Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

An Optical Biosensor for Bacillus Cereus Spore Detection[1]
CHENGQUAN LI, University of California, Riverside, HARRY W. K. TOM, University of California, Riverside — We demonstrate a new transduction scheme for optical biosensing. Bacillus cereus is a pathogen that may be found in food and dairy products and is able to produce toxins and cause food poisoning. It is related to Bacillus anthracis (anthrax). A CCD array covered with micro-structured glass coverslip is used to detect the optical resonant shift due to the binding of the antigen (bacillus cereus spore) to the antibody (polyclonal antibody). This novel optical biosensor scheme has the potential for detecting 10∼100 bioagents in a single device as well as the potential to test for antigens with multiple antibody tests to avoid "false positives."

[1]Funded under a grant from Center for Commercialization of Advanced Technologies (CCAT) through SDSU

Harry Tom
University of California, Riverside

Date submitted: 01 Dec 2004 Electronic form version 1.4