

## Poster-Oral Session 2 壁報-口頭報告 II

13:30-14:00, June 2<sup>nd</sup>, 2018 (Saturday)

Session: Physical Sensors / Applied MEMS II

Venue: Room BX-2

Chairs: 張元震教授 / 蔡耀全教授

Time	Paper	Page
13:30-14:00 (2 min/each)	<b>A2-00-0004</b> 利用熱解膠與軟性模仁進行微元件巨量轉移之研究 莊承鑫, 李懋靖, 胡龍豪	
	<b>A2-00-0005</b> Investigation of CNC/PVA Nanofiber Using Electrospinning Wei-Chih Wang, Ling-Chih Chen	
	<b>A2-00-0006</b> Growth Mechanism of Anodized Ti <sub>2</sub> WyO Nanotubes with an Assistant of Anodic Aluminum Oxide Yung-Huang Chang, Yuan-Tsung Chen, Chih Chen	
	<b>A2-00-0007</b> 三軸磁力式微機電壓電之磁感測器之階梯式連續濕式蝕刻製程開發 段皓, 鍾添淦	
	<b>A4-00-0003</b> Application of MMG Sensors by Piezoelectric Electrospinning for Exoskeleton C.T. Pan, Y.H. Kao, C.K. Yen, C.C. Chang, S.Y. Wang, Y.S. Yang	
	<b>A4-00-0005</b> 培養在微流體晶片內之腫瘤細胞聚落在電場與藥物複合刺激下之抑制影響 黃軍浩, 李健峰	
	<b>A4-00-0006</b> 熱電堆溫度感測元件幾何結構設計之探討 陳鵬仁, 許豐家, 蘇中源, 朱俊勳	
	<b>A4-00-0012</b> 以磁-壓電結構所建構之三軸磁力式微機電磁感測器之電磁雜訊屏蔽研究 葉柏辰, 段皓, 陳勁中, 鍾添淦	
	<b>D3-00-0002</b> 微機電濕度開關應用於遠端水位監控系統之響應時間分析 蔡健忠, 陳信則, 詹智鈞, 古奕豐, 劉謙	
	<b>D3-00-0004</b> 以漸變式聲子晶體匯聚表面聲波能量之研究 孫嘉宏, 游源海	
	<b>D3-00-0005</b> Design of a 2-D Mechanical Resonating Optical Scanner using PZT Based Push-Pull Actuator Wei-Chih Wang	
	<b>D4-00-0004</b> 表面電極型雙端固定式石英音叉加速規	

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	蔡岳埕, 傅荔暄, 張國恩	
	<b>D4-00-0005</b> 以獵能器供電之無線溫度感測模組應用於射出成型之製程監測研究 羅文端, 鍾添淦, 曾佳元, 陳勁中, 鄭智誠, 陳仁浩, 王文金, 張睿文, 蔡沛源	

Session: Multi-sensing Technologies

Venue: Room BY

Chairs: 王詩涵教授 / 廖書賢教授

Time	Paper	Page
13:30-14:00 (2 min/each)	<b>B1-00-0033</b> Specific membrane capacitance of single white blood cells Chun-Chieh Chang and Min-Hsien Wu	
	<b>B1-00-0034</b> Mechanical Property Characterization of Hundreds of Single Nuclei Based on Microfluidic Constriction Channel Pin-Kuan Yeh and Min-Hsien Wu	
	<b>B1-00-0037</b> Low Amount Acid Process for Platinum Nanoparticles/Graphene Nanoribbon Composites Synthesis for Biosensing Application M. H. Yeh, M. H. Lee, S. Y. Wang, H. Feng, T. Y. Huang, Kelvin C. W. Wu, W. C. Chiang, K. C. Ho	
	<b>B1-00-0039</b> Effect of Probe Density of Label-free Impedimetric Nucleic Acid Biosensors on Sensing Properties of Long-chain RNA of Dengue Virus Y.S. Chuang, H.Y. Yen, C.C. Wu	
	<b>B1-00-0040</b> Enzyme-free Hydrogen Peroxide Sensors Based on the Carboxylated Graphene-Polyaniline and Carboxylated Multi-walled Carbon Nanotube-Polyaniline Composites M.Y. Hua, H.C. Chen, Y.C. Lin, and H.Y. Lin	
	<b>B2-00-0036</b> Etching Effect on VOCs Optical Sensor Based on Electrospun Ag/PMMA Freestanding Film Qi-Hong Lin; Chih-Kuang Kao; Shun-Hsiang Chan; Ching-Ting Chiu; Ming-Chung Wu	
	<b>B2-00-0038</b> 軟性基材之液晶生化感測器的研製與於戊二醛溶液檢測之應用 高肇乾; 林志騰; 劉明福; 黃素真	
	<b>B2-00-0039</b> Metalens array for structured light Mu Ku Chen; C. H. Chu; H. H. Hsiao; H. Y. Kuo; B. H. Chen; Y. H. Chen; R. J. Lin; D. P. Tsai	
	<b>B2-00-0040</b> Anapole mode metamaterial Tsong Lin Chung; Yu Han Chen; Ren Jie Lin; Hsin Yu Kuo; Mu-Ku	

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	Chen;Cheng Hung Chu;Pin Chieh Wu;Jia-Wern Chen	
	<b>B2-00-0041</b> Developing a Surface Plasmon Resonance Platform for Detecting Colorectal Cancer at All Stages Ching-Hsu Yang, Hui-Wei Liu, Jian Hong Yang, Da-Shin Wang, Chii-Wann Lin	
	<b>B2-00-0004</b> 光學感測 - 糖水 林玟澈;吳瑋特	
	<b>B3-00-0004</b> 高溫超導量子干涉元件應用於低場磁振造影之系統特性研究 廖宇庭;陳彥呈;陳致豪;廖書賢	
	<b>B3-00-0005</b> 多通道陣列式磁性粒子成像系統之開發與應用 邱瑋文	
	<b>B3-00-0009</b> 變溫交流磁化率系統之開發與物理特性之研究 楊天瑋;王智億;沈棟;王立民	
	<b>B3-00-0010</b> Magnetic immunoassays by using biofunctionalized magnetic nanoparticles and high-Tc SQUID-based ac susceptometer 廖書賢;Yu-Kai Su	
	<b>B3-00-0011</b> 以自平衡光偵測技術提升免疫檢測系統之法拉第旋轉角靈敏度 趙翎歲;陳坤麟;鄭建宗;吳秋賢	
	<b>B3-00-0004</b> 高溫超導量子干涉元件應用於低場磁振造影之系統特性研究 廖宇庭;陳彥呈;陳致豪;廖書賢	

Session: Portable Sensors and Emerging Sensing Technologies II

Venue: Room BZ

Chairs: 吳慧芬教授 / 林震煌教授

Time	Paper	Page
13:30-14:00 (2 min/each)	<b>C3-00-0002</b> The wettability study of graphene on different substrates for humidity sensor application Yi-Te Huang; Yu-Yan Chen; Cheng-Jyun Huang; Ching-Yuan Su; Yao-Chuan Tsai	
	<b>C3-00-0003</b> 以氫氣泡動態模板法製備 3D 多孔電極應用於電流式二氧化氮氣體感測器	

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林聖傑	
<b>C3-00-0004</b> Amperometric Formaldehyde Gas Sensor with Highly Specific Sensitivity Based on Nafion®/Porous Pt Alloys/Au/Al <sub>2</sub> O <sub>3</sub> Electrode Aditya Febry Nurpratama	
<b>C3-00-0005</b> 以氫氣泡模板法製備 Nafion®/Pd/Au(濺鍍)/Al <sub>2</sub> O <sub>3</sub> 電極應用於平板電流式一氧化碳氣體感測器 徐櫻芳; 蔡明瞭; 杜景順	
<b>C3-00-0007</b> 無人機氣體偵測系統之簡介 楊恭洵; 郭瀚文; 王立群; 王玉平	
<b>C3-00-0008</b> Development of Light Weight Gas Sensing System (LWGSS) for Monitoring Gaseous Pollutants A. Ahlawat, S. K. Mishra, V. Goel, C. Sharma, A. Wiedensohler, V.N. Ojha	
<b>C3-00-0009</b> Ultrafast Laser Patterning of Multilayer Graphene on Sensor Module with Wireless Circuits for Gas Detection Tien-Li Chang; Cheng-Ying Chou; Chen-Ting Tu; Wei-Lin Lai	
<b>C3-00-0012</b> 利用氣相層析/微哨偵測系統同步監測鐵在酸洗防鏽處理過程中產生的氫氣的濃度變化並探討其反應速率常數 陳宇儂, 謝易晉, 郭家瑀, 吳羅賢, 王慶豪, 林震煌	
<b>C3-00-0013</b> 奈米複合材料室溫型 ppb-level NO <sub>2</sub> 感測器 王詩涵; 黃少盈; 黃聖諺; 蔡立仁	
<b>C3-00-0014</b> 聚苯胺/金屬氧化物複合材料之 NO 感測器 王詩涵, 葉桂伶	
<b>C4-00-0004</b> Gold nanoparticle aggregates for Cu <sup>2+</sup> detection in the immunoassay of hyperglycosylated human chorionic gonadotropin 張家禎, 陳震宇	
<b>C4-00-0006</b> Dye-sensitized Solar Cell Based on Platinum Counter Electrode Modified by Reduced Graphene Oxide/ Titanium Dioxide 柯承初; 周榮泉; 賴志賢; 廖義宏; 粘譽勳; 郭建宏	
<b>C4-00-0007</b> Performance Evaluation for Wearable Power Banks of the Medical Safety Apparatus by Wireless Sensing Technologies Shang-Husuan Wang; Te-Chun Wu; Chi-Hsiao Yeh; Chau-Chang Chou; Jyh-Jier Ho	
<b>C4-00-0010</b> The Estimation Method of Contour Tangent Vector for Digital DNA Images	

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Zhi-xuan Dai and Peter I. Chang	
<b>C4-00-0011</b> Functionalization of Conducting Polymer Electrodes for Aptasensor Fabrication Jou-Hsuan Chu, Lin-Chi Chen	
<b>C4-00-0013</b> Effect of Calcining Temperature on the Photovoltaic Conversion Efficiency of GO/TiO <sub>2</sub> Nanofiber in Photoanode Materials of Dye-sensitized Solar Cells Hui-Hsuan Hsu; Yu-Hsun Nien; Jung-Chuan Chou; Yi-Hung Liao; Chih-Hsien Lai; Huang-Hua Chen; Chien-Hung Kuo; Cheng-Chu Ko	

Session: Semiconductor and Electric Sensing Technologies II

Venue: Room 2X

Chairs: 莊程豪教授 / 謝明哲教授

Time	Paper	Page
13:30-14:00 (2 min/each)	<b>B4-00-0001</b> 以氧化石墨電子元件作為分子檢測平台之特性研究 蔡宜霖, 蔡麗珠, 陳啟東	
	<b>B4-00-0002</b> A novel device for the detection of Hepatitis C Virus nucleic acids : Poly-Silicon Nanowire Field Effect Transistor 許心瑜, 李亦蟬, 楊裕雄	
	<b>B4-00-0004</b> The Development of Thin Film Thickness Measurement System by Using Soft X-Ray Reflectivity Technology Guo-Dung Chen, Bo-Ching He, Chun Ting Liu	
	<b>B4-00-0006</b> Kidney Injury Biomarker Detection by Using TSMC CMOS Chip Sensors C.T. Lin	
	<b>B4-00-0011</b> Whole blood based cardiac Troponin I assay using high field modulated extended gate FET biosensor Indu Sarangadharan, Shin-Li Wang, Revathi Sukesan, Tse-Yu Tai, Anil Kumar Pulikkathodi and Yu-Lin Wang	
	<b>B4-00-0016</b> 可調變式石墨烯場效光電-化學感測器 徐偉恩, 古庭安, 吳志毅, 林致廷	
	<b>B4-00-0017</b> 以氯化鋁鎳氮化鎳製成之高電子遷移率電晶體建立 RNA 快速篩檢平台檢測之癌症生物標記 miR-21 郭文哲, 陳彥文	
	<b>B4-00-0018</b> 石墨烯於二氧化碳氣體感測元件 林致廷, 林駿璿, 陳煒彤	

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<b>B4-00-0019</b> A Development of Poly-silicon Nanowire Field Effect Transistor Virus Detection Platform by Using Hepatitis B Virus as Study Model 楊淑君;沈尚楷;江家維;楊裕雄教授	
<b>B4-00-0020</b> 用以偵測抗凝劑量之感測系統設計 鄭竹翔, 黃怡蓁, 劉則言, 姜廣興, 林致廷	
<b>B4-00-0021</b> Highly Sensitive VOC Sensors Utilizing ZnO/TiO <sub>2</sub> Composite Inverse Opals for E-nose Application Yu-Szu Chou, Pei-Sung Hung, Pu-Wei Wu	
<b>B4-00-0022</b> 應用於細胞感測之電阻抗式微流道晶片 黃怡蓁, 鄭竹翔, 吳亭緯, 林致廷	
<b>B4-00-0024</b> The photovoltaic performance of perovskite solar cells by using different materials as mesoporous layer 林暉城, 周學韜, 呂京樺, 許元豪, 賴新翰, 許賀鈞	
<b>B4-00-0025</b> The Detections of Diol-Containing Molecules by Boronic Acid Terminated Silicon Nanowires Field-Effect Transistors Ching-Fang Wang, Shu-Ping Lin	
<b>B4-00-0031</b> 數值分析放射狀圖案場強分佈於光誘發介電泳晶片對聚苯乙烯微粒之反應 蔡岳昶, 洪永瀚, 郭如男	

Session: Lab-on-a-chip Microdevices or QCM, SAW and Wireless Sensors III

Venue: Room 2Y

Chairs: 楊家銘教授 / 黃士豪教授

Time	Paper	Page
13:30-14:00 (2 min/each)	<b>C1-00-0004</b> 三相導流定點照護檢測晶片 簡良如, 林佑穎, 邱祈翰, 郭秀怡, 陳志仁	
	<b>C1-00-0005</b> 穿戴式無線藍牙人體呼吸氧氣及二氧化碳即時監測裝置 王綏盛, 蕭景鴻, 郭哲興, 黃士豪	
	<b>C1-00-0007</b> A Plasma Pre-separation integrated Biosensing Platform 楊巧珣, 李博仁	
	<b>C1-00-0008</b> 應用螺旋式微流體於不同大小細胞之高純度分選 邱博霖, 李博仁	
	<b>C1-00-0011</b>	

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	<p>A Novel Label-Free Immunoassay Performed on Electrorotation Microfluidic Biochip I -A. Tsai; T. T. Dong; T. -C. Tsai; I -F. Cheng; H. -C. Chang</p>	
	<p><b>C1-00-0013</b> Hybrid Conductive Polymer Paper Based Lead Ion Sensor Chao-yu Lai , Yi-Kuang Yen</p>	
	<p><b>C1-00-0014</b> Enhancement for gene transfection of bacteria using magnetic attraction in electroporation chip Yung-Chiang Chung; Yi-Sheng Chen; Cheng-Feng Lin; Yun Chen</p>	
	<p><b>C1-00-0018</b> 數值分析放射狀圖案場強分佈於光誘發介電泳晶片對聚苯乙烯微粒之反應</p>	
	<p><b>C1-00-0019</b> 在微流體晶片中產生液珠及液珠的擴大和縮小 邱怡龍; 饒達仁</p>	
	<p><b>C1-00-0021</b> 用介電濕潤晶片進行微流體圖案化 李相廷; 饒達仁</p>	
	<p><b>C1-00-0023</b> A novel oscillating thermal-bubble valve integrated with a nanofluidic concentrator for protein plug trapping Deng Chih-Zong; Fan Yu-Jui; Sheen Horn-Jiunn</p>	
	<p><b>C1-00-0026</b> 非接觸式超寬頻呼吸調控輔助性放射治療 陳詩涵, 吳簡坤</p>	
	<p><b>C1-00-0028</b> Plastic film-mixer based on a passive serpentine microchannel Cheng-Je Lee; Yu-Hsiang Hsu</p>	
	<p><b>C1-00-0029</b> 以甲殼素生物水膠為基底之微組織培養技術之開發 許聿翔, 潘奎宇, 陳宥熹, 韓皓偉, 徐善慧</p>	
	<p><b>C2-00-0001</b> 電紡玉米醇溶蛋白製備酵素型時間溫度指示器監控食品品質 陳輝煌; 莊昭容</p>	
	<p><b>C2-00-0002</b> 非侵入式、快速、無生化耗材之光學檢測應用於食品有害物質快篩 Phil Thomas, 王彥翔, 李冠潔, 潘崇政, 魏文純, 江明憲, 郭泓毅, 謝振傑</p>	
	<p><b>C2-00-0003</b> 摻偽蜂蜜簡易辨別指標之建立 蔡心慈; 侯詠德; 陳力騏; 鄭宗記; 謝博全</p>	