

Chem 511 – Fall 2004
Inorganic Chemistry
Research Paper Assignment

For this assignment, you will work as a team with three other classmates; your team must be formed by Friday Oct. 1 when Emily Wixson will provide an in class workshop on how to use the library resources, and how to use Microsoft Power Point software to prepare your presentation. You will identify a topic to be presented to and approved by Tran and Hashiguchi by Oct. 8. The research and its presentation should be at a level appropriate for advanced students.

Your paper must include at least five pages of 1½ spaced text with one inch margins. Chemical reactions, figures of chemical structures, diagrams, schemes, and data tables must be used to illustrate your presentation. Each graphic must be discussed in the text, with specific reference made to each figure, table or other illustration by its name or number. Each illustration must be accompanied by a legend. A list of references and appropriate citations is also required. You must cite at least ten sources of which seven must be from the scientific literature, and may include patents, journal articles, technical reports, books and reference works. The format of your citations must conform to the American Chemical Society guidelines as outlined in the ACS Style Guide, which is on reserve in the Chemistry Library.

Your presentation should take no more than 15 minutes, and each person in the group is required to present at least one piece of information. Your presentation will be graded on the following criteria: 1) logical organization, 2) clear and effective presentation, 3) correct chemistry, and 4) proper use of chemical vocabulary. Each student who is not presenting will be asked to fill out a simple evaluation of the presentation.

Suggested Topics for Research Papers in Inorganic Chemistry

Cluster Chemistry Alkoxide Chemistry Zeolites
Non-stoichiometric Oxides Metalloporphyrins Subhalides
Intercalation Compounds Rare-Earth Phosphors Zintl Ions
Metallic Hydrogen Transition Metal Nitrides Inorganic Polymers
Magnetic Materials New Superconducting Materials
Open-framework (microporous and mesoporous) compounds (*e.g.*, MCM-41)
Sandwich Compounds (Ferrocene, Titanocene, Dibenzene Chromium, etc.)
Nano particles, nanostructured inorganic materials
Ozone layer destruction and protection (Nobel in Chemistry 1995)
Fertilizers and the global nitrogen cycle

Note: The research paper is due on November 24, 2004.