

CHEMISTRY Departmental Seminar

Spring 2022
CHEM 285/191 Schedule
Tuesday at 4:30-5:45PM
Duncan Hall 250
April 5th, 2022

Ms. Su Hu
San José State University (Radlauer Lab)

***Steric Effect on Benzyl Ether Olefins Under SADMET
Polymerization***

Acyclic diene metathesis (ADMET) polymerization, a type of olefin cross metathesis, is a step-growth and condensation polymerization that can be used to synthesize hydrocarbon polymers with diverse functional groups. Traditional ADMET with symmetric α,ω -dienes are not selective and can only form homopolymers or statistical copolymers. Changing to monomers with acrylate functional groups allows selective reactivity to form block and alternating polymers. In this project, we want to explore other functional groups that result in selective reactivity to form advanced polymer architectures via what we have termed selective acyclic diene metathesis (SADMET) polymerization. Developing new functionalized monomers for SADMET polymerization allows for the synthesis of precision alternating copolymers with a variety of backbone chemistries, pendant groups, and tacticity. The steric effect around the monomers' double bonds was examined with the goal of finding more monomers that can be used to make block or alternating polymers via SADMET polymerization. As controlling over the polymer chain, the newly engineered polymers can be applied to ion transport, drug delivery, and polymer self-assembly.