

國立臺灣大學技術行銷表

台大案號:06A-100823 (由產學合作中心填寫)

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產品/技術名稱	一種阻抗式生物感測器及其量測方法
發明人/單位	李世光/台大應力所
產品/技術說明	本生物感測器以阻抗分析為基礎，配合特殊設計之電誘導型定錨材料，可用來量測抗體抗原交互作用、DNA 雜交反應以及病菌檢測，此外，本生物感測器極具有發展成手持式生物感測器之潛力。
應用範圍	疾病檢測、基因檢測、食品檢驗、環境檢測
產品/技術優勢	<ol style="list-style-type: none">1. 跟光學式生物感測器（如 SPR 等）相比，本技術具有低成本、小體積以及校正步驟簡單之優點。2. 與一般阻抗式生物感測器相比，本技術具有較高的電流響應，較低之阻抗基準，因此在電路設計上可以微小簡單化，更具有實現定點照護(point-of-care)及手持式產品的潛力。
市場潛力	全世界在生物感測器及生醫電子的產值從 2004 年的 6.1 百億美金成長到 2009 年的 8.2 百億美金，並以每年 6.3% 的幅度繼續成長。
產品/技術 智財權保護方式	專利申請中

Marketing Abstract of NTU's Invention Disclosure

NTU's docket no: _____ (由產學合作中心填寫)

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Title	An impedance biosensor and the measuring method
Inventor (s)	Chih-Kung Lee
Brief Description	(\leq 100 words of non-confidential information) The biosensor is based on the impedance measurement and analysis. Combined with the specific conductive linker, this biosensor get better signal to noise ratio while detecting antibody-antigen interaction, DNA hybridization and bacteria. Besides, this testing device of this biosensor has the potential to develop into a handheld device because of the simple detection mechanism.
Fields of Application	Disease diagnosis, DNA test, food test, environment test
Advantages	(when compared to the existing technologies) 1. Compared to optical biosensor, this biosensor has the advantages of low-cost, small size and ease of calibration. 2. Compared to general impedance biosensor, the technique developed here has higher current response and lower impedance baseline. Hence, the electronic circuit can be designed low-cost and compact size. Furthermore, it has the potential to realize the point-of-care application and handheld device.
Market Potential	The global market for biosensors and other bioelectronics is projected to grow from \$6.1 billion in 2004 to \$8.2 billion in 2009, at an AAGR (average annual growth rate) of about 6.3%.
IP Right(s)	Patent pending