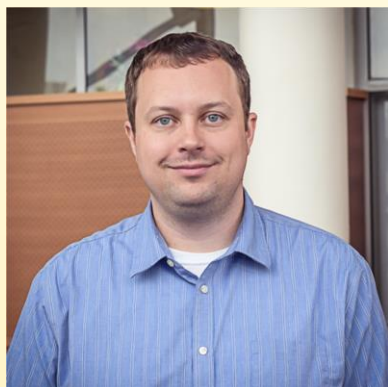


Speaker:

Tom Linz,

Assistant Professor



When:

Friday, September 24th

1:00 pm

Where:

On Zoom

bit.ly/chicochem

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Chemistry and Biochemistry

Fall 2021 Zoom Seminar

Please join us for the following seminar!

High Sensitivity Microfluidic Measurements of Biomolecules

Microfluidic analyses offer numerous benefits compared to traditional bioanalytical techniques. These miniaturized systems afford faster analysis times, require less sample volume, and can integrate sample preparation and analysis into a single platform. Our laboratory has harnessed these benefits to develop high sensitivity gel electrophoresis and digital PCR methods to measure diverse biological analytes including proteins, nucleic acids, small molecules, and cells. Our electrophoresis project utilizes thermally responsive polymers as a gel matrix. Temperature is adjusted to tune analytical performance and achieve preconcentration and separation of biomolecules and cells. Our digital PCR project integrates detection of proteins and nucleic acids. Target analytes are measured from individual biocomplexes with single-molecule sensitivity. The innovative analytical strategies developed in our laboratory enhance measurement capabilities to facilitate biological research.