Chemistry 318 *Current Topics in Chemistry* Spring 2020
Analytical/Physical Chemistry

Instructor: Giuseppe Petrucci
Cook A-218
656-0957
Giuseppe.Petrucci@uvm.edu

Meeting time: Wednesdays 12:00–2:00 PM, INNOVATION E-325

Office hours: Stop by my office as needed or feel free to make an appointment.
Course description: A survey of the current chemical literature for analytical chemistry.

Grading: Your performance in this course will depend on four factors (in order of importance):
1) The quality and completeness of your presentation and facilitating discussion.
2) Your participation in all discussions.
3) Attendance to 318 meetings.
4) Departmental seminar attendance (!).

Selection of papers: You may choose any paper in the current (last ca. 6 months) analytical/PChem literature that *does not* directly relate to your own research. Ideally, papers that are novel or controversial are best to solicit discussion from the group. A pdf (or hard copy) of the paper that will be discussed *must* be distributed to all members of the Analytical/Physical Division by noon Friday before the scheduled presentation.

Presentations: Presentations should be brief and informative (ca. 20 slides or 30 minutes). You must include the complete citation, author's names, and article title. You should supply appropriate background to the audience, present the pertinent results, and make any critical comments on the validity of the results, the nature of the experiments, or on the relevance to the chemical literature.

Discussion: As presenter, your job is to moderate the discussion. One way to open discussion is to pose one or two open-ended, but specific questions to the audience. Attendees are expected to be active participants in the discussion—ask questions, raise alternate viewpoints, and mention other related literature.

The preparation of these presentations should not be wildly time consuming. The expectation is that you will be reading the original article and some appropriate background/related work, summarizing the ideas, and coming up with a couple of discussion points. Use all the tricks to minimize your preparation time. For instance, using figures from the original source (properly noted!), rather than redrawing them, is encouraged. However, be sure to keep image quality in mind.

Suggested journals

General interest journals
The Journal of the American Chemical Society
Angewandte Chemie
Environmental Science and Technology
Chemical Communications
Chemistry Letters
Accounts of Chemical Research
Science
Nature
Nature Chemistry

Analytical journals
Analytical Chemistry
Fresenius' Zeitschrift für Analytische Chemie
Trends in Analytical Chemistry
Analytical Letters
International Journal of Environmental Analytical Chemistry

Physical journals
Journal of Physical Chemistry A/B/C/Lett.
Physical Chemistry Chemical Physics
Chem. Phys. Lett.
Journal of Chemical Theory and Computation
Journal of Chemical Physics
Physical Review B/Lett
Journal of Material Chemistry A/B/C
Advanced Materials
ACS Applied Materials & Interfaces
Crystal Growth & Design
Journal of Chemical Information and Modeling (ACS)
Langmuir
Macromolecules
Biophysical Journal (Cell Press)
Soft Matter (RSC)
Small (Wiley)
Journal of Computational Chemistry
PLOS Computational Biology

More specialized journals
Journal of the American Society for Mass Spectrometry
Mass Spectrometry Reviews
Rapid Communications in Mass Spectrometry

Journal of Raman Spectroscopy
Journal of Separation Science
Journal of Fluorescence
Vibrational Spectroscopy
Journal of Aerosol Science
Aerosol Science and Technology
Atmospheric Environment
Journal of Electroanalytical Chemistry
Electrochemistry Communications
Journal of the Electrochemical Society

This is not a complete list! Take articles from wherever you see fit.

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Presentation Schedule:

Feb 12	Kevin Fischer
Feb 26	Peter Banks
March 18	Chris Snyder
April 1	Xiaochuan Zhao
April 15	Austin Flueckiger
April 29	Emily Verhaeg