CHM 725-152, Independent Study - Fall 2017

Instructor:  Yuanwei Zhang, Ph.D.
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Office Hours:  M, W 10:15 am – 11:15 pm.  And by appointment.


Course Content:  Tentative material to be covered.

Chapter 1. Introduction to Fluorescence
Chapter 2. Instrumentation for Fluorescence Spectroscopy
Chapter 3. Fluorophores
Chapter 6. Solvent and Environmental Effects
Chapter 8. Quenching of Fluorescence
Chapter 9. Mechanisms and Dynamics of Fluorescence Quenching
Chapter 13. Energy Transfer
Chapter 19. Fluorescence Sensing
Chapter 23. Single-Molecule Detection

The intention is to provide students a comprehensive overview of fluorescence technique, including basic photophysics, principles of optical microscopy, and selected applications. Emphasis will be placed on developing a basic, foundational understanding of advanced fluorescence microscopy techniques useful in bioimaging. Student will develop literature research, review, and presentation skills via an oral presentation based on selected course materials (Super Resolution PAINT).

Grading: The grade will be determined by the quality of the presentation and slides preparation. The presentation slides must be turned in to the instructor for evaluation.

References Preparation 30%
Presentation Slides 20%
Final Presentation 50%

A (90-100%), B+ (85-89.9%), B (80-84.9%), C+ (75-79.9%), C (70-74.9%), D (60-69.9%), F (below 60%)
Required Reading: