ICFO research highlighted by Analytical Chemistry

The dynamics of cell growth observed in Prof Petrov?s group by using optical tweezers

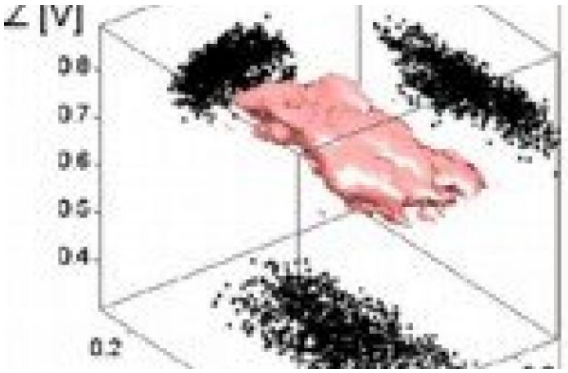
October 11, 2006

Research on "Dynamics of cell growth observed in an optical trap" of Prof. Dmitri Petrov?s group at the Institute is highlighted by the journal Analytical Chemistry. The research, published in Applied Physics Letters, analyzes the dynamics of the forward-scattered light from individual cells in optical traps.

ICFO researchers have pointed out that cell?s growth could cause changes in its equilibrium position during the analysis; these changes must be taken into account when the data are interpreted. When cells do not appreciably alter their shapes, changes in spectra can be attributed to biochemical processes occurring inside the cell. The variations could also be used to identify or sort cells in lab-on-chip devices.

Analytical Chemistry explores the latest concepts in analytical measurements and the best new ways toincrease accuracy, selectivity, sensitivity, and reproducibility. Coverage includes the latest peer-reviewed research and significant applications in bioanalysis, electrochemistry, mass spectrometry, microscale systems, environmental analysis, separations and spectroscopy.
In addition, the first issue of each month contains features and news articles about new analytical concepts, novel apparatus, and the top research published in the other international journals.

Link to Prof. Dmitri Petrov's group page



Forward scattered light distribution for a trapped heat-treated yeast cell