ORGANIC MULTI-CHANNEL OPTOELECTRONIC SENSORS FOR SMART WRISTBANDS

Tech ID: 30190 / UC Case 2019-103-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	0192549-A1	06/23/2022	2019-103

BRIEF DESCRIPTION

This invention is a printed, flexible, two-channel reflectance oximeter able to collect PPG signals using red and near-infrared (NIR) (or green) organic light-emitting diodes (OLEDs) and organic photodiodes (OPDs). Inverse-variance weighting and template matching algorithms are used to improve the detection of heart rate from the multi-channel PPG signals.

SUGGESTED USES

This invention is useful for and in wearable smart watches and wristbands.

ADVANTAGES

This varied reflectance oximeter sensor has varying device geometry, light emitter and detector spacing. In certain embodiments, an optical barrier between the emitter and the detector is provided to maximize sensor performance.

RELATED MATERIALS

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OTHER INFORMATION

CATEGORIZED AS

» **Medical**

» Diagnostics

» Disease: Blood and Lymphatic System

RELATED CASES

2019-103-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Printed All-Organic Reflectance Oximeter Array
- Biodegradable Potentiometric Sensor to Measure Ion Concentration in Soil
- Scalable And High-Performance Pressure Sensors For Wearable Electronics
- Pulse Oximeter Using Ambient Light
- A Potentiometric Mechanical Sensor
- Simultaneous Doctor Blading Of Different Colored Organic Light Emitting Diodes
- Printed Organic Leds And Photodetector For A Flexible Reflectance Measurement-Based Blood Oximeter