

The University of New Mexico

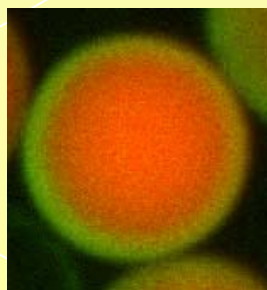
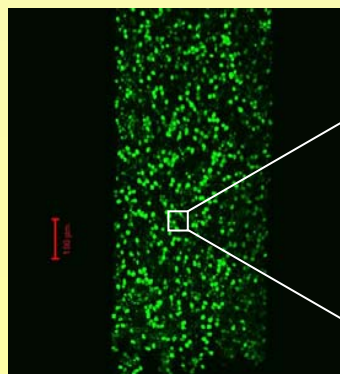
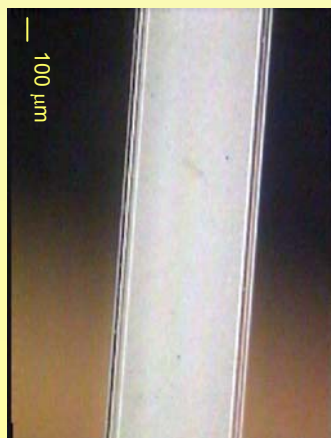
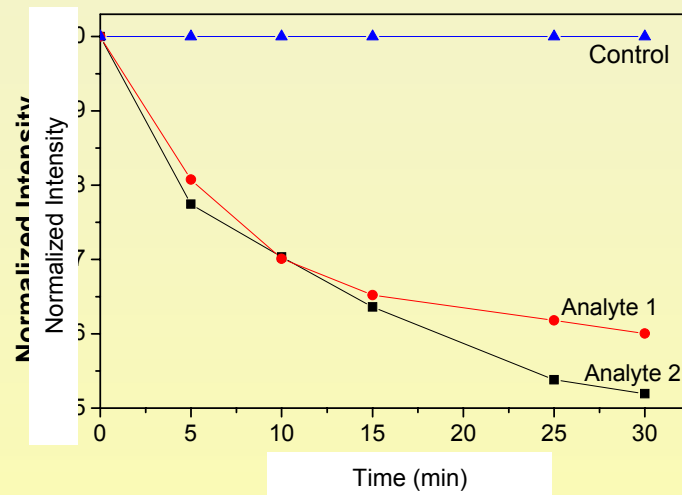
Multi-Analyte Biosensors in Packed Microcolumns

GP Lopez, P Atanassov, JA Brozik, SRJ Brueck, D Petsev

T Buranda, LA Sklar, D Whitten

UNM Chemical Engineering, Chemistry, CHTM, Pathology

- small volume quantitative analysis
- inherent preconcentration capability
- short analysis time
- laminar mixing not a problem ($t = d^2/2D$); $d \leq \mu\text{m}$
- "dark" analytes do not contribute to background
- direct detection of biomolecular recognition
- multi analyte detection possible



Microbiosensor Technologies

- Microfluidics, Mixing, Valves, Pumps
- Analyte Collection / Preconcentration
- Materials and Molecular Display
- Molecular Transduction
- Multiparameter Fluorescence Detection