Sensors and Materials, Vol. 17, No. 4 (2005) 215–221 MYU Tokyo

S & M 0599

A Novel Fiber-Optic Biosensor for On-Line Monitoring of Cell Cultivation

Lei Zeng, Chu-Tian Zhang, Wei-Ning Huang, Jia Zhou, Quan Liu and Yi-Ping Huang*

ASIC and System State Key Lab, Department of Microelectronics, Fudan University 220 Handan Road, Shanghai 200433, China

(Received July 24, 2004; accepted January 17, 2005)

Key words: fiber optics, biosensor, hexapod cell

A novel fiber optic biosensor has been developed to monitor the growth of hexapod cells on-line. By measuring the light intensity, the dynamic growth of hexapod cells can be observed continuously. Such a fiber-optic sensor has many advantages, including rapid response, high sensitivity, immunity to electromagnetic interference, small detector size, and facilitated operation. Potential applications exist in drug developing and screening.

*Corresponding author, e-mail address: yphuang@fudan.edu.cn