

Accepted Manuscript

Title: A Platinum-porphine/Poly(perfluoroether) Film Oxygen Tension Sensor for Noninvasive Local Monitoring of Cellular Oxygen Metabolism using Phosphorescence Lifetime Imaging

Authors: Yihua Zhao, Liwei Liu, Teng Luo, Liang Hong, Xiao Peng, Robert H. Austin, Junle Qu



PII: S0925-4005(18)30863-3
DOI: <https://doi.org/10.1016/j.snb.2018.04.154>
Reference: SNB 24630

To appear in: *Sensors and Actuators B*

Received date: 27-1-2018
Revised date: 24-4-2018
Accepted date: 26-4-2018

Please cite this article as: Yihua Zhao, Liwei Liu, Teng Luo, Liang Hong, Xiao Peng, Robert H. Austin, Junle Qu, A Platinum-porphine/Poly(perfluoroether) Film Oxygen Tension Sensor for Noninvasive Local Monitoring of Cellular Oxygen Metabolism using Phosphorescence Lifetime Imaging, *Sensors and Actuators B: Chemical* <https://doi.org/10.1016/j.snb.2018.04.154>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A Platinum-porphine/Poly(perfluoroether) Film Oxygen Tension Sensor for Noninvasive Local Monitoring of Cellular Oxygen Metabolism using Phosphorescence Lifetime Imaging

Yihua Zhao^a, Liwei Liu^{a,*}, Teng Luo^a, Liang Hong^a, Xiao Peng, Robert H. Austin^{a,b,*}, Junle Qu^{a,*}

^aKey Laboratory of Optoelectronic Devices and Systems of Ministry of Education and Guangdong Province, College of Optoelectronic Engineering, Shenzhen University, Shenzhen 518060, China

^bDepartment of Physics, Princeton University, Princeton, NJ 08544

*Corresponding authors. E-mail addresses: liulw@szu.edu.cn (Liwei Liu), austin@princeton.edu (Robert H. Austin), jlqu@szu.edu.cn (Junle Qu).

Highlights

- Phosphorescence lifetime imaging (PLIM)-based O₂ level mapping is demonstrated;
- The chemical inert, gas-permeable and bio-biocompatible property of PFPE enables more precise long-term cell study in vitro;
- (3) The easy fabrication of PFPE microfluidic chip enables on-chip study O₂ environment of cell.

Download English Version:

<https://daneshyari.com/en/article/7139097>

Download Persian Version:

<https://daneshyari.com/article/7139097>

[Daneshyari.com](https://daneshyari.com)