

#### **4cu Microfluidics for Biomolecular Studies**

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There is a great deal of interest in using microfluidic devices to study chemical and biological systems due to the unique nature of microscale systems. Specifically, microfluidics offer the potential to drastically reduce the amount of sample that is consumed for screening and characterization studies, which is of particular interest when using highly purified proteins and other precious materials. Another unique property of microfluidics is the ability to manipulate liquid volumes to achieve specific goals.

This poster will present several microfluidic devices that we have developed for a variety of biomolecular studies. Specifically, the poster will present microfluidic flow cells for characterizing sub-millisecond enzyme kinetics using time resolved UV/Vis and FTIR spectroscopy. The poster will also discuss several new fabrication methods that have been used to make the devices. Microfluidic devices with integrated detectors for combinatorial chemistry applications will also be discussed.