

Polarization-Sensitive Optical Coherence Tomography Using a Polarization-Insensitive Detector

Tech ID: 32080 / UC Case 2019-652-0

BRIEF DESCRIPTION

A polarization-sensitive optical coherence tomography (PS-OCT) is a common approach to non-invasively imaging in biomedical applications. The inventors have come up with a new way of creating a PS-OCT that is cheaper and simpler.

SUGGESTED USES

- » Biomedical imaging such as retina, coronary artery, genitourinary tissue, gastrointestinal tissue, respiratory tissue, etc.

FEATURES/BENEFITS

- Cheaper because one standard detector is used instead of two polarization-sensitive detectors
- Less complex because fewer materials are used
- Faster post-processing of the detected polarization information

FULL DESCRIPTION

OCTs are in common use because of its ability to non-invasively image the biological tissue such as the retina. PS-OCT, a variant of the OCT, provides polarization contrast and overall better quality images. Typical PS-OCTs require a pair of polarization-sensitive detectors that measure the polarization.

The inventors have developed a PS-OCT system that does not require two polarization-sensitive detectors. Instead, only the standard OCT detector is used. This enables cheaper and simpler PS-OCTs to be manufactured. Also, the detected polarization information can be processed faster because of the way the information is captured.

STATE OF DEVELOPMENT

Prototype in development for testing of retina, coronary artery, genitourinary tissue, gastrointestinal tissue, and respiratory tract.

PATENT STATUS

Patent Pending

CONTACT

Alvin Viray
aviray@uci.edu
tel: 949-824-3104.



INVENTORS

- » Chen, Zhongping
- » Miao, Yusi
- » Moon, Sucbei

OTHER INFORMATION

CATEGORIZED AS

- » **Optics and Photonics**
 - » All Optics and Photonics
- » **Imaging**
 - » Medical
 - » Other
- » **Medical**
 - » Devices
 - » Diagnostics
 - » Disease: Cancer

- » Disease:
Cardiovascular and
Circulatory System
- » Disease:
Ophthalmology and
Optometry
- » Disease:
Respiratory and
Pulmonary System
- » Imaging

RELATED CASES

2019-652-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Mapping Ciliary Activity Using Phase Resolved Spectrally Encoded Interferometric Microscopy
- SPECTRAL DOMAIN FUNCTIONAL OCT and ODT

UCI Beall
Applied Innovation

5270 California Avenue / Irvine, CA
92697-7700 / Tel: 949.824.2683



© 2020, The Regents of the University of
California
Terms of use
Privacy Notice