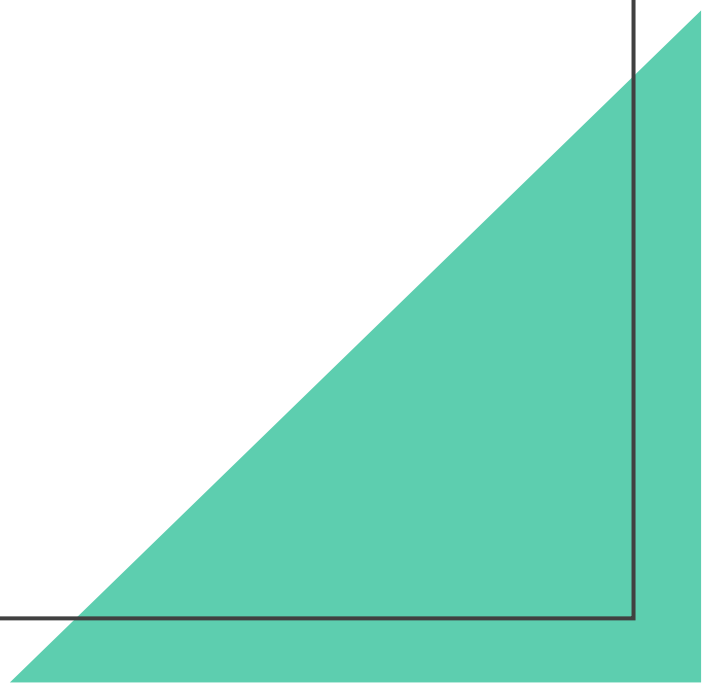


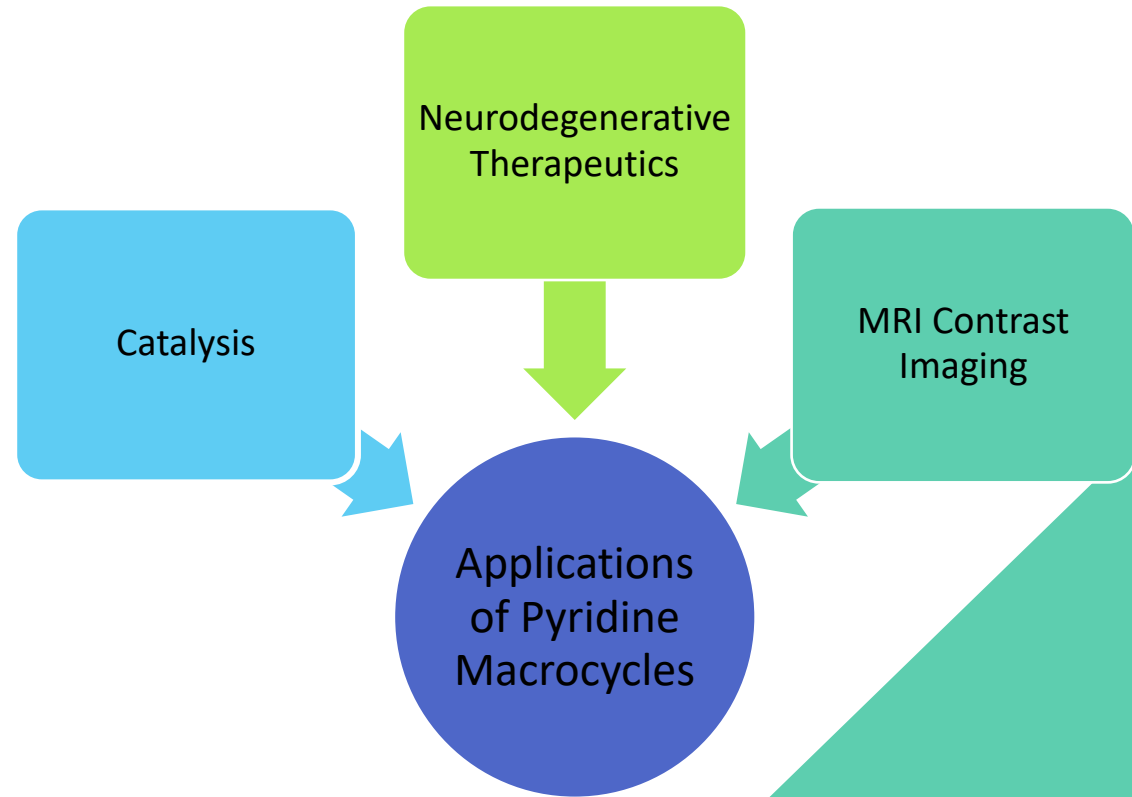
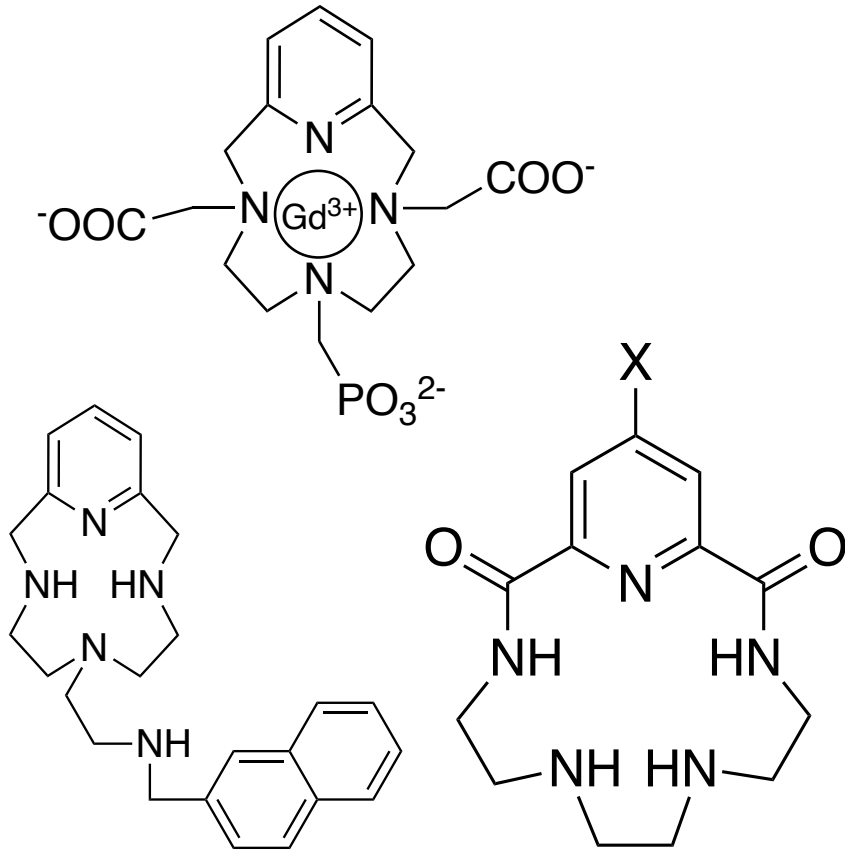
Synthesis and Characterization of an Iodo-substituted Macrocyclic Complex: Comparison of Pyridine Modification

Diandria Veals

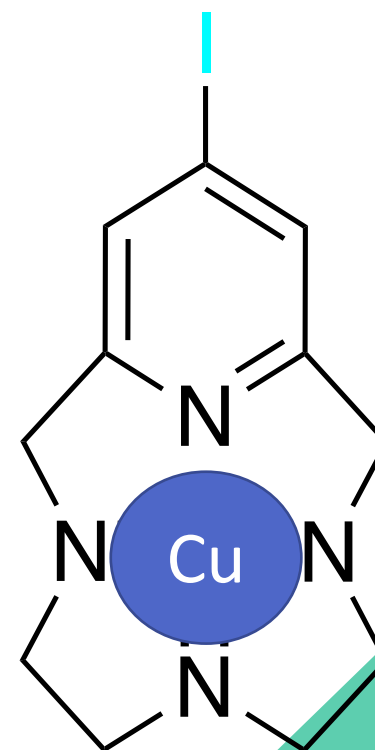
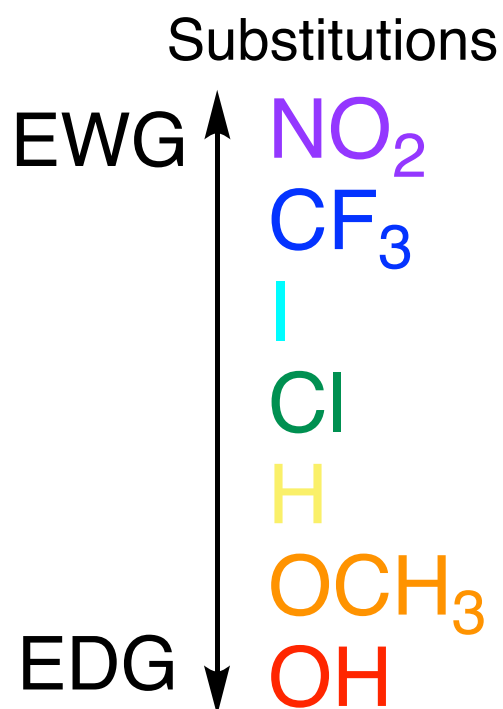
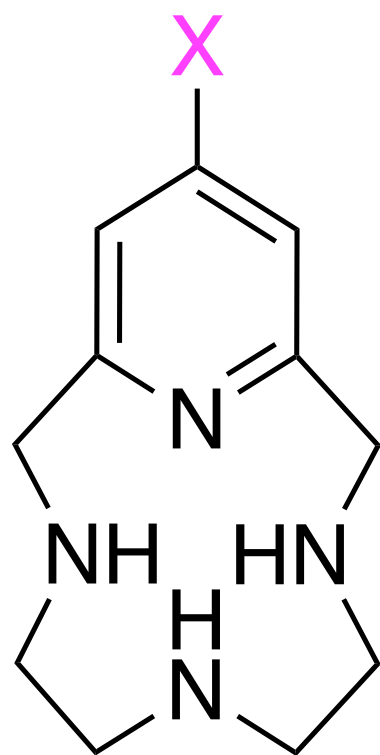
Department of Chemistry and Biochemistry, Texas Christian University, Fort Worth, TX



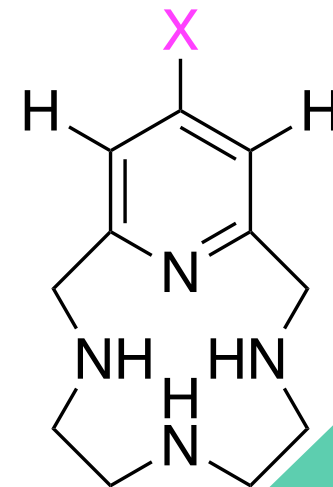
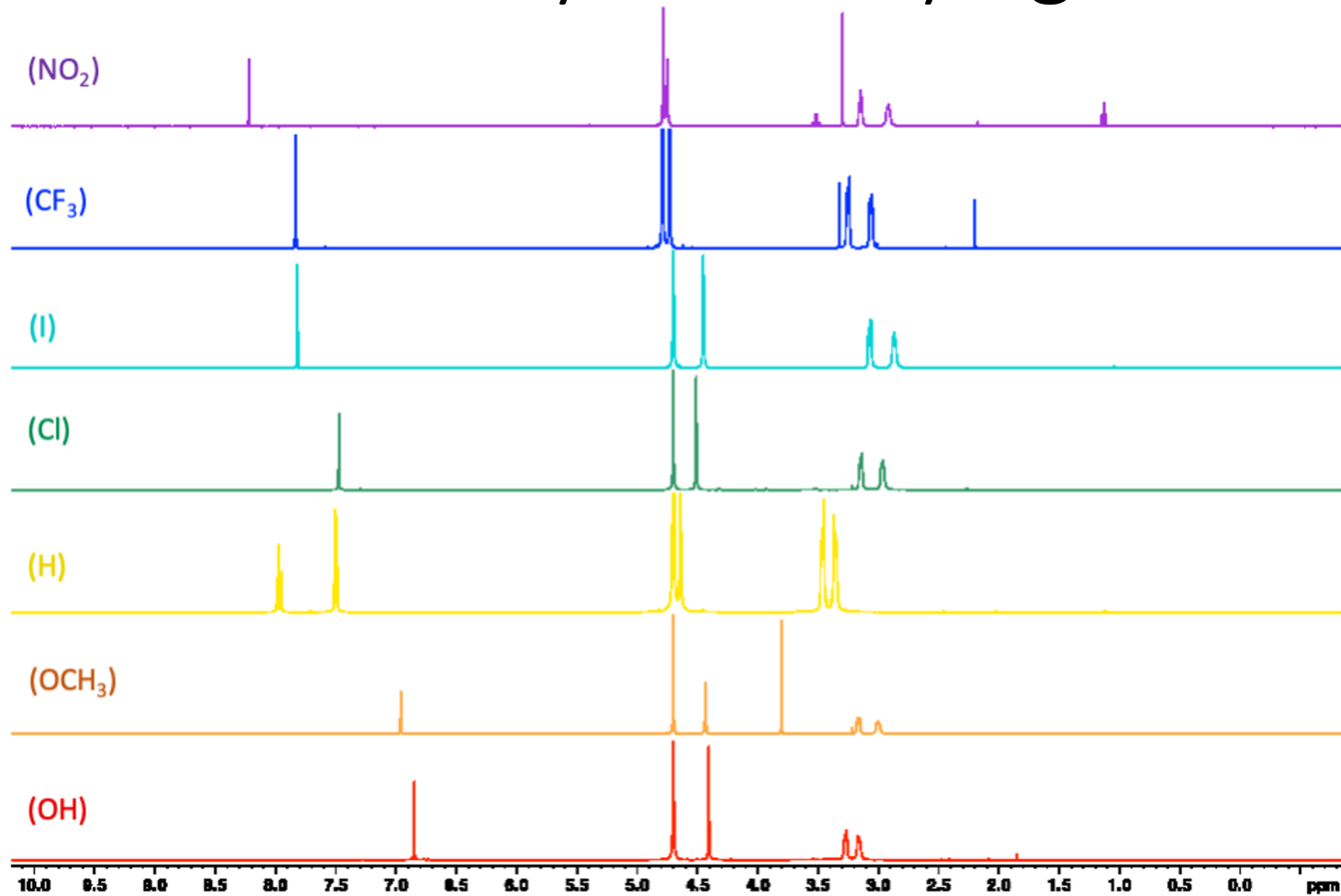
What are pyridine macrocycles?



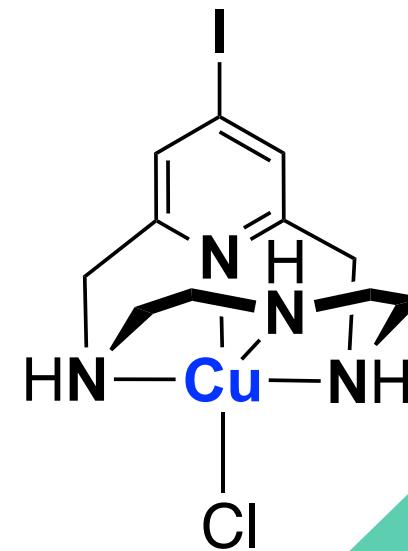
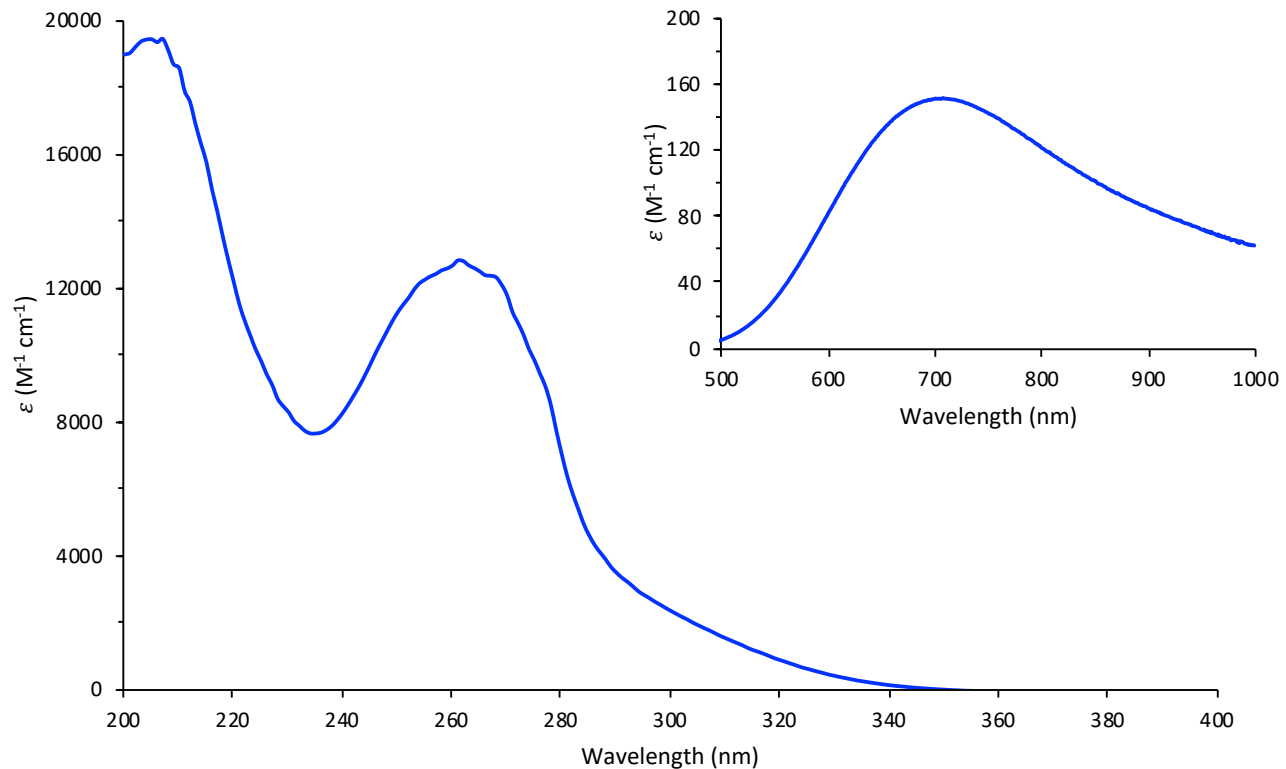
What are variations in pyridine macrocycle structure and how do they impact metal complexing?



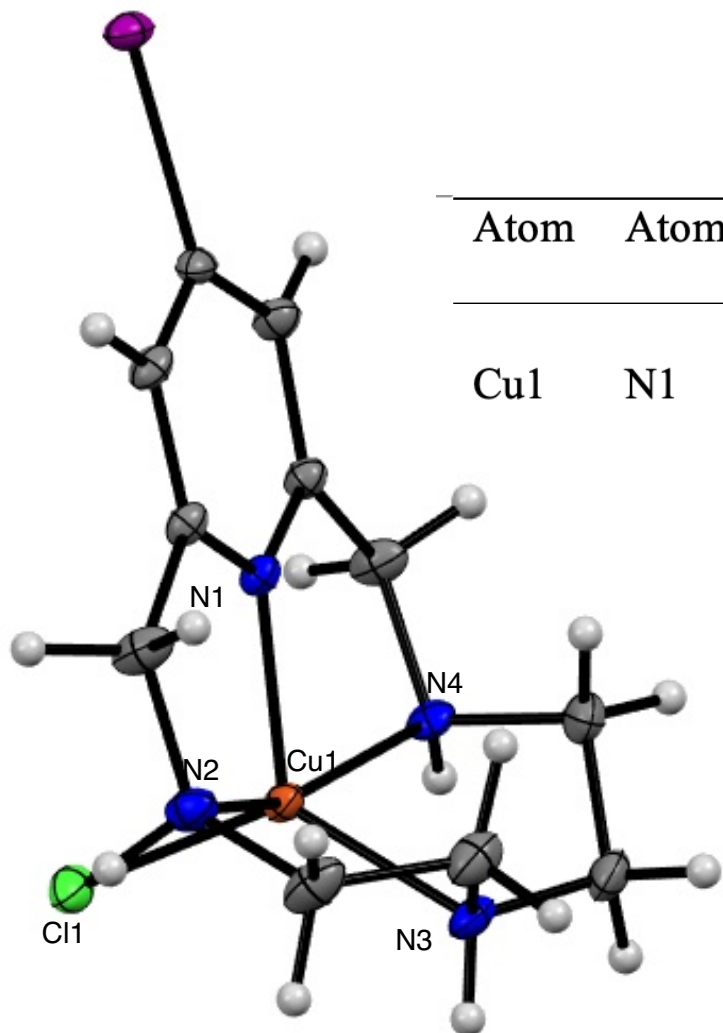
^1H NMR Analysis: Studying Electronic Environment



UV- Vis Spectroscopy: Analyzing Metal and Donor Atom Binding

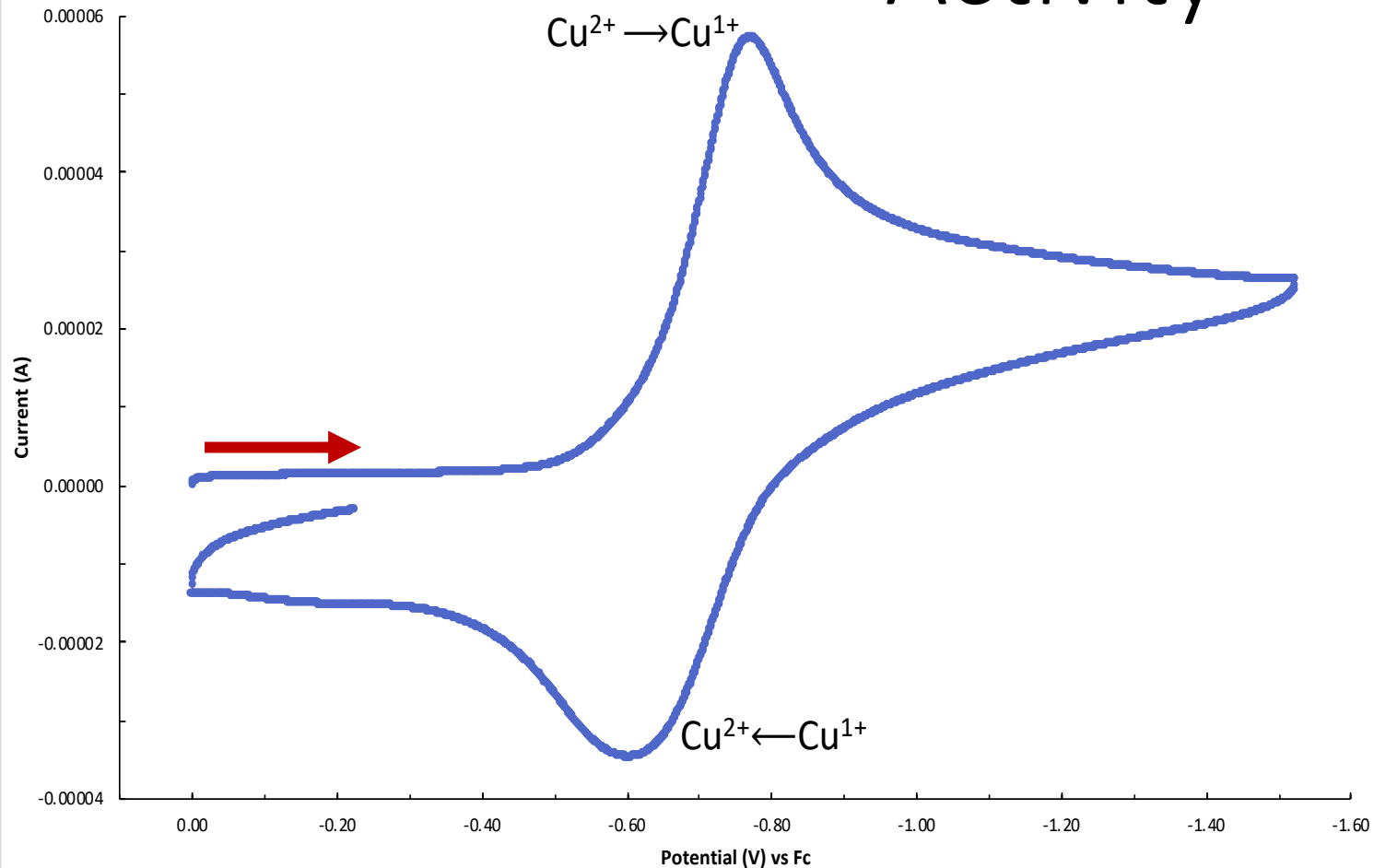


X-Ray Diffraction: Studying Crystal Bond Lengths/Angles

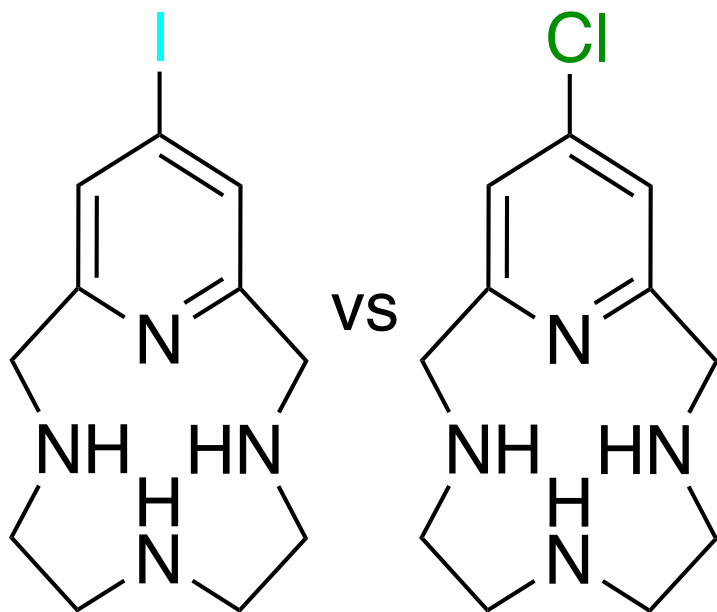


Atom	Atom	¹ PyN ₃	¹ PyN ₃	^H PyN ₃	^O HPyN ₃	^C NPyN ₃	^{Cl} PyN ₃
Cu1	N1	1.973 (2)	1.985 (2)	1.947 (2)	1.939 (16)	1.9600 (19)	1.977 (6)

Cyclic Voltammometry: Measuring Metal Redox Activity



Conclusion and Future Applications



Conclusion:

- Differences seen between the Iodo and the Chloro pyridine macrocycles and the implications of these results

Future applications:

- Gateway molecule for other substitutions on the pyridine ring