Medical Optical Tomography: Functional Imaging and Monitoring

Gerhard J Meuller
However, functional imaging, for instance polarization sensitive OCT, or the combination with other modalities such as Multiphoton Tomography may open new possibilities to improve diagnostic accuracy. Currently available clinical OCT systems provide only structural images. Optical imaging techniques. Laser optical tomography or, for one particular application, tomographic laser mammography, yields cross-sectional images of tissue obtained by projecting laser beams inward from many directions (Wolbarst and Hendee, 2006). With a slightly different approach, confocal scanning laser tomography can be used to noninvasively acquire three-dimensional images of the posterior segment of the eye, creating a quantitative image of the optic nerve head and the surrounding retinal surface (Wolbarst and Hendee, 2006). A laser beam is focused to some depth within the eye and... Diffuse optical tomography (DOT) is a very promising approach to further a resolution of the aforementioned issues.