

Atmos. Chem. Phys. Discuss., community comment CC1
<https://doi.org/10.5194/acp-2020-1266-CC1>, 2021
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Comment on acp-2020-1266

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Community comment on "Opinion: Papers that shaped tropospheric chemistry" by Paul S. Monks et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2020-1266-CC1>, 2021

Dear authors

thank you for gathering this corpus of founding articles to understand the construction, evolution and fundamental discoveries of this discipline that is the chemistry of the atmosphere. This article will remain a reference and an entry point for the new generation of researchers, as well as for the older generation to understand its field and progress.

As indicated at the end of the article, I would like to provide additional information. It seems to me that Lovelock's article (1) and his discovery of DMS (thanks to his invention of the ECD detector (2) which also allowed the first measurements of CFCs) as the reduced sulfur compound emitted by the marine biota (and not H₂S as thought previously) would have its place in this article. This article also advances the idea that the MSA resulting from the oxidation of DMS is a probable source of aerosols. It is on the basis of this article that the CLAW hypothesis was born. This article deserves to be mentioned.

In the same vein, I think Patterson's paper on the increase of lead in the air (3) (actually in snow) as well as its decrease since the elimination of lead in gasoline (4) would be worth mentioning. With the elimination of CFCs, this is the other major victory of atmospheric chemistry research over environmental policy.

With regards

1- Lovelock, J. E., Maggs, R. J., and Rasmussen, R. A.: Atmospheric Dimethyl Sulphide and the Natural Sulphur Cycle, *Nature*, 237, 452-453, [10.1038/237452a0](https://doi.org/10.1038/237452a0), 1972.

2- Lovelock, J. E., SR Lipsky, Electron Affinity Spectroscopy-A New Method for the Identification of Functional Groups in Chemical Compounds Separated by Gas Chromatography -*Journal of the American Chemical*, 82, 431, 1960.

3-Murozumi, M., Chow, T. J., and Patterson, C. (2003): Chemical concentrations of pollutant lead aerosols, terrestrial dusts and sea salts in Greenland and Antarctic snow strata, *Geochim. Cosmochim. Acta*, 33, 1247-1294, [https://doi.org/10.1016/0016-7037\(69\)90045-3](https://doi.org/10.1016/0016-7037(69)90045-3), 1969.

4-Boutron, C. F., Görlach, U., Candelone, J.-P., Bolshov, M. A., and Delmas, R. J.: Decrease in anthropogenic lead, cadmium and zinc in Greenland snows since the late

1960s, *Nature*, 353, 153-156, 10.1038/353153a0, 1991.