

# Organic Seminar

Friday, October 8, 9 am

Hutchison Hall, Room 473

## Sarah Wengryniuk

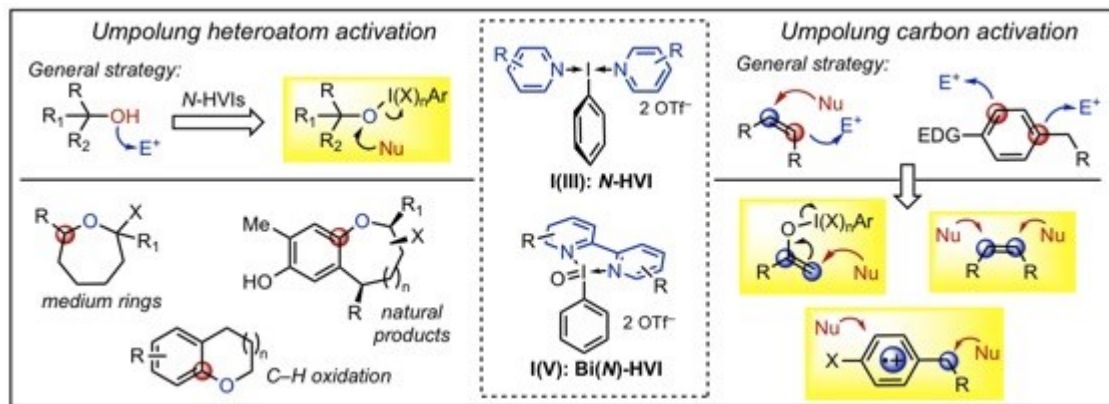
Assistant Professor of Chemistry

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*“Umpolung Strategies for the Functionalization of Organic Molecules Enabled by Hypervalent Iodine Reagents”*

**Abstract:** Hypervalent iodine reagents in the I(III) oxidation state have emerged as a versatile, environmentally benign toolkit for the functionalization of organic molecules. Amongst their diverse reactivity is the ability to facilitate reversed-polarity, or “umpolung”, transformations of typically nucleophilic functionalities, enabling novel bond disconnections. Our laboratory has leveraged an underexplored class of hypervalent iodine compounds, (bis)cationic nitrogen ligated I(III) reagents (N-HVIs), as well as the analogous I(V) class (Bi(N)-HVIs), as a platform to develop umpolung transformations of heteroatoms and alkenes. The presence of datively bound heterocyclic ligands leads to enhanced, highly tunable and novel reactivity relative to their well-established oxygen or halogen ligated counterparts. In the talk, our efforts in reagent development as well as umpolung C-O, C-C, and C-N bond forming reactions towards scaffolds of synthetic and biological relevance will be discussed.



Lab Website: <https://wengryniuklab.weebly.com>

Website: [https://events.rochester.edu/event/chemistry\\_organic\\_seminar\\_wengryniuk](https://events.rochester.edu/event/chemistry_organic_seminar_wengryniuk)

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