
- Page 3, line 13: Replace "an acidic" by "acidic". **Replaced**
- Page 3, line 28: Replace "filters taken" by "filters". **Replaced**
- Page 3, line 31: Replace "has also" by "have also". **Replaced**
- Page 4, line 4: Replace "et al., (" by "et al. (" **Replaced**
- Page 4, line 14: Replace "and University" by "and the University". **Replaced**
- Page 4, line 19: Replace "and humidity" by "and relative humidity". **Replaced**
- Page 4, lines 20-22: It should be indicated for which size fraction this sentence applies. **For PM<sub>1</sub>**
- Page 4, line 22: Replace "contained high" by "contained a high". **Replaced**
- Page 4, line 27: Replace "were mostly" by "were mostly with". **Replaced**
- Page 5, line 2: Replace "et al., (" by "et al. (" **Replaced**
- Page 5, line 8: Abbreviations and acronyms, here "UHP" should be defined (written full-out) when first used. **Now abbreviated**
- Page 5, line 10: Abbreviations and acronyms, here "IMR" should be defined (written full-out) when first used. **Now abbreviated**
- Page 7, line 1: Abbreviations and acronyms, here "NOS" should be defined (written full-out) when first used. **Now abbreviated**
- Page 7, line 1: Replace "le Breton" by "Le Breton". **Replaced**
- Page 7, line 8: Replace "NOS's" by "NOSs". **Replaced**
- Page 7, line 10: Replace "as Olson" by "as used by Olson". **Replaced**
- Page 7, line 11: Replace "(0.96g, 7.75mmol) in 2mL" by "(0.96 g, 7.75 mmol) in 2 mL". **Replaced**
- Page 7, line 18: Abbreviations and acronyms, here "HR" should be defined (written full-out) when first used. **Now abbreviated**
- Page 7, line 21: Replace "were calculated" by "was calculated". **Replaced**
- Page 7, line 24: Replace "i.e." by "i.e.,". **Replaced**
- Page 7, line 25: Replace "were performed" by "was performed". **Replaced**
- Page 7, line 26: Replace "highlighted an" by "it was found that an". **Replaced**
- Page 7, line 33: Replace "desorption's" by "desorptions". **Replaced**
- Page 8, line 2: Replace "e.g. Lee et al., (" by "e.g., Lee et al. (" **Replaced**
- Page 8, line 3: Abbreviations and acronyms, here "ON" should be defined (written full-out) when first used. **Now abbreviated**
- Page 8, line 12: Replace "e.g." by "e.g.,". **Replaced**

Page 8, line 16: Replace "over corresponding" by "over the corresponding". **Replaced**

Page 8, line 32: Replace "Pascals" by "Pascal". **Replaced**

Page 9, line 2: Abbreviations and acronyms, here "VP" should be defined (written full-out) when first used. **Now abbreviated**

Page 9, line 9: Replace "Pa. (Booth)" by "Pa (Booth)". **Replaced**

Page 9, line 21: Abbreviations and acronyms, here "OA" should be defined (written full-out) when first used in the body of the manuscript. **Now abbreviated**

Page 9, line 22: Replace "that SCO" by "that the SCO". **Replaced**

Page 9, line 25: Replace "that SCO" by "that the SCO". **Replaced**

Page 10, line 5: Replace "than absolute" by "than the absolute". **Replaced**

Page 10, line 10: Replace "e.g." by ", e.g.," and replace "(e.g." by "(e.g.,". **Replaced**

Page 10, line 14: Replace "i.e." by ", i.e.,". **Replaced**

Page 10, line 19: Replace "e.g." by "e.g.,". **Replaced**

Page 10, line 27: Replace "(Pa)" by "Pa". **Replaced**

Page 10, lines 31-32: "Bilde et al. (2015)" is missing in the Reference list. **Added to reference list**

Page 10, line 32: Replace ". Using" by " Pa. Using". **Replaced**

Page 10, line 33: Replace "were it" by "where it". **Replaced**

Page 11, line 2: Replace "need to" by "needs to". **Replaced**

Page 11, line 5: "Lopez-Hilfiker et al. (2016)" is missing in the Reference list. **Added to reference list**

Page 11, line 9: Insert a space before "(SI4)" and replace "14 Celisus" by "14 degrees Celsius". **Replaced**

Page 11, line 10: Replace "et al., (" by "et al. (. Furthermore, "Huang et al. (2017)" is missing in the Reference list. **Replaced and added**

Page 11, line 11: Replace "assess" by "assess the". **Replaced**

Page 11, line 14: Replace "as temperature" by "as the temperature". **Replaced**

Page 11, line 25: Replace "some which have" by "some have" and replace "e.g." by "e.g.,". **Replaced**

Page 12, line 1: Replace "ratio benzene" by "ratio between benzene". **Replaced**

Page 12, line 11: Place the second "et al." in italic and place "2015" not in italic. **Replaced**

Page 12, line 21: Delete either "polyaromatic hydrocarbon" or "(PAH)". As indicated above the acronym "PAH" should be defined (written full-out) when first used. **Deleted**

Page 13, line 6: Replace "6am" by "6 am". **Replaced**

Page 13, line 10: Replace "4pm" by "4 pm". **Replaced**

Page 13, line 12: Replace "4pm" by "4 pm". **Replaced**

Page 13, line 16: Replace "8am" by "8 am". **Replaced**

Page 13, line 32: Abbreviations and acronyms, here "GA" should be defined (written full-out) when first used. **Now abbreviated**

Page 14, line 2: Replace "concentrations" by "concentration", replace "high fraction" by "a high fraction" and replace "in particle" by "in the particle". **Replaced**

Page 14, line 3: Replace "provides higher" by "provides a higher". **Replaced**

Page 14, line 5: "Liao et al. (2016)" is missing in the Reference list.

Page 14, line 7: Replace "between GAp" by "is observed between GAp". **Replaced**

Page 14, line 12: Replace "i.e." by "i.e.,". **Replaced**

Page 14, line 20: Replace "and Amazon" by "and the Amazon". **Replaced**

Page 15, line 26: Replace "regards to" by "regard to". **Replaced**

Page 16, line 6: Replace "to a small" by "a small" and replace "was dominated" by "were dominated". **Replaced**

Page 16, line 8: Replace "abundant SCO" by "abundant SCOs". **Replaced**

Page 16, line 23: Replace "by Swedish" by "by the Swedish". **Replaced**

Page 17, lines 12-14: There is not referred to this reference within the text. **Deleted**

Page 17, line 18: Replace "Claevs" by "Claeys". **Replaced**

Page 17, lines 29-34: There is not referred to this reference within the text. **Deleted**

Page 20, lines 1-3: There is not referred to this reference within the text. **Deleted**

Page 20, lines 15-20: This reference should be moved down to before "Li et al., 2017". **Moved**

Page 22, lines 4-6: "Shalamzari et al. (2013)" should be removed as it is already given in lines 1-3. **Deleted**

Page 22, line 23: Replace "2017" by "2007". **Replaced**

Page 22, lines 30-32: There is not referred to this reference within the text. **Deleted**

Page 23, lines 12: This reference should be moved down to after "Zhang et al., 2012a". **Moved**

Page 25, within Table 1: Replace "Surrat" by "Surratt" on 5 occasions. **Replaced**

Page 26, line 10: Delete "dat" or move it down and replace it by "date". **Deleted**

Page 26, line 12: Replace "Time series" by "The time series". **Replaced**

**Supplement:**

Caption of Figure SI4, second line: Replace "top left window" by "top right window". **Replaced**