

Analytical Seminar

Presented by

Prof. David Walt of Tufts University

“Single Molecule Arrays: From Fundamental Enzymology to High Sensitivity Analysis”

We have developed a technology for detecting individual enzyme molecules. This technology enables us to observe thousands of individual enzyme molecules over time and allows us to manipulate them thermally. We have been able to elucidate some of the underlying mechanistic behavior of enzymes that cannot be ascertained from bulk ensemble measurements. Using a modification of the technology, we can measure biomolecules using digital measurements, based on counting single molecules. This method allows us to measure the concentrations of proteins more than a thousand times lower than ELISAs. The use of such ultra-sensitive assays for making novel clinical measurements will be described.



Thursday, April 4

12:15 p.m.

1315 Chemistry