Chemical Literature Assignment

1. Find a full paper detailing an inorganic synthesis of some type in a recent on-line version of a journal or paper journal from the library. Make a copy of the paper to turn in with this assignment.

2. Skim the introduction section of the paper. Write a **short** paragraph in your own words about the reason the compounds in the paper were made.

3. What method(s) do the authors of your paper use to know they have made what they think they have? Use both the Experimental section of the paper and the Results and Discussion section of the paper to answer this question. For now, just list the methods; don't worry about what they tell you.

4. Look through the experimental section carefully. Can you identify and special conditions or equipment used for the synthesis (that you would need to get if you were going to carry out this synthesis in the lab)

5. Identify at least five words that you don't know the meaning of, especially in the Experimental Section of the paper. Try to find the meaning of one of them (it can be a compound name, the name of a technique, etc).

6. Pick one of the syntheses outlined in the Experimental section (indicate which one). Are all of the chemicals commercially available? Hint: they will usually tell you in the article!

7. For that one synthesis, identify all of the needed chemicals, apparatus (flasks, filtration devices, other special equipment needed).

8. In what molar ratios are the chemicals combined when making this substance?

9. Write a balanced or unbalanced reaction (the best you can—you may not be able to balance it –many chemical reactions have lots of unidentified byproducts) representing the synthesis you've chosen, including an indication of the solvent(s) used (over the arrow). Use structural formulas that show the connections between atoms whenever possible.