

Abstract Submitted  
for the APR10 Meeting of  
The American Physical Society

**Optical Tweezing of Yeast Cells** KYLE GILROY, ROMULO OCHOA,  
The College of New Jersey — Optical Tweezers is a powerful technique that aids in understanding and applying the unique principles of photonics, optical physics, and basic cell biology. The experiments presented involve using HeNe lasers (632.8 nm) to trap spherical and ovular shaped objects in a solution. Polystyrene spheres, six micrometers in diameter, were trapped and moved with the laser to calibrate our system. The spheres were submerged in a Sodium Phosphate buffer solution to prevent sticking. *Saccharomyces cerevisiae*, better known as yeast, was grown in a glucose rich environment to reach sizes of four to nine micrometers. Our optical tweezers captured and moved these cells under the operators command. A two laser system was utilized to control two cells simultaneously and attempt the splitting of cells.

Kyle Gilroy  
The College of New Jersey

Date submitted: 22 Oct 2009

Electronic form version 1.4