## HIBARA LAB.

## [Micro/Nano Analytical Chemistry]

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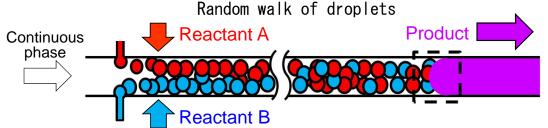
**Micro Analytical Systems** 

Department of Applied Chemistry Graduate School of Engineering

## **Miniaturized Analytical Systems**

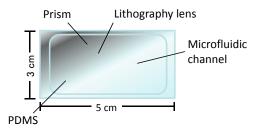
◆Micro Droplet reactor

Fast mixing (mixing length  $\approx$  droplet diameter) Isothermal emulsion conversion (w/o  $\rightarrow$  o/w)



◆Integrated Optics

Integration of laser spectroscopies Microfluidic channel with optical components Photothermal spectroscopy





◆Spectroscopy for Liquid Interface

Simple heterodyne optics for interfaces Ionic liquid surface

