



# Department of Chemistry and Biochemistry Colloquium Speaker



## Prof. Guijun Wang

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### "Synthesis and Applications of Glycomimetics, from Asymmetric Synthesis to Advanced Materials"

**Abstract:** Chiral small molecules are important building blocks for biologically active compounds and advanced materials. Carbohydrates, abundant and renewable natural resources, contain rich chiral centers that can be utilized for the synthesis of medicinally relevant compounds and new materials. For the past several years, my group has been working on the synthesis of chiral aminol alcohols and heterocycles and the synthesis and study of glycomimetics. We have carried out the synthesis and characterizations of monosaccharide derivatives and discovered several novel classes of sugar based low molecular weight gelators (LMWGs). Carbohydrate based LMWGs can form unique reversible supramolecular organogels and hydrogels that are useful for biomedical and environmental applications. The bottom up approach for the preparation of functional self-assemblies has potential impact in advanced materials, biomedical research, and bioorganic chemistry. In this seminar, I will give a brief overview of our ongoing research, followed by our recent research in the synthesis and characterization of new sugar derivatives and their applications as soft biomaterials.

**Monday November 20<sup>th</sup>, 2017  
4:00 pm  
WO 1205**

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