



# Opportunities for microfluidic devices at Free-Electron Lasers

## Glass-based Microfluidic Injectors

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Fluid based sample delivery is used for a little over half of the user operations shifts at the SLAC Linac Coherent Light Source. The sample injector devices are fairly task-specific with little demand for them elsewhere. As a result, there is little commercial interest in developing microfluid injectors and sample delivery efforts have progressed slower than other FEL subsystems. This presentation will discuss the efforts at SLAC and Stanford to produce standardized, manufactured, glass and silicon based fluid injectors.