As the culminating product of your quarter-long efforts, you will submit a final report meant to pass on your results and assessments to our collaborators at WSU/PNNL. Your report should not exceed 12 pages double-spaced, including figures (with exceptions for supplementary tables or plots). Your report should include the following elements and sections:

- Title
- Author Information
- Abstract (should not exceed 100 words)
- Introduction
- Experimental Section
- Results & Discussion (split into subsections)
- Future Work
- References

Use the articles you have based your synthesis procedures off of as a guide for what should be included in and how to construct these sections. However, while you should plot and present your data in a professional way that is similar to a published paper, your audience is different. You should focus on your interpretation of data and how a group of researchers might pick up where you left off or consider exploring related avenues of research. In the context of an “internal report” like this, it is okay to speak more about the hypotheticals in your interpretation of your data than you might in a published work, but you should always present all possible arguments and pose both supporting and refuting arguments to your reasoning. That being said, you should present your arguments in professional and scientific language.

You should be precise about the results you have recorded from your experiments, discuss and analyze your results in light of the Chong, et al. article, other relevant articles that you find in the scientific literature, and reports from quarter 1. Your discussion should lay the groundwork for the future work proposals you make.

Your discussion should acknowledge and be thoughtful about any ambiguity in your results. Because the scope of your work for Superlab is limited, it may be difficult to make firm conclusions; that is okay. Any conclusions that you make should include a statement about the impact of your work and how it fits within the scope of other work done in the field and by your fellow students.

Figures should be clearly labeled and easy to read. Data that the reader is asked to compare should be plotted on the same axes (e.g., FTIRE spectra of four samples) or presented as two sub-plots in the same figure (e.g., XRD patterns of your samples and a model of the crystal structure that was
identified). You should plot all the data you collect using Excel, Origin, Igor, or a similar software program. Your data should be presented in a professional way. In cases where you are discussing fitted data, you may export an image of your plots from GSAS by using the “Save” button below the plot in the plot window.

For your XRD pattern refinements, you should report both \( wR \) and \( wR\text{min} \) values as well as phase fractions. You should also include an analysis of the quality of your fits based on visual inspection.