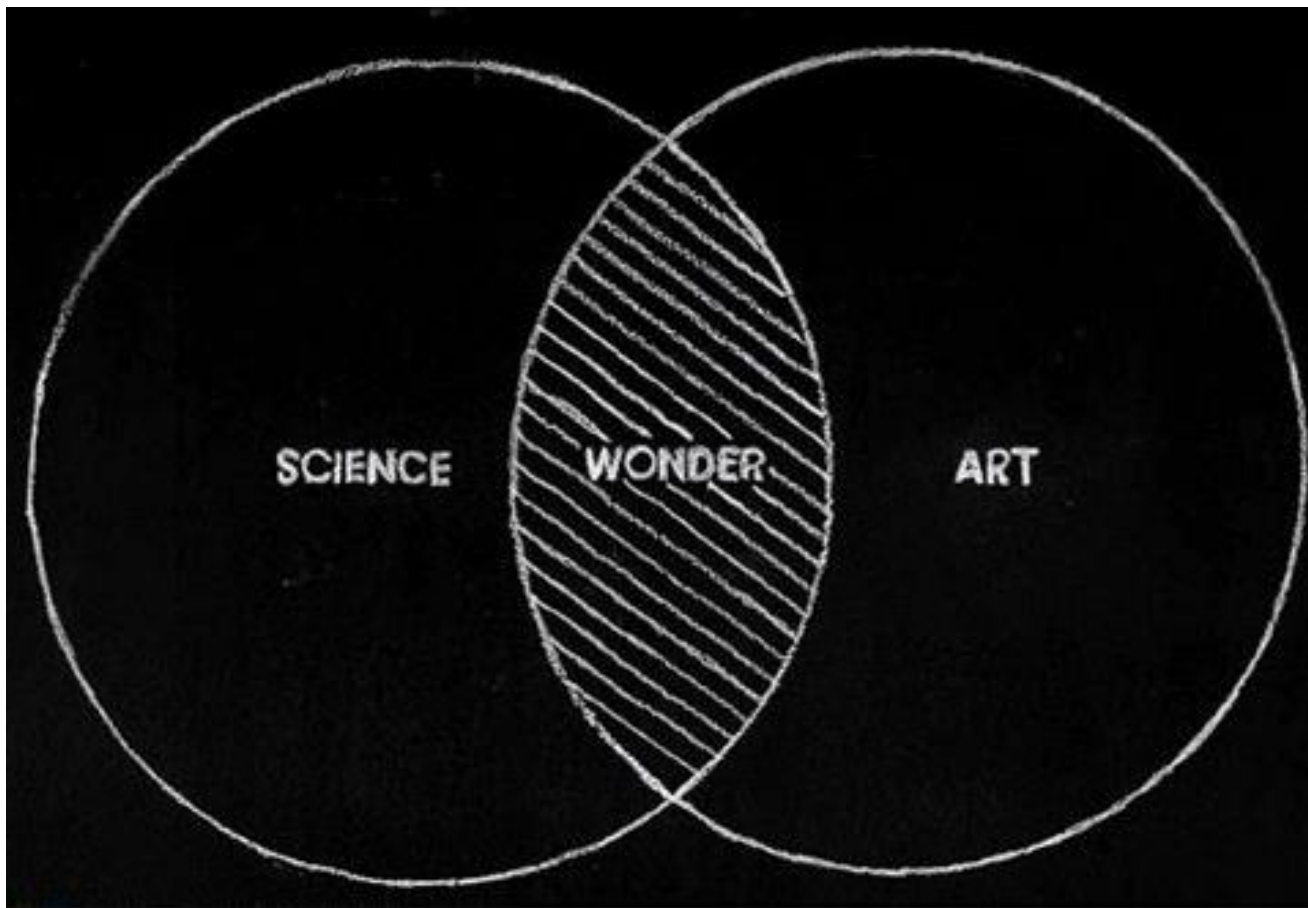


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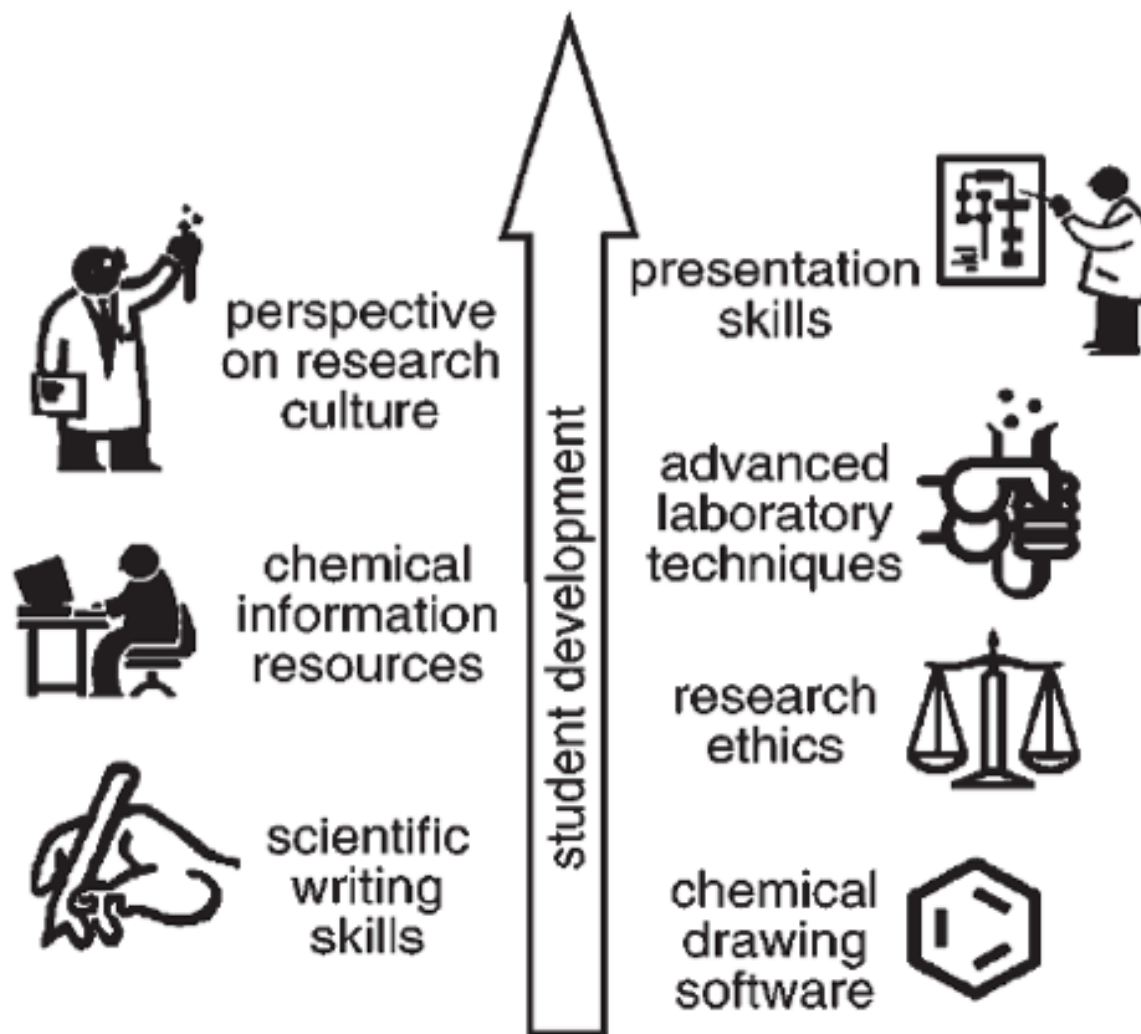
Organic Chemistry Laboratory
Fall 2013



Lecture I Introduction to CHEM 346
September 3rd 2013

"The Undivided Mind" Imaginary Foundation, 2010

READY FOR RESEARCH

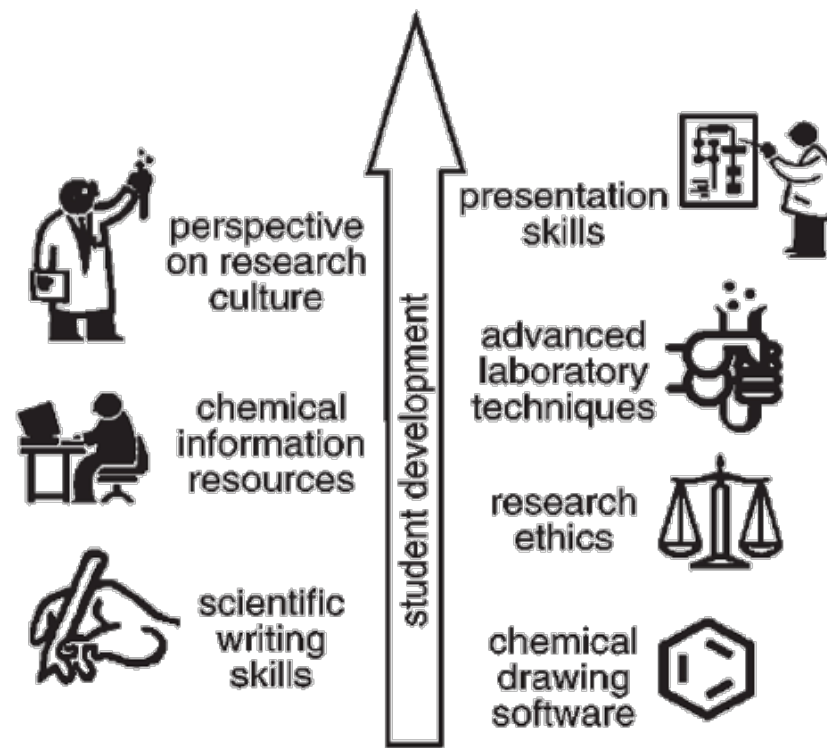


UNDERGRADUATE CHEM 344

What is CHEM 346?

Part I - Learning

- new organic chemistry
- intermediate/advanced lab techniques
- chemical information resources
- scientific writing
- ethics in scientific research



What is CHEM 346?

New organic chemistry & techniques

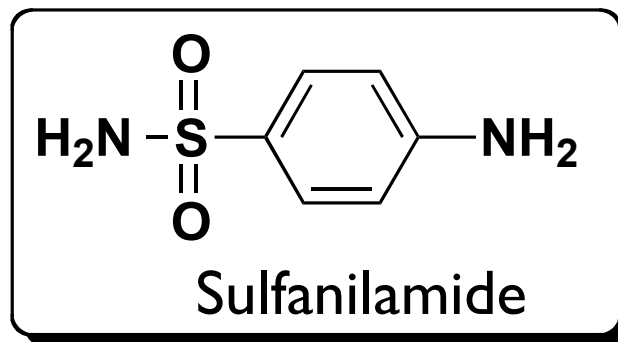
- 3 “scripted” lab projects

I. Total synthesis of a sulfa-antibiotic

- protecting groups
- EAS
- antibacterial testing



Gerhard Domagk



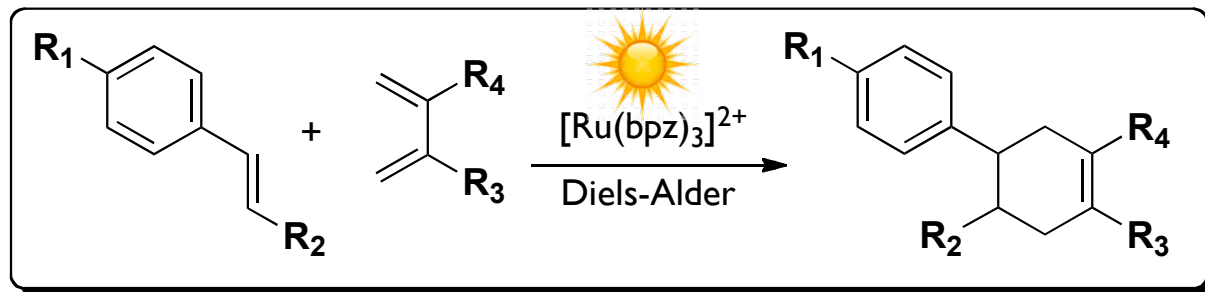
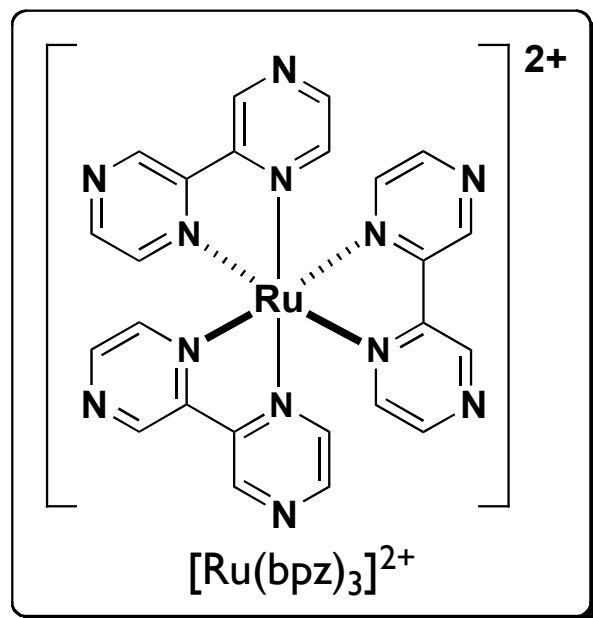
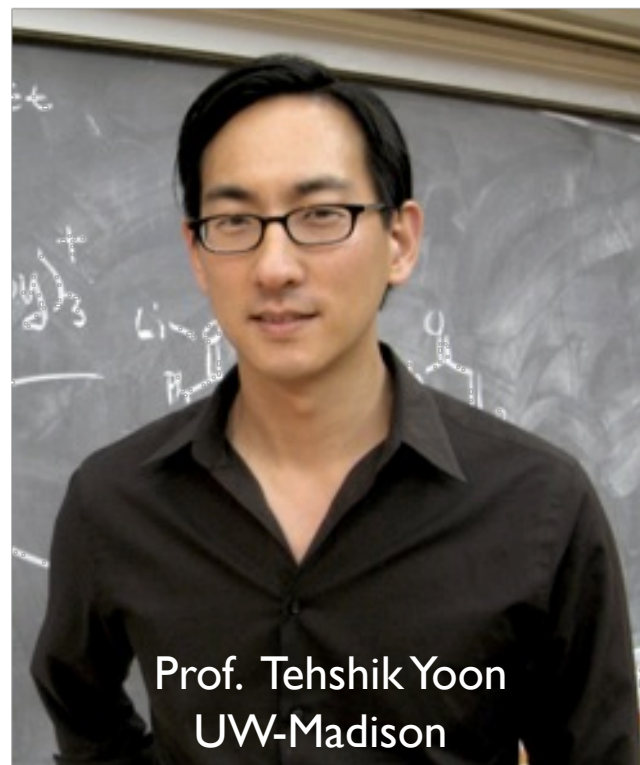
What is CHEM 346?

New organic chemistry & techniques

- 3 “scripted” lab projects

2. Visible light photocatalysis

- ligand synthesis/coordination chemistry
- photocatalysis of a Diels-Alder reaction
- screening reaction conditions
- collating & discussing experimental data



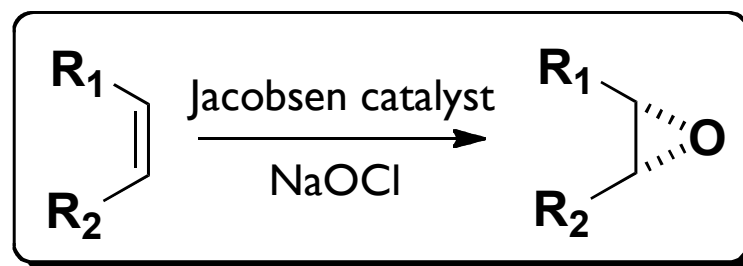
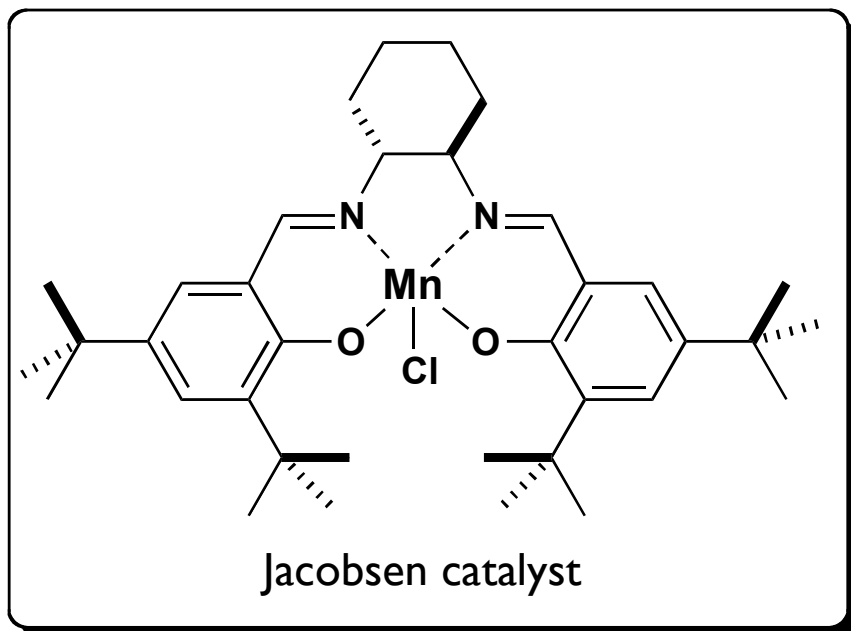
What is CHEM 346?

New organic chemistry & techniques

- 3 “scripted” lab projects

3. Jacobsen epoxidation

- ligand synthesis/coordination chemistry
- asymmetric epoxidation of an alkene
- mechanistic details



What is CHEM 346?

Chemical information resources

- 2 sessions with chemistry librarian

Scientific writing

- 3 lab reports written in *Organic Letters* template
- peer review of first draft → comments → graded final draft

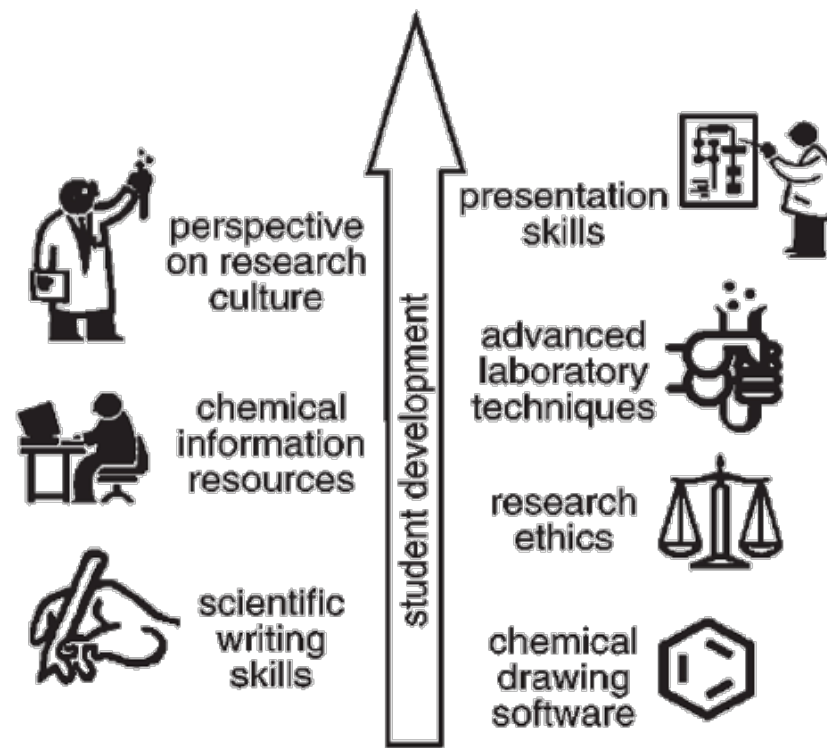
Ethics in scientific research

- overview and case studies

What is CHEM 346?

Part I - Learning

- new organic chemistry
- intermediate/advanced lab techniques
- chemical information resources
- scientific writing
- ethics in scientific research



Part II - Applying

- research project/lab placement
- poster presentation

This week

Today

- lab drawer check-in B341
- training on NMR instrument (Dr. Fry)
- processing/work-up of NMR data (Kaz)

Thursday

- begin sulfanilamide lab project
- read lab manual, know what you are doing