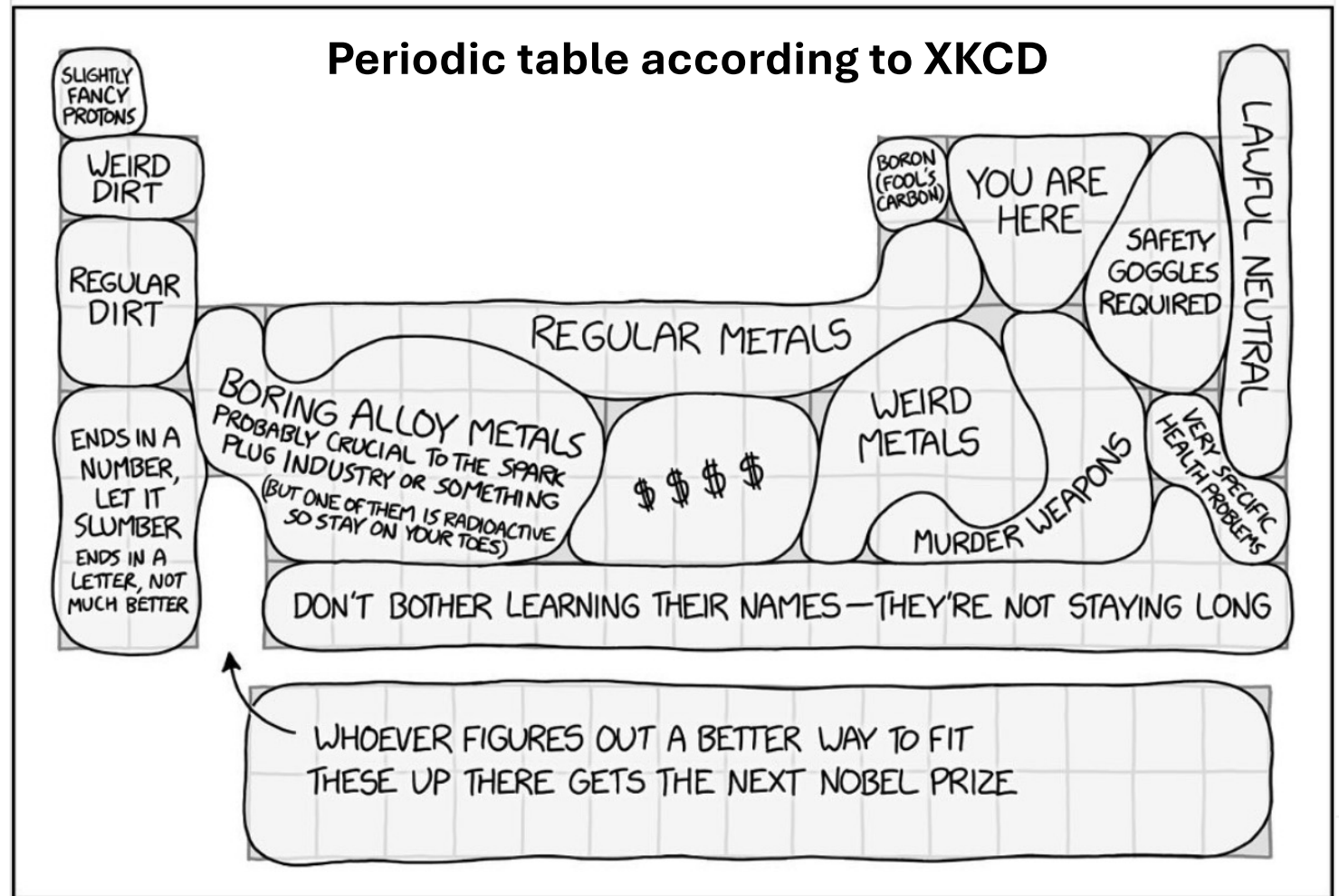
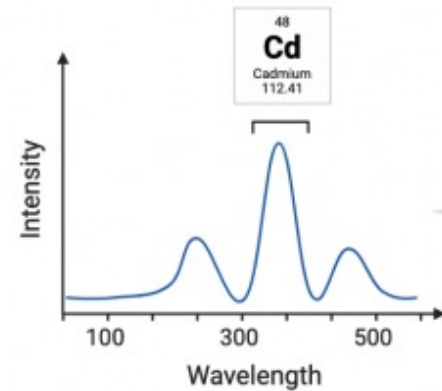
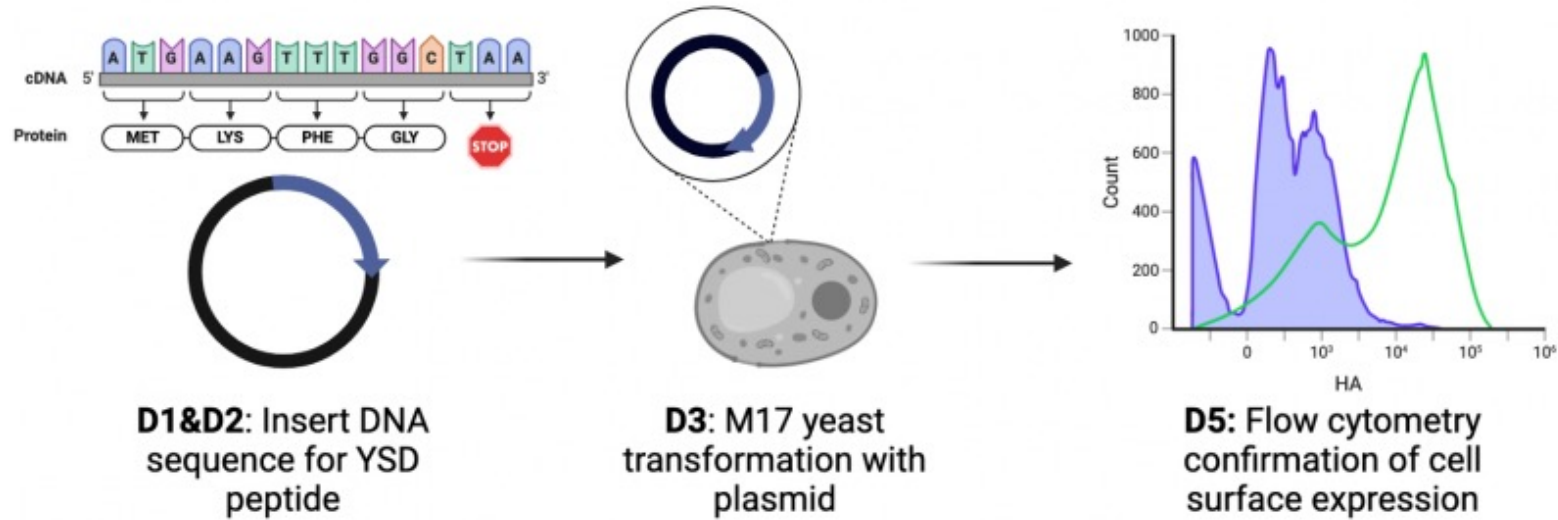


M2D7: Visualize cadmium sequestration and assess quality of cadmium sulfide production

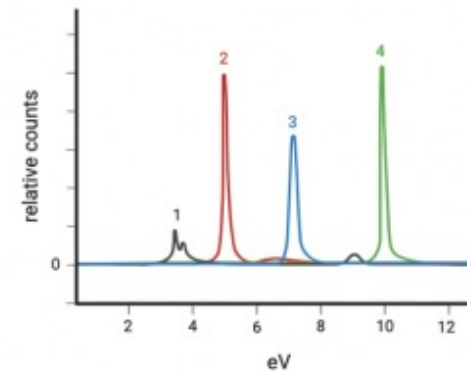
- Prelab
- Work in Belcher lab to examine samples with fluorimetry
- Data analysis!



Mod2 overview



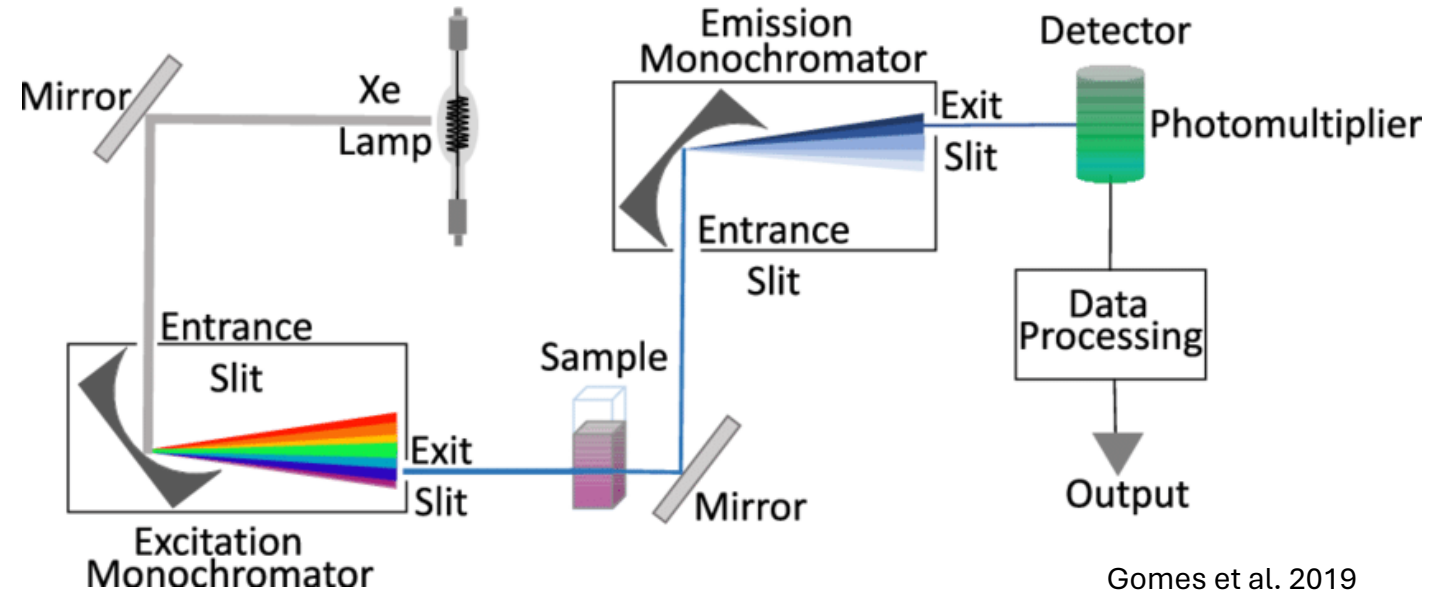
D6: ICP-OES analysis of heavy metal uptake



D7: Examine CdS sequestration pattern and fluorescence

Fluorescent spectroscopy (fluorimetry)

- Xe or Hg lamp
- Single wavelength excitation of sample
- Emission spectrum measured
- For data processing:
 - Use S1/R1 numbers
 - Signal (S) is corrected to account for background lamp signal (R) to produce more reliable emission data

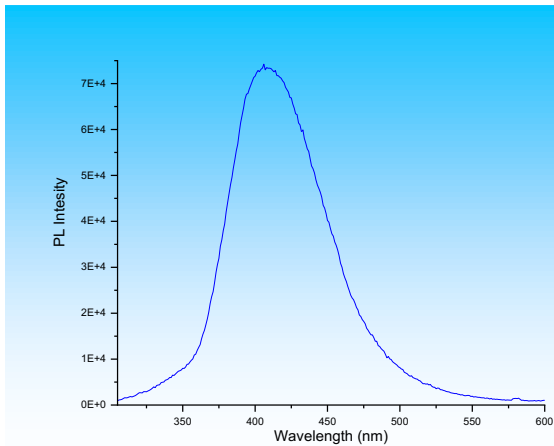


Gomes et al. 2019

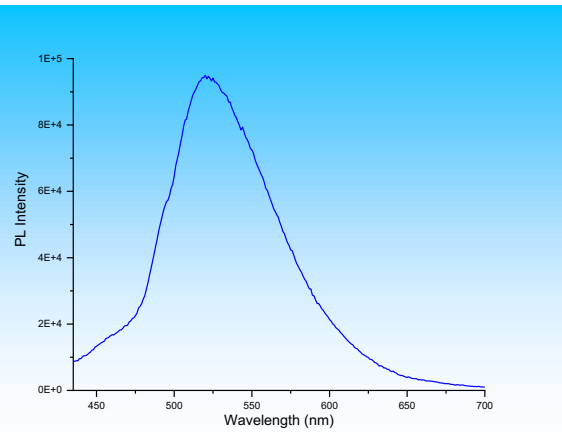
Example fluorimetry data

Excitation

$\lambda_{\text{ex}} = 290 \text{ nm}$

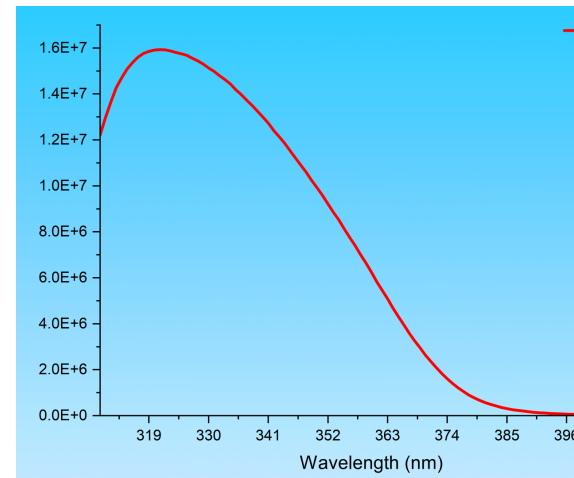


$\lambda_{\text{ex}} = 420 \text{ nm}$

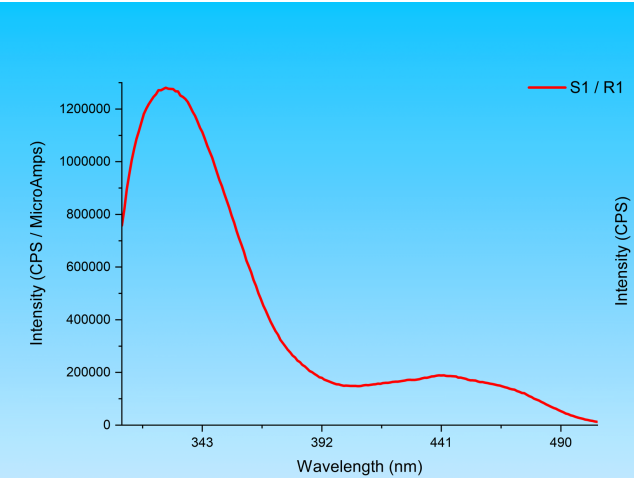


Emission

420 nm emission excitation spectrum



520 nm emission excitation spectrum



Data analysis today!

Experiment review: what is the goal of each experiment?

- Flow cytometry

- ICP-OES

- Fluorimetry

- TEM

For today

- First group meets Jifa at 1:30ish
 - We are all going over to the Koch
 - Take your laptop to keep notes for a lab notebook
 - Work on data analysis if your group is not processing samples

For M2D8

- Outline your RA discussion
 - Like Implications section of the Data Summary + data interpretation
 - Use placeholders for analysis that is not complete