

"Fluorescence Detection for Immunoassays and DNA sensing - from optical table to miniaturized biosensor devices"

Dr. M.I. Boamfa

Senior Researcher, Molecular Diagnostic Group

Philips Research Europe - Eindhoven The Netherlands

E-mail: marius.boamfa@philips.com

Abstract:

Fluorescence Detection plays a central role in Molecular Diagnostics as main-stream techniques of Immunoassays and DNA sensing use fluorescence labeled bio-molecules. Aspects of Fluorescence Detection are described as they are perceived in Industrial Research and Development environment, with emphasis on the transition from proof of principle to a functional miniaturized biosensor. We present the development of a Compact Confocal Scanner for Fluorescence Detection based on low cost components from Optical Storage technology and we illustrate the potential of this life science tool with examples of Immunoassays and DNA detection.