



**CHEM 580**  
**Current Topics in Inorganic Chemistry & Nanoscience**

**Units:** 2

**Term—Day—Time:**

Spring—Tu—12:30 (**Seminar**, Zoom)

Spring—Tu—16:30 (**Discussion**, Zoom)

Spring—Th—17:00 (**Journal Club**, Zoom)

**Seminar Zoom:**

<https://usc.zoom.us/j/95148829458?pwd=d1pDd2Vya1E0U1g2Q1o4TkVBYTZsZz09>

Passcode: Inorganic

**Discussion Zoom:**

<https://usc.zoom.us/j/99679769471?pwd=TUFTZjRDSFIYNEdT MWo5ZVlrRkZOUT09>

Passcode: Inorganic

**Journal Club Zoom:**

<https://usc.zoom.us/j/96029209493?pwd=azltcXByaWtXU3hMa3YwcE83c1Z5dz09>

Passcode: Inorganic

**Start date:** January 15, 2021

**End date:** May 12, 2021

**Instructor:** Prof. Michael S. Inkpen

**Office:** Zoom (normally LJS 250)

**Office Hours:** By appointment.

**Contact Info:** [inkpen@usc.edu](mailto:inkpen@usc.edu), +1 (213) 821-1910. Please expect a response to emails/calls within 2 working days.

**Teaching Assistant:** N/A

**IT Help:** N/A, use Blackboard.

**Catalogue Description:** Introduction to emerging research areas in Inorganic Chemistry & Nanoscience through a discussion of seminal research articles and presentations of current research topics.

## Course Description

CHEM 580 is a **2-unit** graduate level course in modern Inorganic Chemistry & Nanoscience. The intent of this course is to provide you with a broad-based sampling of the latest developments in Inorganic Chemistry & Nanoscience. The course consists of two main components:

- (i) **External Speaker Seminar** - you will attend departmental Inorganic seminars and meet for a discussion (question and answer) session with the speaker later that day;
- (ii) **Journal Club** – you will attend *Inorganic Journal Club* (IJC), where USC graduate students and postdoc formally present recent articles from the scientific literature.

Attendance is mandatory unless previous arrangements have been made with the instructor.

## Learning Objectives

By the end of this course you should be able to:

- Identify the core components of good scientific writing.
- Engage with research topics outside of your immediate area.
- Evaluate the significance of recently published research in Inorganic Chemistry & Nanoscience.

By demonstrating that you can:

- Correctly format scientific articles in different styles.
- Prepare for discussions with visiting scientists on their latest research.
- Describe new concepts, theories, and methodologies in a clear and concise written form.
- Consider new scientific results, data, and advances in a broader context.

Please note that these lists are not comprehensive and subject to change.

**Prerequisite(s):** N/A

**Co-Requisite(s):** N/A

**Concurrent Enrollment:** N/A

**Recommended Preparation:** N/A

## Course Notes

Letter Grades will be assigned based on the assignments described below.

## Technological Proficiency and Hardware/Software Required

N/A

## Required Readings and Supplementary Materials

**Required Texts:** Online access to journals.

## Description and Assessment of Assignments

### Research Synopses

You will prepare a 1-page research synopsis (Times New Roman 12-pt font, single spaced, 1 inch margins) for each of the visiting speakers. The specific content is left up to you, but you could focus on a single research paper from their group, an overview of their group's research, or a specific technique that they utilize, for example. Please feel free to get creative, and try different approaches as we go through the semester. You can find the information you need to prepare this synopsis from the speaker's faculty website and recent publications from that person. Do not simply copy information off the web or from their publications (that is plagiarism). You must distill information from these sources into your own words. Include references in ACS format (in the style of *J. Am. Chem. Soc.*, <https://pubs.acs.org/doi/pdf/10.1021/bk-2006-STYG.ch014>). Feel free to include figures where appropriate.

Your research synopsis should include 2 (sophisticated) scientific questions that will help to facilitate your discussions with the speaker when you meet with them.

This synopsis is due before 12:30 pm the day of the seminar via email ([inkpen@usc.edu](mailto:inkpen@usc.edu)) as a pdf document. Feedback will be given to help improve your scientific writing, which you should incorporate in subsequent synopses and your highlight article.

### Highlight Article

You will write an article in the style of an *Angew. Chem. Int. Ed.* Highlight on a paper from one of this semester's seminar speakers.

*Highlights describe very important recent results of original research (preferably published online within the last month), in general by a third person, with a view to instruct and to highlight the significance of the findings. The results should be presented clearly and as succinctly as possible, without the comprehensive details required for an original article. Highlights should include only essential formulae and figures, as well as not more than 15 references.*

(adapted from <https://onlinelibrary.wiley.com/page/journal/15213773/homepage/notice-to-authors>)

- Choose a high impact paper from the seminar speaker assigned to you. A large part of your grade will be based on whether the paper you choose is actually important and high impact. Once you have chosen a paper, it is extremely important that you highlight the importance of the paper you are writing about by placing it in the context of the larger field and past work. What is this paper bringing to the community that is new and innovative? Why is it a big deal? Find previous examples of highlights by browsing recent issues of *Angew. Chem. Int. Ed.* at: <https://onlinelibrary.wiley.com/journal/15213773>.
- Your Highlight must be written in a formal scientific writing style.
- Use the Wiley format for references (in the style of *Angew. Chem. Int. Ed.*). Pay close attention to detail. In addition to content, you will also be graded for spelling, formatting, grammar, etc.

Once you have written your Highlight of 5 double-spaced pages or less, you must insert it into the journal template. You can download the template at:

[https://onlinelibrary.wiley.com/pb-assets/assets/vch/author\\_templates/Highlight-1574257928077.zip](https://onlinelibrary.wiley.com/pb-assets/assets/vch/author_templates/Highlight-1574257928077.zip)

It is up to you to figure out how to use the journal template and format your Highlight so it looks perfect.

This article is due April 30 before 5 pm via email ([inkpen@usc.edu](mailto:inkpen@usc.edu)) as a pdf document.

### Grading Breakdown

Assessment Tool (assignments)	Due	% of Grade
Participation		
- 8 seminars	Day of Seminar, 12:30 pm	12
- 8 meetings with speakers*	Day of Seminar, 4:30 pm	12
- 4 IJCs	Day of IJC, 5 pm	6
Synopses of Visiting Speaker's Research	Day of Seminar, 12:30 pm	30
Highlight Article of Assigned Topic	April 30, 5 pm	40
<b>TOTAL</b>		100

\* Where speaker is unavailable to meet with students/postdocs, participation grade for the meeting will be added to that of the seminar.

### **Assignment Submission Policy**

Assignments should be submitted through email by the specified time and date.

### **Grading Timeline**

Grading and feedback for all assessments will be provided within one week of submission.

### **Additional Policies**

There will be absolutely no make ups, extra time, or special arrangements given for any assignments. Students are expected to attend all events and participate in discussions, unless an pre-arranged agreement has been made due to unusual circumstances (e.g., course conflict).

### **Speaker Schedule:**

February 2	<b>Greg Girolami</b> , University of Illinois
February 9	<b>Michael Therien</b> , Duke University
February 16	<b>Richard Ernst</b> , University of Utah
February 23	<b>Anne McNeil</b> , University of Michigan
March 9	<b>Gab Menard</b> , UC Santa Barbara
April 6	<b>Charlie Machan</b> , University of Virginia
April 13	<b>Oleg Ozerov</b> , Texas A&M
April 27	<b>Jenifer Shafer</b> , Colorado School of Mines

### **IJC Schedule:**

March 18	<b>IJC 1</b>
March 25	<b>IJC 2</b>
May 6	<b>IJC 3</b>
May 13	<b>IJC 4</b>

## Statement on Academic Conduct and Support Systems

### Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, [policy.usc.edu/scientific-misconduct](http://policy.usc.edu/scientific-misconduct).

### Support Systems:

*Counseling and Mental Health - (213) 740-9355 – 24/7 on call*  
[studenthealth.usc.edu/counseling](http://studenthealth.usc.edu/counseling)

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call*  
[suicidepreventionlifeline.org](http://suicidepreventionlifeline.org)

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

*Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call*  
[studenthealth.usc.edu/sexual-assault](http://studenthealth.usc.edu/sexual-assault)

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

*Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298*  
[equity.usc.edu](http://equity.usc.edu), [titleix.usc.edu](http://titleix.usc.edu)

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

*Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298*  
[usc-advocate.symplicity.com/care\\_report](http://usc-advocate.symplicity.com/care_report)

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity | Title IX for appropriate investigation, supportive measures, and response.

*The Office of Disability Services and Programs - (213) 740-0776*  
[dsp.usc.edu](http://dsp.usc.edu)

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

*Campus Support & Intervention - (213) 821-4710*

[campussupport.usc.edu](http://campussupport.usc.edu)

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*Diversity at USC - (213) 740-2101*

[diversity.usc.edu](http://diversity.usc.edu)

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

*USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu), [emergency.usc.edu](http://emergency.usc.edu)

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call*

[dps.usc.edu](http://dps.usc.edu)

Non-emergency assistance or information.