# Literature Search Worksheet

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## Use the SciFinder Scholar database to answer the following.

1. Provide a title for a journal article by H. Bernhard Schlegel and list the volume number for the abstract that corresponds to this article.

**Solution:**
**Title:** Structures, energies and vibrational frequencies of the X and A states of haloacetylene cations, HCCX+ (X = F, Cl, Br, I)
**Volume Number:** 505

2. Provide a complete literature citation for a 1964 article by P. Cossee dealing with Ziegler-Natta catalysis and polymerization of $\alpha$-olefins.

**Solution:**
Cossee, P. Ziegler-Natta catalysis. I. Mechanism of polymerization of $\alpha$-olefins with Ziegler-Natta catalysts. *Journal of Catalysis* **1964**, *3*, 80. DOI: 10.1016/0021-9517(64)90095-8

Cossee, P Ziegler-Natta catalysis. I. Mechanism of polymerization of -olefins with Ziegler-Natta catalysts. *Journal of Catalysis* **1964**, *3*, 80. DOI: 10.1016/0021-9517(64)90095-8

3. Provide a complete literature citation for a paper titled: "Density functional studies on chromium catalyzed ethylene trimerization."

**Solution:**
Bhaduri, S.; Mukhopadhyay, S.; and Kulkarni, S. A. Density functional studies on chromium catalyzed ethylene trimerization *Journal of Organometallic Chemistry* **2008**, *694*, 1297–1307. DOI: 10.1016/j.jorganchem.2008.12.012

4. Who are the authors of a paper Dealing with the Exxon Mobil Sulfuric Acid Alkylation Process?

**Solution:**
Ackerman, S.; Chitnis, G. K.; McCaffrey, D. S. Jr.

5. Give the complete literature citation for a 1999 full paper (i.e. not an abstract for a talk) published by Clark R. Landis.

**Solution:**
Landis, C. R.; and Hilfenhaus, P.; Feldgus, S. Structures and Reaction Pathways in Rhodium(I)-Catalyzed Hydrogenation of Enamides: A Model DFT Study *Journal of the American Chemical Society* **1999**, *121*, 8741–8754. DOI: 10.1021/ja991606u

6. I am interested in using the DFT computational method to study ethylene hydroformylation. Find a complete literature citation on this topic.

**Solution:**
Papp, T.; Nagy, P. R.; and Kegl, T. Advanced computation of enthalpies for a range of hydroformylation reactions with a predictive power to match experiments *Chemical Physics Letters* **2025**, *861*, 141833. DOI: 10.1016/j.cplett.2024.141833

7. I am a co-author of an international patent application. What is its title?

**Solution:**
Selective oligomerization catalysts and methods of identifying same

8. Using the Explore Substances tab in SciFinder, find a paper that would help you determine the racemization barrier of Binaphthalene. Give its complete citation.

**Solution:**
Hutchins, L. G.; Pincock, R. E. The racemization and reduction of optically active 1,1'-binaphthyl by Raney nickel catalysts *Journal of Catalysis* **1982**, *74*, 275. DOI: 10.1016/0021-9517(82)90033-1

## Use the bound journals in the library and SciFinder Scholar to complete the following task.

1. Go to the library. Find the print version of A.J.Merer and R.S, Mulluken's 1969 review article in the library. Read the article and record the last two sentences in the first paragraph of section V. (Note: these paragraphs describe a safety-related incident. If it isn't related to safety, then you probably have not located the correct reference.) Where specifically is this journal located in the library? (i.e. describe where to find the print version.)

**Solution:**
**Location:** Donnelley and Lee Lilbrary Basement, Bound Journals, Aisle 5.
**Text:** Evans boldy put 50 atm of ethylene ($C_2H_4$, *trans*-$C_2H_2D_2$, or $C_2D_2$) in a cell with 25 atm of $O_2$. The apparatus subsequently blew up, but luckily not before he had obtained the spectra shown in Figure 8.