The article describes the temporal behaviour of n-alkanes in Beijing China on some days during 1 year of measurements. The authors propose emission sources using some ratios as well as a multivariate test. The study is a longitudinal descriptive analysis. Methodological details are lacking, some comments are not properly supported, information on atmospheric criteria pollutants associated with the air quality is missing, as well as the meteorology. The article cannot be published in its current state.

- The authors should further justify the interest in studying alkanes in PM2.5. The alkanes are irrelevant from the point of view of air quality and human health, since alkanes are not toxic to humans.
- Line 44. What are the human health effects of alkanes in PM2.5 mentioned by the authors? Provide the references.
- Lines 102-103. In the gravimetric procedure carried out at 20°C for 24 h to obtain the particulate mass, the mass of some organic compound is lost due to evaporation during this time. How was the alkanes mass lost considered to calculate their concentrations in the air?
- Lines 109-110. Explain what was the procedure to evaluate the recovery efficiency of the alkanes by the analytical method used? What were the concentrations spiked? and how many repetitions were made?
- It is not clear how the alkanes were quantified. Was a calibration curve used, external standards, internal standards, isotopic dilution, etc.? Explain the details of the quantitative analysis.
- Lines 237-242, 283-285. It is well known that gasoline is mostly comprised of hydrocarbons in the C4 to C10 range while diesel fuel consists of C8 to C25 hydrocarbons (Han et al., 2008; Schauer et al., 1999; Lough et al., 2005; Gentner et al., 2012; Wang et al., 2005). Explain the discrepancy with the results obtained by the authors of the actual study.
- Line 245. Why can road dust be a source of alkanes with >C34?
- Lines 257-258 and 267-270. The authors assume that temporal distribution of LMW and HMW alkanes is explained by the behaviour of Cmax and WNA%, however, they do not consider the effect of temperature or the mixing layer height. How do these variables affect the temporal behaviour of the alkanes?
- Lines 294-296. Show scatter plot corroborating this association.
- Authors should incorporate atmospheric criteria pollutants and the association with alkanes.
- Meteorology was not included. It is extremely important to describe the meteorological variables, for example to observe differences in temperature between the four seasons, as well as wind speed and wind direction in order to propose emission sources.
- Line 16. It should say 153 ng/m$^3$
- The PMF 5.0 user guide can not be a supplemental material. Authors should only cite it.


