

Comments on Student XYZ's report entitled "The study of Cl₂O₄: Implications for the Ozone Hole"

Summary: This article touches an important topic in chemistry: the formation and chemistry of the ozone hole. Understanding the thermodynamics of the chlorinated compounds is important to understanding this large issue, and this paper is one more step to reaching an understanding. However, there are some (minor) problems with the article as is, and these should be corrected before the article is published.

Detailed Review:

This article is well-written and the author has taken pains to format the article (although columns are not required or expected). The author excelled in the following:

- (1) The title of the article touches on the material presented. To give further clarification, I would suggest adding the word "computational" between "The" and "study". Also, the title should be in headline format.
- (2) Abstract is well written – after reading it, I was interested in reading the entire report. The important results are included and the experiment, and the article's importance, is summarized well.
- (3) The summary of Hartree-Fock calculations on lines 192-204 is well written. The author understood the material presented in class and was able to explain it to a reader.
- (4) The results from Part 1: Geometry Optimization are clearly tabulated and nothing is missing.

Problems:

- (1) Watch tenses! They should all be the same, and should be past tense.
- (2) Do not use I, we, they, etc. Keep everything to third person.
- (3) Do not make reference to something a reader may not have at hand without directly quoting the reference.
- (4) Keep negative signs next to the numbers. (Ex. Line 18 – last in abstract). This can be done by using 'ShiftControl-' or 'ShiftControlSpace'.
- (5) Semi-empirical should not be capitalized if used in the middle of a sentence (see Line 205 for example), but Table and Figure should be capitalized if referring to a specific item (see Line 177).
- (6) Present all data in the text! The results from Part 2 are missing. This becomes even more important in the discussion where the results of this part aren't discussed in great detail. For example, the importance and meaning of $\Delta_r G$ and $\Delta_r H$ should be expanded. This is the weakest part of the report and is the main reason I believe the report should be edited prior to acceptance.
- (7) There are several confusing and run-on sentences... Lines 129-135 and 186-190 are the most egregious. These need to be fixed so the reader can understand the article.