專任老師

林彥亨
教授

Yen-Heng Lin

長庚大學 生物醫學工程學系

現職

教授

學歷

成功大學工程科學博士
成功大學工程科學碩士
成功大學工程科學學士

研究專長

生醫晶片設計及製作、光介電泳操控平台、微機電製程技術、奈米感測器製作

聯絡分機

03-211-8800 #3789

E-mail

yenheng@mail.cgu.edu.tw

經歷

長庚大學生物醫學工程系，教授 (2022.08 ~迄今)
長庚大學醫療機電所/電子工程系，副教授 (2015.08 ~2022.07)
長庚大學電子工程系，助理教授 (2010.08 ~2015.07)
長庚大學生醫工程研究中心，博士後研究員 (2009.08 ~2010.07)
鈺德科技股份有限公司，副研究員 (2002.08 ~2003.06)

實驗室

生醫光電微流體晶片實驗室(工學大樓 4 樓)

個人研究

Journal paper:

Sum of the Times Cited: 1508 (Scopus database)

h-index: 20

- A40. Ding-Ping Chen, Chen Chen, Pei-Yu Wu, **Yen-Heng Lin***, Wei-Tzu Lin, Yi-Liang Yan, Micro-droplet platform for exploring the mechanism of mixed field agglutination in B3 subtype, Biosensors, Vol. 11, 276, 2021.

- A39. **Yen-Heng Lin***, Ching-Hui Chang, Glass capillary assembled microfluidic three-dimensional hydrodynamic focusing device for fluorescent particle detection, Microfluidics and Nanofluidics, Vol. 25, 42, 2021.

- A38. **Yen-Heng Lin***, Chia-Chun Wu, Wei-Ting Su, Pei-Chi Tseng, Ya-Yu Hsueh, Yung-Chin Hsiao, Kai-Ping Chang, Jau-Song Yu*, Yun-Ju Chuang, Target peptide enrichment microfluidic chip for rapid detection of oral squamous cell carcinoma using stable isotope standards and capture by anti-peptide antibodies, Sensors and Actuators B: Chemical, Vol. 322, 128607, 2020.

- A37. **Yen-Heng Lin***, Chih-Ching Wu, Wan-Ling Chen, Kai-Ping Chang, Anti-p53 autoantibody detection in automatic glass capillary immunoassay platform for screening of oral cavity squamous cell carcinoma, Sensors, Vol. 20, 971, 2020.

- A36. **Yen-Heng Lin***, Heng-Yun Chang, Chia-Chun Wu, Chia-Wei Wu, Kai-Ping Chang, Jau-Song Yu*, BRAF protein immunoprecipitation, elution, and digestion from cell extract using a microfluidic mixer for mutant BRAF protein quantification by mass spectrometry, Analytical and Bioanalytical Chemistry, Vol. 411, 1085–1094, 2019.

- A35. **Yen-Heng Lin***, Chih-Ching Wu, Yong-Sheng Peng, Chia-Wei Wu, Ya-Ting Chang, Kai-Ping Chang, Detection of anti-p53 autoantibodies in saliva using microfluidic chips for the rapid screening of oral cancer, RSC Advances, Vol. 8, 15513–15521, 2018.

- A34. **Yen-Heng Lin***, Jing-Chao Wong, Yong-Sheng Peng, Characterization of the Electrical Properties of Silicon Nanowire using the Dielectrophoretic Assembling Platform, International Journal of Electrochemical Science, Vol. 12, 2017.

- A33. **Yen-Heng Lin***, Wei-Siao Lin, Jing-Chao Wong, Wei-Chieh Hsu, Yong-Sheng Peng, Chien-Lun Chen, Bottom-up assembly of silicon nanowire conductometric sensors for the detection of apolipoprotein A1, a biomarker for bladder cancer, Microchim Acta, Vol. 184, 2419–2428, 2017.

- A32. **Yen-Heng Lin***, I.-Chi Lee, Wei-Chieh Hsu, Ching-Hong Hsu, Kai-Ping Chang, Shao-Syuan Gao, Rapid fabrication method of a microneedle mold with controllable needle height and width, Biomedical Microdevices, Vol. 18, 85, 2016.

- A31. **Yen-Heng Lin***, Chih-Pin Chu, Chen-Fu Lin, Hsin-Hao Liao, Hann-Huei Tsai, Ying-Zong Juang, Extended-gate field-effect transistor packed in micro channel for glucose, urea and protein biomarker detection, Biomedical Microdevices, Vol. 17, 111, 2015.

- A30. **Yen-Heng Lin*** and Po-Yu Peng, Semiconductor sensor embedded microfluidic chip for protein biomarker detection using a bead-based immunoassay combined with deoxyribonucleic acid strand labeling, Analytica Chimica Acta, Vol. 869, 34-42, 2015.

- A29. **Yen-Heng Lin***, Kai-Siang Ho, Chin-Tien Yang, Jung-Hao Wang, and Chao-Sung Lai*, A highly flexible platform for nanowire sensor assembly using a combination of optically induced and conventional dielectrophoresis, Optics Express, Vol. 22, pp. 13811-13824, 2014.

- A28. Briliant Adhi Prabowo, Ying-Feng Chang, Yu-Ying Lee, Li-Chen Su, Chih-Jen Yu, **Yen-Heng Lin**, Chien Chou, Nan-Fu Chiu, Hsin-Chih Lai*, and Kou-Chen Liu*, Application of an OLED integrated with BEF and giant birefringent optical (GBO) film in a SPR biosensor, Sensors and Actuators B: Chemical, Vol. 198, pp. 424-430, 2014.

- A27. **Yen-Heng Lin***, Chia-Chu Wang, and Kin Fong Lei, Bubble-driven mixer integrated with a microfluidic bead-based ELISA for rapid bladder cancer biomarker detection, Biomedical Microdevices, Vol. 16, pp. 199-207, 2014.

- A26. Anirban Das, **Yen-Heng Lin***, and Chao-Sung Lai*, Miniaturized amorphous-silicon based chemical imaging sensor system using a mini-projector as a simplified light-addressable scanning source, Sensors & Actuators: B. Chemical, Vol. 190, pp. 664-672, 2014.

- A25. **Yen-Heng Lin***, Anirban Das, and Chao-Sung Lai*, A simple and convenient set-up of light addressable potentiometric sensors (LAPS) for chemical imaging using a commercially available projector as a light source, International Journal of Electrochemical Science, Vol. 8, pp. 7062-7074, 2013.

- A24. **Yen-Heng Lin***, Anirban Das, Min-Hsien Wu, Tung-Ming Pan, and Chao-Sung Lai*, "Microfluidic Chip Integrated with an Electrolyte-Insulator-Semiconductor Sensor for pH and Glucose Level Measurement," International Journal of Electrochemical

Science, Vol. 8, pp. 5886-5901, 2013.

- A23. **Yen-Heng Lin***, Ying-Ju Chen, Chao-Sung Lai*, Yi-Ting Chen, Chien-Lun Chen, Jau-Song Yu, and Yu-Sun Chang, "A negative-pressure-driven microfluidic chip for the rapid detection of a bladder cancer biomarker in urine using bead-based ELISA," Biomicrofluidics, Vol. 7, pp. 024103, 2013.

- A22. Atanu Das, Anirban Das, Liann-Be Chang*, Chao-Sung Lai, Ray-Ming Lin, Fu-Chuan Chu, **Yen-Heng Lin**, Lee Chow, and Ming-Jer Jeng, "GaN Thin Film Based Light Addressable Potentiometric Sensor for pH Sensing Application," Applied Physics Express, Vol. 6, pp. 036601, 2013.

- A21. Song-Bin Huang, Min-Hsien Wu, **Yen-Heng Lin**, Chia-Hsun Hsie, Chih-Liang Yang, Hung-Chih Lin, Ching-Ping Tseng*, and Gwo-Bin Lee*, "High-purity and label-free isolation of circulating tumor cells (CTCs) in a microfluidic platform by using optically-induced-dielectrophoretic (ODEP) force," Lab on a chip, Vol. 13, pp. 1371-1383, 2013.

- A20. **Yen-Heng Lin***, Shih-Hao Wang, Min-Hsien Wu, Tung-Ming Pan, Chao-Sung Lai, Ji-Dung Luo, and Chiuan-Chian Chiou, "Integrating solid-state sensor and microfluidic devices for glucose, urea and creatinine detection based on enzyme-carrying alginate microbeads," Biosensors and Bioelectronics, Vol. 43, pp. 328-335, 2013.

- A19. **Yen-Heng Lin**, Ya-Wen Yang, Yi-Dao Chen, Shih-Siou Wang, Yu-Han Chang*, and Min-Hsien Wu*, "The application of an optically switched dielectrophoretic (ODEP) force for the manipulation and assembly of cell-encapsulating alginate microbeads in a microfluidic perfusion cell culture system for bottom-up tissue engineering," Lab on a chip, Vol. 12, pp. 1164-1173, 2012.

- A18. **Yen-Heng Lin***, Chien-Hung Chiang, Min-Hsien Wu, Tung-Ming Pan, Ji-Dung Luo, and Chiuan-Chian Chiou, "Solid-state sensor incorporated in microfluidic chip and magnetic-bead enzyme immobilization approach for creatinine and glucose detection in serum," Applied Physics Letters, Vol. 99, pp. 253704, 2011.

(Before Chang Gung University)

- A17. **Yen-Heng Lin** and Gwo-Bin Lee*, "An integrated cell counting and continuous cell lysis device using an optically induced electric field," Sensors and Actuators B: Chemical, Vol. 145, pp. 854-860, 2010.

- A16. Wei Wang, **Yen-Heng Lin**, Ten-Chin Wen, Tzung-Fang Guo, and Gwo-Bin Lee*, "Selective manipulation of microparticles using polymer-based optically-induced

dielectrophoretic devices," Applied Physics Letters, Vol. 96, pp. 113302, 2010.

- A15. Shih-Hsun Hung, **Yen-Heng Lin**, and Gwo-Bin Lee*, "A microfluidic platform for manipulation and separation of oil-in-water emulsion droplets using optically induced dielectrophoresis," Journal of Micromechanics and Microengineering, Vol. 20, pp. 045026, 2010.

- A14. Ming-Wei Lee, **Yen-Heng Lin**, and Gwo-Bin Lee*, "A platform to manipulate carbon nanotubes utilizing optically-induced dielectrophoretic forces," Microfluidics and Nanofluidics, Vol. 8, pp. 609-617, 2010.

- A13. Wang-Ying Lin, **Yen-Heng Lin**, and Gwo-Bin Lee*, "Optically-induced Dielectrophoretic Forces for Continuous Micro-particle Separation," Microfluidics and Nanofluidics, Vol. 8, pp. 217-229, 2010.

- A12. Wei Wang, **Yen-Heng Lin**, Ruei-Syuan Guan, Ten-Chin Wen, Tzung-Fang Guo, and Gwo-Bin Lee*, "Bulk-heterojunction polymers in optically-induced dielectrophoretic devices for the manipulation of microparticles," Optics Express, Vol. 17, pp. 17603-17613, 2009.

- A11. **Yen-Heng Lin**, Chen-Min Chang, and Gwo-Bin Lee*, "Manipulation of single DNA molecules by using optically projected images," Optics Express, Vol. 17, pp. 15318-15329, 2009.

- A10. **Yen-Heng Lin** and Gwo-Bin Lee*, "An Optically-Induced Cell Lysis Device Using Dielectrophoresis," Applied Physics Letters, Vol. 94, pp. 033901, 2009.

- A9. Chen-Yi Lee, **Yen-Heng Lin**, and Gwo-Bin Lee*, "Droplet-Based Microfluidic System Capable of Droplet Formation and Manipulation," Microfluidics and Nanofluidics, Vol. 6, pp. 599-610, 2009.

- A8. **Yen-Heng Lin** and Gwo-Bin Lee*, "Optically-induced Flow Cytometry for Continuous Microparticle Counting and Sorting," Biosensors and Bioelectronics, Vol. 24, pp. 572-578, 2008.

- A7. Chia-Wei Lai, **Yen-Heng Lin**, and Gwo-Bin Lee*, "A Microfluidic Chip for Formation and Collection of Emulsion droplets Utilizing Active Pneumatic Micro-choppers and Micro-switches," Biomedical Microdevices, Vol. 10, pp. 749-756, 2008.

- A6. **Yen-Heng Lin**, Chun-Hong Lee, and Gwo-Bin Lee*, "Droplet Formation Utilizing Controllable Moving-wall Structures for Double Emulsion Applications," Journal of Microelectromechanical Systems, Vol. 17, pp. 573-581, 2008.

- A5. **Yen-Heng Lin**, Cheng-Tso Chen, Lynn L.H. Huang, and Gwo-Bin Lee*, "Multiple-channel Emulsion Chips Utilizing Pneumatic Choppers for Biotechnology Applications," Biomedical Microdevices, Vol. 9, pp. 833-843, 2007.

- A4. Lung-Ming Fu, Gwo-Bin Lee*, **Yen-Heng Lin**, and Ruey-Jen Yang, " Manipulation of Micro-particles Using New Modes of Travelling-wave-dielectrophoretic Forces - Numerical Simulation and Experiments," IEEE/ASME Transactions on Mechatronics, Vol. 9, pp. 377-383, 2004.

- A3. Gwo-Bin Lee*, Shu-Hui Chen, Chin-She Lin, Guan-Ruey Huang, and **Yen-Heng Lin**, "Microfabricated Electrophoresis Chips on Quartz Substrates and Their Applications on DNA Analysis, ", Journal of The Chinese Chemical Society, Vol. 48, No. 6B, 2001.

- A2. Che-Hsin Lin, Gwo-Bin Lee*, **Yen-Heng Lin**, and Guang-Liang Chang, "A Fast-Prototyping Process for Fabrication of Microfluidic Systems on Soda-Lime Glass, " Journal of Micromechanics and Microengineering, Vol. 11, pp. 726-732, 2001. Highly cited papers in 10 years, top 1% selected by ISI.

- A1. Gwo-Bin Lee*, Shu-Hui Chen, Guan-Ruey Huang, Wang-Chou Sung, and **Yen-Heng Lin**, "Microfabricated Plastic Chips by Hot Embossing Methods and Their Applications for DNA Separation and Detection, " Sensors and Actuators B: Chemical, Vol. 75, pp. 142-148, 2001. Highly cited papers in 10 years, top 1% selected by ISI.

Conference paper:

- International conference paper:

- B. Heng-Yun Chang, Chia-Chun Wu, Jau-Song Yu, and **Yen-Heng Lin***, Pneumatic micro-mixers for protein immunoprecipitation and protein digestion, ISMM 2017, Hobart, Australia.

- B. ChingHung Hsu, Gui Chen, **Yen-Heng Lin**, Mark Ming-Cheng Cheng*, Anodic bonding using Gorilla glasses, IEEE-NEMS 2017, Los Angeles, USA.

- B. Heng-Yun Chang, Chia-Wei Wu, Chia-Chun Wu, Jau-Song Yu, and **Yen-Heng Lin***, "An pneumatic micro-mixer design for rapid protein immunoprecipitation," ISMM 2016, Hong Kong.

- B. Yong-Sheng Peng, **Yen-Heng Lin***, "Controllable number of assembled nanowires between a gap of metal electrode with aid of optoelectronic tweezers,"

Optofluidics 2015, Taiwan.

- B. Jing-Chao Wong, Yong-Sheng Peng, **Yen-Heng Lin***, "An assembling process of silicon naowire sensor using dielectrophoresis," IEEE-NEMS 2015, Xian, China.

- B. Chia-Wei Wu and **Yen-Heng Lin***, An automatically controlled microfluidic chip for protein biomarker detection by using bead-based ELISA, ISMM2014, Singapore.

- B. Wei-Chieh Hsu, Po-Yu Peng, Tung-Ming Pan, and **Yen-Heng Lin***, An immunoassay solid-state sensor integrated in a microfluidic chip, ISNE2014, Taoyuan, Taiwan.

- B1. Po-Yu Peng, Wei-Chieh Hsu, Tung-Ming Pan, and **Yen-Heng Lin***, " Rapid detection of bladder cancer using an immunoassay transistor combined with DNA-labeling technique in a microfluidic chip," IEEE-NEMS 2014, Hawaii, USA.

- B2. Chih-Pin Chu, Chen-Fu Lin, Hsin-Hao Liao, Hann-Huei Tsai, Ying-Zong Juang, and **Yen-Heng Lin***, " Integration of Ion-Sensitive-Field-Effect-Transistor with Microfluidic Chip for Biomedical Application," IEEE NANOMED 2013, Phuket, Thailand.

- B3. Chia-Chu Wang, **Yen-Heng Lin***, Kin-Fong Lei, "A chaotic bubble mixer microfluidic device for rapid detection of bladder cancer using bead-based ELISA, " IEEE-NEMS 2013, Suzhou, China.

- B4. Anirban Das, **Yen-Heng Lin***, Tatsuo YOSHINOBU, and Chao-Sung Lai*, "A Novel Flexible Chemical Imaging Set-Up of Amorphous- Si-Based Light-Addressable Potentiometric Sensor Using Video Projector as a Programmable Scanning Light Source," IMCS 2012, Nuremberg, Germany.

- B5. Shih-Hao Wang, **Yen-Heng Lin***, Chih-Pin Chu, Min-Hsien Wu, Tung-Ming Pan, "Integration of Solid-state Sensor and Microfluidic Chip for Glucose, Urea, and Creatinine Measurement," IEEE-NEMS 2012, Kyoto, Japan.

- B6. Ying-Ju Chen, **Yen-Heng Lin***, Chao-Sung Lai, Yi-Ting Chen, Jau-Song Yu, and Yu-Sun Chang, "A syringe-vacuum driven microfluidic chip integrated with beads-based ELISA for early setection of bladder cancer," Micro-TAS 2011, Seattle, USA.

- B7. **Yen-Heng Lin***, Anirban Das, Kai-Siang Ho, Yu-Jen Pan, Chao-Sung Lai, Liann-Be Chang, "Investigation of possibility of generating high resolution chemical image by using light-addressable potentiometric sensor with amorphous silicon as substrate and commercial projector as light source," ISMM 2011, Seoul, Korea.

- B8. **Yen-Heng Lin***, Anirban Das, Kai-Siang Ho, Chao-Sung Lai, "A Novel Light-Addressable Potentiometric Sensors Set-Up with LCD Projector as Scanning Light Source," IEEE NEMS 2011, Kaohsiung, R.O.C.

- B9. S.-J. Lin, W. Wang, Y.-H. Lin, B.-C. Yeh, T.-F. Guo, G.-B. Lee*, "Separation and manipulation of micro-particles using optical images on flexible polymer devices," IEEE MEMS 2011, Cancun, Mexico.

- B10. **Yen-Heng Lin** and Gwo-Bin Lee*, "Continuous cell lysis devices using optically-induced electric field," ASME-MNHMT 2009, Shanghai, China. (Invited talk co-author)

- B11. **Yen-Heng Lin**, Chen-Min Chang, and Gwo-Bin Lee*, "A new platform for manipulating a single DNA molecule by using optically-induced dielectrophoresis," Transducer 2009, Denver, USA. (Oral presentation)

- B12. Gwo-Bin Lee*, **Yen-Heng Lin**, Wang-Ying Lin, Wei Wang, and Tzung-Fang Guo, "Optically-induced dielectrophoresis using polymer materials for biomedical applications," Transducer 2009, Denver, USA. (Invited talk co-author)

- B13. Shih-Hsun Hung, **Yen-Heng Lin** and Gwo-Bin Lee*, A new platform for manipulation and separation of oil-in-water emulsion droplets using optically induced dielectrophoresis,' Transducer 2009, Denver, USA.

- B14. Wang-Ying Lin, **Yen-Heng Lin** and Gwo-Bin Lee*, "Continuous micro-particle separation using optically-induced dielectrophoretic forces," IEEE-MEMS 2009, Sorrento, Italy. (Oral presentation co-author)

- B15. Wei Wang, **Yen-Heng Lin**, Tzung-Fang Guo and Gwo-Bin Lee*, "Manipulation of biosamples and microparticles using optical images on polymer devices," IEEE-MEMS 2009, Sorrento, Italy.

- B16. **Yen-Heng Lin** and Gwo-Bin Lee*, "A new micro flow cytometer using optically-induced dielectrophoretic forces for continuous microparticle counting and sorting," Micro-TAS 2008, San Diego, USA. (Oral presentation)

- B17. Chen-Yi Lee, **Yen-Heng Lin** and Gwo-Bin Lee*, "A new microfluidic device for formation and switching of micro-droplets," Micro-TAS 2008, San Diego, USA.

- B18. **Yen-Heng Lin**, Chun-Hong Lee and Gwo-Bin Lee*, "A New Droplet Formation Chip Utilizing Controllable Moving-wall Structures for Double Emulsion Applications," IEEE-MEMS 2008, Tucson, USA. (Oral presentation)

- B19. Che-Hsin Lin, Gwo-Bin Lee*, **Yen-Heng Lin** and Guang-Liang Chang, "A Fast-Prototyping Process for Fabrication of Microfluidic Systems on Soda-Lime Glass Substrates, "The 2nd Cross-Strait Symposium on Microsystem Technologies, Hung-Chou, China, Oct. 29-31, 2001.

- B20. Gwo-Bin Lee*, Cheng-I Hung, Bin-Jo Ke, Guan-Ruey Huang, Bao-Herng Hwei, **Yen-Heng Lin**, Wan-Yu Wu, " Development of high-throughput microfluidic chips with continuous sample introduction and separation functions," International Symposium on Smart Structures and Microsystems (IS3M), Hong Kong, October 19-21, 2000.

- B21. Gwo-Bin Lee*, Guan-Ruey Huang, **Yen-Heng Lin**, Wang-Chou Sung, Shu-Hui Chen, "Microfabricated Plastic Chips by Hot Embossing Methods and Their Applications for DNA Separation and Detection, " SPIE micromachining and microfabrication, Santa Clara, CA, USA, September 18-20, 2000, pp. 113-122. (EI)

Other conference paper:

- B. 王益庭, **林彥亨***, 光纖感測應用於液滴計數, 2017 化學感測器科技研討會, 成功大學

- B. 廖祥竣, 宋政達, 邱全羊, **林彥亨***, 連續流聚合酶連鎖反應之微流體檢測晶片, 2017 化學感測器科技研討會, 成功大學

- B. 吳家緯, 蘇瑋婷, 張恆芸, 吳嘉群, 蕭永晉, 余兆松, **林彥亨***, 質譜定量偵測蛋白質之快速樣品前處理微流體晶片, 2016 台灣質譜學會學術研討會, 中山大學 (Invited talk)

- B. Y.S. Peng, Y.T. Chang, C.C. Wu, Y.H. Lin*, Oral Cancer Autoantibody Detection by using Microfluidic Chip, 2016 醫工年會, 陽明大學

- B. 蘇瑋婷, 吳嘉群, 蕭永晉, 余兆松, **林彥亨***, 快速自動胜肽濃縮樣品前處理之微流體晶片應用於質譜偵測, 2016 奈米工程暨微系統技術研討會, 台南

- B. Ching-Hong Hsu, Wei-chieh Hsu ,Yu-Chieh Wu Shao-Syuan Gao, I-Chi Lee and **Yen-Heng Lin***, Fast fabrication methods with controllable height and width of microneedle arrays for transdermal drug delivery, 2016 SEMBA, 長庚大學

- B. 王益庭, 林威孝, **林彥亨***, 介電泳力奈米線感測器組裝技術, 2016 化學感測器科技研討會, 中興大學

- B. 彭詠聖, 張雅婷, 吳治慶, **林彥亨***, 自體免疫抗體檢測之微流體檢測晶片應用於快速篩檢口腔癌, 2015 醫工年會, 台灣大學

- B. 吳家緯，吳嘉群，余兆松，**林彥亨***，微流體技術應用於蛋白質定量質譜分析之樣品快速前處理，2015 分析技術交流研討會，嘉義大學 （Invited talk）

- B. 林威孝，**林彥亨***，介電泳力組裝矽奈米線電晶體應用於生物感測，2015 化學感測器科技研討會，長庚大學

- B. 吳家緯，吳嘉群，余兆松，**林彥亨***，結合微流體及質譜分析技術實現生物標記物樣品之快速前處理應用於癌症診斷及預後評估，2015 化學感測器科技研討會，長庚大學

- B. 蘇瑋婷，吳嘉群，余兆松，**林彥亨***，多種胜肽質譜樣品前處理之微流體晶片應用於快速癌症篩檢，2014 醫工年會，陽明大學

- B. 吳瑜瑄，**林彥亨***，整合型微流體 PCR 及快速側向流之結核分枝桿菌檢測晶片，2014 醫工年會，陽明大學

- B. Chia-Wei Wu , Wei-Ting Su, and **Yen-Heng Lin***, An automatic control ELISA in a microfluidic chip for a protein biomarker detection, 2014 APCMBE/GCBME, Tainan.

- B. 林威孝，陳祐民，蘇清源，**林彥亨***，利用介電泳力操縱奈米線作為蝕刻遮罩製作石墨烯奈米帶，2014 奈米工程暨微系統技術研討會，台南

- B22. 彭柏祐，翁竟超，潘同明，**林彥亨***，“免疫分析電晶體結合 DNA 標定技術作為蛋白質癌症標記的偵測,” 2013 生物醫學工程科技研討會，新竹

- B23. 朱志彬，林建甫，廖信豪，蔡瀚輝，莊英宗，**林彥亨***，“EGFET 整合微流體系統應用於氫離子、葡萄糖、尿素、蛋白質、DNA 之檢測,” 2013 第十七屆奈米工程暨微系統技術研討會，台中

- B24. Kai-Siang Ho, **Yen-Heng Lin***, Tsung-Cheng Chen, Chin-Tien Yang, Jung-Hao Wang, and Chao-Sung Lai, “A new platform for assembling nanowire sensor by using the combination of optically switched dielectrophoresis and dielectrophoresis,” 2013 SEMBA, Tainan. (大會最佳論文獎)

- B25. 王嘉駒，**林彥亨***，李健峰，“高效率氣泡混合微流體裝置結合磁珠式酵素連結免疫分析法應用於膀胱癌之檢測,” 2012 生物醫學工程科技研討會，中壢，桃園 (壁報論文優等獎)

- B26. 楊志亮，黃菘斌，邱子耕，**林彥亨**，吳旻憲*，“應用光介電泳力之微流體平台於高純度純化分離已利用傳統方法篩選之循環腫瘤細胞,” 2012 生物醫學工程科技研討會，中壢，桃園 (壁報論文優等獎)

- B27. Ying-Ju Chen, **Yen-Heng Lin***, Chao-Sung Lai, Yi-Ting Chen, Jau-Song Yu, and

Yu-Sun Chang, "Development of microfluidic chip for rapid detection of biomarker," 第十屆台塑關係企業應用技術研討會, 龜山, 桃園

- B28. **Yen-Heng Lin***, Shih-Hao Wang, Chih-Pin Chu, Tung-Ming Pan, Chao-Sung Lai, Ji-Dung Luo, Chiuan-Chian Chiou, "An solid-state sensor incorporated microfluidic chip for human blood monitoring," 2012 Symposium on Emerging Technologies in Biomedical & Healthcare Applications, Taoyuan, Taiwan.

- B29. **Yen-Heng Lin***, Chien-Hung Chiang, Tung-Ming Pan, Min-Hsien Wu, "An Enzyme Immobilization Method for Creatinine and Glucose measurement in microfluidic chip," 2012 SEMBA, Taichung.

- B30. Ying-Ju Chen, **Yen-Heng Lin***, Chao-Sung Lai, Yi-Ting Chen, Jau-Song Yu, and Yu-Sun Chang, "An Integrated Microfluidic Chip for Rapid Detection of Bladder Cancer," 2012 SEMBA, Taichung.

- B31. **林彥亨***, 王世豪, 潘同明, 吳旻憲, 賴朝松, "血糖、尿素、肌酐酸 ISFET 微流體感測晶片," 2011 第十五屆奈米工程暨微系統技術研討會, 台北 (大會最佳論文獎)

- B32. Ya-Wen Yang, **Yen-Heng Lin**, Yi-Dao Chen, Min-Hsien Wu*, „The Assembly of Cell-Encapsulated Microgel Particles in a Microfluidic System Using Optically Induced Dielectrophoretic (ODEP) Force for Structurally-Controllable Cartilage Tissue Engineering," 2011 生物醫學工程科技研討會, 台南 (壁報論文特優獎)

- B33. **Yen-Heng Lin***, Chien-Hung Chiang, Tung-Ming Pan, Min-Hsien Wu, Chao-Sung Lai, "A novel enzyme deliver approach for glucose sensing in electrolyte-insulator-semiconductor embedded microfluidic chip," 2011 SEMBA, Dashu, Kaohsiung.

- B34. **林彥亨***, 王世豪, 潘同明, 吳旻憲, 賴朝松, "新式酵素固定技術應用於 EIS 微流體血糖感測晶片," 第九屆台塑關係企業應用技術研討會, 龜山, 桃園 (績優獎論文)

- B35. **Yen-Heng Lin** and Gwo-Bin Lee*, "A new platform for manipulating cells by using optically-induced dielectrophoretic force, "The 33rd National Conference on Theoretical and Applied Mechanics, Miaoli, Taiwan, November 13-14, 2009.

- B36. 黃聖傑, **林彥亨**, 李國賓* "製備膠原蛋白微粒之新型微流體晶片," 第十一屆奈米工程暨微系統技術研討會, 台中, August 30-31, 2007.

- B37. Chia-Wei Lai, **Yen-Heng Lin**, Cheng-Tso Chen and Gwo-Bin Lee*, „A Microfluidic Chip for Formation and Sorting of droplets Utilizing Active Pneumatic Micro-choppers and Micro-switches," The 23rd Annual Conference on Mechanical Engineering, Dec., 2006.

- B38. **林彥亨**，李國賓*，傅龍明，楊瑞珍，“利用介電泳力操控細胞之生物晶片研究,” 第十九屆機械工程研討會，雲林，虎尾 Nov. 29-30, 2002.

- B39. **林彥亨**, 謝宸碩, 李國賓*, “微型致動器之設計製作及分析,” The Seventeenth National Conference on Mechanical Engineering, The Chinese Society of Mechanical Engineers, Kaohsiung, Taiwan, Dec. 9-10, 2000.

- B40. 李國賓*, 陳榮盛, 歐憲璋, **林彥亨**, 龔傑, “熱動式微致動器尺寸效應之探討, “ The 23rd National Conference on Theoretical and Applied Mechanics, Hsinchu, Taiwan , December 17-18, 1999.

- B41. Gwo-Bin Lee*, Ruey-Bin Chang, **Yen-Heng Lin** and Shih-Chou Chen, “A Surface-Micromachined Magnetically-activated Mirror and Its Application on a 4 x 4 Fiber-Optic Switch,” The 23rd National Conference on Theoretical and Applied Mechanics, Hsinchu, Taiwan, December 17-18, 1999.

- B42. G. B. Lee*, **Yen-Heng Lin**, Guan-Ruey Huang, Shu-Hui Chen, Yu-Hung Chen, “Fabrication of Plastic Microfluidic Devices by Embossing Methods and Their Applications for Chemical Analysis, “ The Sixteenth National Conference on Mechanical Engineering, The Chinese Society of Mechanical Engineers, Hsinchu, Taiwan, Dec. 3-4, 1999.

- B43. Gwo-Bin Lee*, Charles Grosjean, Yu-Chong Tai, Yu-Hong Lin, **Yen-Heng Lin**, “ Pneumatically-driven Micromachined Balloon Actuators and Their Applications on Micro Valves,” The Sixteenth National Conference on Mechanical Engineering, The Chinese Society of Mechanical Engineers, Hsinchu, Taiwan, Dec. 3-4, 1999.

Patent filing:

- C1. “檢測系統及檢測方法,” 發明人：**林彥亨**、王世豪, filing date: 2011/12/22 with a filing number 100147918.

- C2. “光誘發控制之細胞胞解晶片,”發明人：李國賓、**林彥亨**, filing date: 2009/04/02 with a filing number 98111068.

- C3. “光驅動微粒子分選裝置及方法,” 發明人：李國賓、**林彥亨**, filing date: 2008/11/11 with a filing number 97143588.

- C4. “光驅動微粒子分離方法,” 發明人:李國賓、林宛瑩、**林彥亨**, filing date: 2008/11/11 with a filing number 97143587.

- C5. “光誘發介電泳晶片,”發明人:李國賓、王瑋、**林彥亨**、郭宗枋, filing date: 2008/08/28

with a filing number 97132878.

- C6. “生物分子傳輸系統及生物分子傳輸方法,” 發明人： 李國賓、 **林彥亨**, No：I259453.

- C7. “微結構模仁製作技術,” 發明人:周天佑 賴志輝 陳怡礽 巫諾文 **林彥亨** 廖俊郎 顏國雄 張世慧, No：188584.

- C8. “生物晶片電化學感應器之製法,” 發明人：周天佑 賴志輝 陳怡礽 巫諾文 **林彥亨** 廖俊郎 顏國雄 張世慧, No：I259453.

Book chapter:

- D1. **Yen-Heng Lin** and Gwo-Bin Lee*, “Optically Assisted and Dielectrophoretical Manipulation of Cells and Molecules on Microfluidic Platforms,” Wiley-VCH, Emerging Tools for Micro and Nano Manipulation , Chapter 5, September, 2015. (Link: http://as.wiley.com/WileyCDA/WileyTitle/productCd-3527337849.html)

- D2. **Yen-Heng Lin** and Min-Hsien Wu*, “Microfluidic technology and its biological applications,” Elsevier Ltd, Comprehensive Biotechnology 5.21, 2011.

- D3. **Yen-Heng Lin**, Wang-Ying Lin, and Gwo-Bin Lee*, “Image-driven cell manipulation,” IEEE Nanotechnology Magazine, Vol. 3, pp. 6-11, 2009