

Microfabricated Fluidic Devices for Biochemical Analysis**Professor J. Michael Ramsey****Depts. of Chemistry, Biomedical Engineering, and
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Chapel Hill, NC, USA****日時: 2009年 11月6日(金) 10:00 - 11:30
会場: 東京大学工学部2号館 3F 31A会議室****要旨**

There has been rapidly growing interest in microfabricated fluidic devices (microchips) over the past decade. The diversity of chemical and biochemical measurement techniques that have been implemented on microchips includes various electrophoretic and chromatographic separations, chemical and enzymatic reactions, noncovalent recognition interactions, sample concentration enhancement, and cellular manipulations. In addition, the types of samples addressed by microchips has been broad in scope, e.g., small ions and molecules, single and double stranded DNA, amino acids, peptides, and proteins.

These devices have low cost and small footprints while consuming miniscule quantities of reagents and can rapidly produce precise results. All of these features suggest the possibility to perform chemical and biochemical experimentation on a massive scale at low cost on a bench top or relatively complex automated assays in field settings. Our laboratory has been focusing on developing microfluidic technologies for acquiring biochemical information from limited quantities of material. A selection of these devices will be discussed.

