System and Method for Isotropic Quantitative Differential Phase Contrast Microscopic Imaging

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Experience:

學 校 名 稱	學 位	起 訖 年 月
College of Optical Sciences, University of Arizona	Ph. D	2004/08~2008/09
College of Optical Sciences, University of Arizona	M.S.	2004/08~2007/06

Affiliation	Title	Period
Current Position		
Institute of Medical Device and Imaging	Associate Professor	2015/08~present
曾任：		
Molecular Imaging Center	Division Chief	2012/01~2017/07
Opto-electronic Biomedical Research Center	Assistant Professor	2011/08~2015/07
Mechanical Engineering, MIT, USA	Postdoctoral Associate	2008/12~2011/07

Market Needs:

Our technique can provide the quantitative phase information of cell for biomedicine study.

Our Technology:

We design a new illumination method to modulate the optical field of cell to generate the phase contrast images. The captured phase contrast image data can be utilized to reconstruct the quantitative information of optical path length through cell sample.

Strength:

Past technique needs 24 frames for quantitative phase image, our technique only require 2-3 frames for reconstruction so as to provide better efficiency and robustness.

Competing Products:

FourierScopeTM Clearbridge BioPhotonics Pte Ltd

Intellectual Properties:

Based on our algorithm with a gradient pattern in Fourier plane of illumination unit in a microscopic system, the quantitative phase information of cell can be reconstructed.

Contact (do not need to fill out):

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