

# **Applications: Biosensing in integrated optics**

***Ivo Rendina***

*National Research Council, Institute for Microelectronics and Microsystems  
Area della Ricerca CNR, Via P. Castellino 111, 80131 Napoli, Italy  
e-mail: ivo.rendina@cnr.it*

In the last years, an increasing interest has been devoted to the exploitation of integrated optics to biosensing for biomedicine, food analysis, environmental monitoring and security applications. The lecture provides students with a survey starting from the basic concepts applied to biosensing up to the most advanced lab-on-chip technologies. A particular emphasis will be given to new ideas emerging in label-free biosensing, exploiting strong light confinement and resonance in micro and nanostructures.