

## Accepted Manuscript

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PII: S0925-4005(18)31198-5  
DOI: <https://doi.org/10.1016/j.snb.2018.06.093>  
Reference: SNB 24930

To appear in: *Sensors and Actuators B*

Received date: 30-1-2018  
Revised date: 11-6-2018  
Accepted date: 20-6-2018

Please cite this article as: Shao J, Huang Y, Dong L, Zhang Y, Tittel FK, Automated rapid blood culture sensor system based on diode laser wavelength-modulation spectroscopy for microbial growth analysis, *Sensors and Actuators: B. Chemical* (2018), <https://doi.org/10.1016/j.snb.2018.06.093>

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# Automated rapid blood culture sensor system based on diode laser wavelength-modulation spectroscopy for microbial growth analysis

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## Highlights

- An automated blood culture system was developed for microbial growth analysis.
- The system is based on diode laser wavelength-modulation spectroscopy (DLWMS).
- An optical sensing core module was designed to realize automated rapid CO<sub>2</sub> detection.
- A 2-month field test was carried out in the Jinhua Guangfu hospital, Jinhua, China.
- The developed sensor system exhibits an excellent accuracy with short detection time.

## Abstract

An automated rapid blood culture sensor system was developed to detect CO<sub>2</sub> concentration

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