CURRICULUM VITAE (PROF. PIN-CHUAN CHEN)

CAREER

Fellowship, *2020/February-Current, Royal Society of Chemistry (FRSC).*

Distinguished Professor, *2022.2-Current, Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan, Taiwan.*

Director, *2023/August-Current, Science and Technology Division, Taipei Economic and Cultural Office in Houston (TECO in Houston), USA.*

Professor, *2018/August-2022/January, Mechanical Engineering, National Taiwan University of Science and Technology, Taiwan, Taiwan.*

Vice Chairman, *2021/Aug.-2023/July, Mechanical Engineering Dept., National Taiwan University of Science and Technology, Taiwan, Taiwan.*

Principal Investigator (PI), *2021/Feb-2023/July, Taiwan European Union Innovation and Cooperation Platform, Taipei, Taiwan.*

Program Director, *2017/August-2022/Jan., International Advanced Technology Program, National Taiwan University of Science and Technology, Taipei, Taiwan.*

Associate Professor, *2015/Feb-2018/July, Mechanical Engineering, National Taiwan University of Science and Technology Taipei, Taiwan.*

Assistant Professor, *2011/Sep-2015/Jan, Mechanical Engineering, National Taiwan University of Science and Technology Taipei, Taiwan.*

Assistant Research Scientist, *June 2009-2011/Aug: Singapore Institute of Manufacturing Technology (SIMTech), Agency for Science, Technology and Research (A*STAR), Singapore*

EDUCATION

Ph.D. 2006-2009, Louisiana State University, USA
Advisor: Professor Michael C. Murphy
Major: Mechanical Engineering; **Minor:** Electrical Engineering
Dissertation Title: A Modular Approach to High Throughput Micro Systems

M. S. 2002-2006, Mechanical Engineering, Louisiana State University, USA
Advisor: Professor Michael C. Murphy

Thesis Title: Accelerating Micro-Scale PCR (Polymerase Chain Reaction) for Modular Lab-on-a-Chip System

B. S. 1996-2000, National Cheng-Kung University, Taiwan
Major: Mechanical Engineering
Specialized Field Course: Microelectromechanical Systems (MEMS)

RESEARCH INTEREST AND PERFORMANCE

- ***Current research interests:*** Using Additive Manufacturing (3D Printing) to Create Micro/Mini Paper Fluidic Devices for Chemical/Biochemical Applications (New Psychoactive substances (NPS), Organ-on-a-chip), Manufacturing of Polymeric/Paper microfluidics for Chemical/Biochemical Applications.

Invited Speaker

- Invited Speech, "Using 3D Printing to manufacture microlens array", CBMM All Hands Meeting, Seminar, Mechanical Engineering Dep., Louisiana State University, Baton Rouge, USA, Mar 33, 2024.
- Invited Speech, "Using 3D Printing to manufacture microlens array and micropads and their applications", CBMM All Hands Meeting, University of Kansas, Kansas, USA, Feb 1~2, 2024.
- Keynote Speech, "Welcome to an Interdisciplinary era, and being a faculty in Taiwan", TTBA Annual Meeting, Houston, TX, USA. Oct 28-29.
- Opening Remark, "2023 Midwest Taiwanese Biotechnology Association (MTBA) Annual Symposium", St. Louis, MO, USA, Sep. 1~3, 2023.
- Invited Speaker, "Fabrication a Monolithic Three-dimensional (3D) Paper-based microfluidic devices for Multistep dopamine detections using Stereolithography 3D printing" 45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (IEEE EMBC), July 22-24, 2023, Sydney, Australia
- Invited Speech, "Opportunities of Applying Horizon Europe Project from Taiwan", European Innovation Week (EIW), May 31, 2023.
- Invited Speech, "利用 3D 列印製造微透鏡陣列以及腦外手術模擬器" (書報討論演講), National Taipei University of Technology, April. 8, 2023.
- Invited Speech, "EMI Innovative Teaching Curriculum and Design" (EMI 創新教學課程與設計), Feng Chia University, Nov, 17, 2022.
- Invited Speech, " EMI Application and Performing Workshop" (EMI 教學實踐申請及執行分享), Aug 9, 2022.
- Invited Interview, "Applications of advanced manufacturing to enhance the quality of clinical neurosurgeon training - creation of lifelike brain simulator" (仿生腦模擬器/利用先進製程提升臨床腦神經外科醫師訓練品質), National Education Radio. (教育廣播電台專訪), July 13, 2022.
- Invited Speech, "Project of MOE Application Workshop" (申請教育部教學實踐計劃分享), Department of Mechanical Engineering, National Taiwan Technological University, April, 15, 2022.
- Invited Speech, "EMI Teaching Experiences Workshop" (EMI 教學經驗分享), College of Engineering, Tatung University, March 22, 2022.
- Invited Interview, "MIT's 3D-Printed Artificial Brain Won the Future Technology Award"(3D 列印仿真性人工腦 MIT 獲得未來科技獎肯定), Formosa TV News Network (民視新聞), Dec 12, 2021.

- Invited Speaker, “Rapidly and Simultaneously Quantifying Multiple Biomarkers of L-tyrosine Hydroxylase (TH) Deficiency by Using Paper Microfluidic Devices and Smartphone-Based Analysis System”, The 15th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2020), Nov 15-18, 2021, Online.
- Invited Speaker, “Maximizing Interfacial Bonding Strength between PDMS/PMMA for Manufacturing High Flow Rate Microvalve System”, Korean Sensor Society Conference, Oct. 28, 2021, on-line Invited Presentation.
- Invited Speaker, “Mini/Micro/Manufacturing Lab”, National Defense Medical Center, Oct 1, 2021.
- Invited Speaker, “The Role of Mechanical Engineer in the Current Development of Chemical Analysis and Bioengineering”, General Education and Common Course, National Cheng Chi University, May 21th, 2021.
- Invited Speaker, “Manufacturing and Applications of Microfluidics”, Graduate Institute of Biomedical Engineering, Chang Gung University, May 4th, 2021.
- Invited Speaker, “Additive Manufactured Microfluidics for Chemical Analysis and Bio-Applications”, Graduate Institute of Biomedical Engineering, Taiwan Tech, March 5th, 2021.
- Invited Speaker, How and What Microfluidics can do?, Invited by the Innovation Network, Netherlands Office Taipei, Feb 25, 2021.
- Invited Speaker, The 14th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2020), Nov 14-16, 2020, Online.
- Invited Speaker, “Manufacturing Adjustable Microlens by Using Expandable Elastomer”, Korean Sensor Society Conference, Nov 11, 2020, on-line Invited Presentation.
- School of Life Science, National Taiwan Normal University, May 15, 2020, Taipei, Taiwan.
- The 13th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2019), Nov 21-24, 2019 in Gwangju, Korea.
- School of Mechanical Engineering, Kyungnam University, Changwon, Republic of Korea, Nov 20, 2019.
- Invited Speaker, Taipei Private Zhongshan Elementary School, May 8, 2019, Taipei, Taiwan.
- Invited Speaker, Chemical Engineering, Feng Chia university, April 22, 2019, Taichung, Taiwan.
- Invited Lecture, The 14th Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems, (IEEE-NEMS 2019), April 11-14, 2019 in Bangkok, Thailand.
- Invited Speaker, Power Mechanical Engineering Department, National Tsing Hua University, March 11, Hsinchu, Taiwan.
- Future Tech Exhibition, Taipei World Trade Center, Dec 13~15, 2018, Taipei, Taiwan.
- Graduate Institute of Precision Engineering, National Chung Hsing University, Nov 30, 2018, Taichung, Taiwan.
- Keynote Lecture, 3rd International Meeting on Electromechanical Systems and Measurement & Control Technology, Oct, 16th -18th 2018, in Taizhou, Jiangsu, China.
- Invited Lecture, The 12th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2018), Dec 2-5, 2018 in Hawaii, USA.
- Invited Lecture, 2018 International Symposium on Transport Phenomena and Applications (STPA), Nov 9-10, 2018 in Taiwan.
- Taiwan Automation Intelligence and Robot Show, Taipei Nangang Exhibition Center, Aug 29~Sep 1, 2018, Taipei, Taiwan.

- Mechanical Engineering Department, National Cheng-Kung University, Dec 12 2017, Tainan, Taiwan.
- Chemistry Department, National Taiwan Normal University, Nov 6, 2017.
- Invited Lecture, The 7th International Multidisciplinary Conference on Optofluidics 2017 (Optofluidics 2017), July 25-28, Singapore.
- Invited Lecture, The 6th International Multidisciplinary Conference on Optofluidics 2016 (Optofluidics 2016), July 24-27, Beijing, China.
- Invited Lecture, Lab on a Chip Asia, Microfluidics, Point-of-Care Diagnostics Diagnostics & Organ-on-a-Chip, Nov 19-20, 2015, Singapore.
- Invited Lecture, International Conference on Smart Sensors, 2015, Taiwan.
- Invited Lecture, International Conference on Manipulation, Manufacturing and Measurement on the Nanoscle (3M-Nano), Oct. 27-31, 2014, Taiwan.
- Invited Lecture, A Handy Tool for Rapid Mixing and Uniform Distribution of Multiple Chemical Reagents, 2014/12/17, National Chung Cheng University, Taiwan.
- Invited Lecture, Design and manufacturing of a disposable high throughput microfluidic chip, 2013/3/13, Ming Chi University of Technology, Taiwan.
- Invited Lecture, Design and manufacturing of a disposable high throughput microfluidic chip, 2013/9/18, Chung Yuan Christian University, Taiwan.

Research Awards (Conference/National Thesis Competition/Others)

- 2023 National Innovation and Excellence Award (2023 國家新創精進獎)
- 2023 Future Tech Award, National Science and Technology Council of Taiwan (2023 年國科會未來科技獎)
- 2023 ICSS Distinguished Oral Paper Award (2023 國際智慧感測器研討會傑出論文獎)
- 2022 National Innovation and Excellence Award (2022 國家新創精進獎)
- 2022 ICSS Distinguished Oral Paper Award (2022 國際智慧感測器研討會傑出論文獎)
- 2021 Future Tech Award, Ministry of Science and Technology of Taiwan (2021 年科技部未來科技獎)
- 2021 NTUST School-level Outstanding Research Award (台科大 110 學年度校級傑出研究獎).
- 2021 ICSS Best Oral Paper Award and Excellent Oral Paper Award (2021 國際智慧感測器研討會)
- Automation 2020 (MOST), Taiwan (109 年度科技部自動化學門計畫成果競賽，優等)
- National Innovation Award, 2021 (第 18 屆國家新創獎—臨床新創獎)
- Youth Scholar Award of Nanotechnology and Micro System Association, 2021 (中華民國微系統暨奈米科技協會 110 年度青年學者獎)
- Honorary Award, 2021 NARlabs Instrument Technology Innovation Competition (i-ONE), Taiwan (國研盃儀器科技創新獎 i-ONE).
- Youth Scholar Award of Ministry of Science and Technology (MOST), 2021 (科技部 110 學年度優秀年輕學者獎)
- Special Award (Technology University Award), 2020 17th Hiwin Thesis Award, Taiwan (109 學年上銀碩士論文獎科技大學特別獎)
- Best Oral Paper Award, 2020 International conference on smart sensors, Taiwan. (Two students received)
- Excellent Oral Paper Award, 2020 International conference on smart sensors, Taiwan.
- Excellence in Research (2019, University Level), National Taiwan University of Science and Technology.

- Best Paper Award, RSC Analyst, 2019 International conference on smart sensors, Taiwan.
- Best Paper Award, MDPI Micromachines, 2019 International conference on smart sensors, Taiwan.
- Excellent Poster Award, 2019 International conference on smart sensors, Taiwan.
- Poster Honorary Award, 2019 International conference on smart sensors, Taiwan.
- 2018 Future Tech Award, MOST, Taiwan (2018 年科技部未來科技獎)
- Bronze Award, 2018 Intelligent Automation Equipment Invention Award, Taiwan
- Competition Committee Special Award, 2018 Chime Ball Technology Thesis Award, Taiwan.
- Competition Committee Creative Award, 2018 Spintech Technology Thesis Award, Taiwan.
- Honorary Award (4th), 2018 14th Hiwin Thesis Award, Taiwan (106 學年上銀碩士論文獎優等獎)
- Finalist, 2018 The International Conference on Nano/Micro Engineered and Molecular Systems (NEMS) Best Student Paper Competition.
- Outstanding Oral Presentation Award, 2018 International conference on smart sensors, Taiwan.
- Honorable Mention Paper Award (Best Paper Award), 2017 World Congress on Micro and Nano Manufacturing.
- 2016 Youth Scholar Excellence Award, National Taiwan University of Science and Technology.
- Silver Award, 2015 Training Program on Innovation and Entrepreneurship of Biotechnology, Ministry of Education of Taiwan.
- Excellence in Research Award (2012~2019), Mechanical Engineering Dept., National Taiwan University of Science and Technology.

Teaching Award

- Merit Award in Teaching (2022, Department Level), National Taiwan University of Science and Technology. (111 學年度臺科大機械系教學績優教師)
- 2022 spring, Innovative Teaching Model (PBL) Award (110-2 學期創新教學模式(PBL 類)獎勵).
- Merit Award in Teaching (2021, University Level), National Taiwan University of Science and Technology. (110 學年度臺科大教學績優教師)
- IEET Distinguished Teaching Award, The Institute of Engineering Education Taiwan (IEET), 2021. (2021 中華工程教育學會教學傑出獎)
- Outstanding in Teaching (2020, University Level), National Taiwan University of Science and Technology.
- Digital Teaching Award, (2020, University Level), National Taiwan University of Science and Technology. (108/2 學年數位教學課程獎勵)
- Innovative Teaching Strategies and Materials Development (2020, University Level), National Taiwan University of Science and Technology.
- Problem-Based-Learning Course Award (2018, University Level), National Taiwan University of Science and Technology, the awarded course is 「Introduction and Practice of Biochip」
- Outstanding in Teaching (2017, University Level), National Taiwan University of Science and Technology.
- Excellence in Teaching (2014, University Level), National Taiwan University of Science and Technology.

- Excellence in Teaching (2012~2019, Department Level), Mechanical Engineering Dept., National Taiwan University of Science and Technology.

Service in Professional Academia Society:

- Opening Remark, 2023 Midwest Taiwanese Biotechnology Association (MTBA), St. Louis, MO, USA, Sep. 2 to 3.
- Professional Service Award, 2023 Nanotechnology and Micro System Association (微系統暨奈米科技協會服務貢獻獎)
- Program Committee, The 16th IEEE International Conference on Nano/Molecular Medicine Engineering, December, 5-8, 2023, Okinawa, Japan
- Reviewer, Higher Education SPROUT Project: The Featured Areas Research Center Program. 2023, Mar. (教育部第 2 期「高教深耕-特色領域研究中心計畫」_工學領域書審委員)
- Committee Member of Engineering Field, MOE Teaching Practice Research Program, Ministry of Education, 2023. (教育部教學實踐計畫工程學門複審委員)
- Reviewer, 19th Automation 2022, November, 12, 2022. (110 年度自動化學門成果報告之最佳海報評審)
- Reviewer, 2022 19th Hiwin Thesis Award, Taiwan, October, 11, 2022. (第十九屆上銀機械碩士論文獎評審)
- Reviewer, Best Achievement Poster Award, Program of Aeronautics & Astronautics and Thermal Science & Fluid Dynamics (航太領域成果發表會最佳成果海報獎評審), November, 5, 2022.
- Scientific committee Member, WCMNM, 2022. (精微技術聯合會議科學委員)
- Reviewer, ICSS, 2022. (國際智慧感測器研討會審查委員)
- Committee Member, Senior High School Professional Subjects Seminar and Creativity Competition, 2022. (教育部全國高級中等學校專業群科 111 年專題及創意製作競賽：創意組-機械群評審委員)
- Reviewer, *Scientific Reports*, March 2022.
- Guest Editor, Journal of Frontiers in Bioengineering and Biotechnology, Impact Factor 5.890, Ranking 12/72, 2022.
- Technical Program Committee (TPC), The 17th IEEE International Conference on Nano/Micro Engineered & Molecular Sys-tems, (IEEE- NEMS 2022), April 14-17, 2022, Online.
- Committee Member of World Congress on Micro and Nano Manufacturing, 2022.
- Committee Member of Engineering Field, Aerospace/Thermal flow, MOST, 2021-2022 (110-111 年科技部工程司航太/熱流學門複審委員)
- Director, Nanotechnology and Micro System Association, 2022.
- Session Chair, "Micro/Nano and Interface Systems", Automation 2021 Online Material Conference, Nov 13-14, 2021, Online.
- Session Chair, The 15th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2021), Nov 15-18, 2021, Online.
- Committee Member of Engineering Field, MOE Teaching Practice Research Program, Ministry of Education, 2021-2022. (教育部教學實踐計畫工程學門複審委員)
- General Co-Chair, The 17th IEEE International Conference on Nano/Micro Engineered & Molecular Systems (IEEE-NEMS), April 14-17, 2022, Taiwan.
- Technical Program Committee (TPC), The 15th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2021), Nov 15-18, 2021, Online.

- Membership Representative, Nanotechnology and Micro System Association, 2021.
- Executive Committee, 2021 International Conference on Smart Sensors (ICSS 2021), Oct 14-15, Taipei, Taiwan.
- Scientific Committee Member, 2021 World Congress on Micro and Nano Manufacturing, March, 2021 in Bombay, India.
- Promotion Review Committee, Institute of Biomedical Engineering and Nanomedicine, National Health Research Institutes.
- Invited Chair, The 14th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2020), Nov 14-16, 2020, Online.
- Technical Program Committee (TPC), The 14th Annual IEEE International Conference on Nano/Molecular Medicine and Engineering, (IEEE-NANOMED 2020), Nov 14-16, 2020, Online.
- Session Chair, Automation 2020, Hualien, Taiwan.
- Committee Member of Engineering Field, MOE Teaching Practice Research Program, Ministry of Education (教育部教學實踐計畫工程學門複審委員)
- Professional Service Award, 2020 Nanotechnology and Micro System Association (微系統暨奈米科技協會服務貢獻獎)
- Technical Program Committee (TPC), The 15th Annual IEEE International Conference on Nano/Micro Engineered and Molecular Systems, (IEEE-NEMS 2020), Sep 27-30, 2020 in San Diego, USA.
- Technical Program Committee (TPC), 2020 Asia-Pacific Conference of Transducers and Micro-Nano Technology 2020 (APCOT 2020), Shanguai, China (Postponed due to Coronavirus).
- Technical Program Committee (TPC), 2020 International Conference on Smart Sensors (ICSS 2020), Oct 19-20, Kaohsiung, Taiwan.
- Chair of Technical Program Committee (TPC), 2019 International Conference on Smart Sensors (ICSS 2019), June 3-4, Hsinchiu, Taiwan.
- Local Arrangement Chair, 2019 The 6th IFToMM International Symposium on Robotics and Mechatronics (ISRM 2019)
- Session Chair, 2018 International Conference on Smart Sensors (ICSS 2018), June 3-4, Taipei, Taiwan.
- Organization Committee, 2015 National Conference of Computational Fluid Dynamics, July 26~July28, New Taipei City, Taiwan.
- Session Chair, Organization Committee, 2014 International Conference on Mechatronics Technology, Oct 21, Taipei, Taiwan.

Journal Articles

2023	
60.	D.M. Lestari, **P.C. Chen*, "**Enhancing Precise and Fast Fabrication for Solid Microneedle Using Digital Light Processing with Machine Learning (DLP-ML)", Submitted.
59.	S.S. Wu, M.L.Hsueh, **P.C. Chen***, W.H. Liu*, J.C. Lin, "Developing a Piezoresistive Sensor Based Neurological Intraoperative Monitoring System for Bionic Spine Surgery Skill Training, Submitted.
58.	T.N.A.Vo, **P.-C. Chen***, P.S. Chen*, Y.C. Jair, Y.H. Wu "Engineering a Novel Vacuum-Actuated Peristaltic Micropump with Inclined Wall Design to Achieve Low Hemolysis Blood Plasma Extraction", Submitted.

57.	S.W. Lu, Y.H.Wu, **P.-C. Chen***, P.S. Chen*, "Additive Manufacturing A Microfluidic One-Piece Chip for *In Vitro* Human Liver Microsomal Metabolic Reaction Coupled To Mass Spectrometer System", Submitted.
56.	**P.-C. Chen***, C.Y. Hsieh, "Integrating Artificial Intelligence Based Design Tool into Digital Light Processing 3D Printing Process for Rapidly Manufacturing Functional Microlens Arrays" , Submitted.
55.	"Wastewater-based epidemiology to monitor 68 NPS/conventional drug use in Taipei metropolitan area in Taiwan during COVID-19 pandemic", Under Revision, Journal of Hazardous Materials, (SCI, IF: 14.99, Rank: 6/75, Q1).
54.	C.M. Truong, Y.C. Jair, H.P. Chen, W.C. Chen, Y.H. Liu, **P.-C. Chen***, P.S. Chen*, "Streamlining Regular Liquid Chromatography with MALDI-TOF MS and NMR Spectroscopy Using Automatic Full-Contact Spitless Spotting Interface and Flash-Tap Fractioning Collection", In-Press, Analytica-Chimica-Acta, (SCI, IF: 6.337, Rank: 6/75, Q1).
53.	**P.-C. Chen***, J. Lawrensen, "Improving a Smartphone Based Droplet Flow Cytometry System With Microlens Arrays Integrated Optofluidic Chip", 367, 115080,(SCI, IF: 4.291, Rank: 15/64, Q1).
2023	
52.	M.F. Zaki, Y.X. Wu, **P.C. Chen***, P.S. Chen*, "Determination of Psychoactive Substances in One Microliter Plasma Using A Novel 3D Printing Microfluidic Paper-based Column Coupled to Liquid Chromatography-Mass Spectrometry, Sensors and Actuators B (SCI, IF: 9.221, Rank: 2/64, Q1)
51.	T.N.A.Vo**, P.-C. Chen***, P.S. Chen, W.H.Liu, "Engineering an extremely high flow rate micropump and integrating with an inertial microfluidics for rapid and efficient blood plasma extraction from fingertip blood with lancets", Sensors and Actuators A, 358, 114430 (SCI, IF: 4.291, Rank: 15/64, Q1).
50.	**P.-C. Chen***, C.Y. Hsieh, " Studying the Influence of the Photopolymer Material Properties to the Creation of MLAs with Using Digital Light Processing (DLP) Stereolithography Printing (SLA), Sensors and Actuators A (SCI, IF: 4.291, Rank: 15/64, Q1).
2022	
49.	**P.C. Chen**, W.Z. Zhang, W.R. Chen, Y.H. Liu, P.Z. Chen, L.Y. Chen, P.S. Chen, "Engineering an Integrated System with a High Pressure Resistance Polymeric Microfluidic Chip Coupled to Liquid Chromatography-Mass Spectrometry (LC-MS) for the Analysis of Abused Drugs", Sensors and Actuators B, 350, 130888, 2022 (SCI, IF: 7.46, Rank: 3/64, Q1)
48.	T.N.A.Vo, P.-C. Chen*, "Maximizing Interfacial Bonding Strength Between PDMS and PMMA Substrates for Manufacturing Microvalve Withstanding Extremely High Flow Rate and High Operation Pressure", Sensors and Actuators A, 334, 113330 (SCI, IF: 4.291, Rank: 15/64, Q1).
47.	**P.C. Chen**, Y.W. Yang, J.C. Lin, W.H. Liu, "Advanced Manufacturing in the Fabrication of a Lifelike Brain Glioblastoma Simulator for the Training of Neurosurgeons", Polymers, 14(6), 1072 (SCI, IF: 4.967, Rank: 16/90, Q1).
46.	**P.C. Chen***,C.S. Yeh, C. Y. Hsieh, "Defocus Digital Light Processing Stereolithography for Rapid Manufacturing of Microlens Array", Sensors and Actuators A, 345, 113819 (SCI, IF: 4.291, Rank: 15/64, Q1).
45.	D. Barshilia, A.C. Komaram, **P.C. Chen**, L.K. Chau, G.E. Chang, "Slab waveguide-based particle plasmon resonance optofluidic biosensor for rapid and label free detection", Analyst, Accepted (SCI, IF: 5.227, Rank: 18/87, Q1).

44.	M. F. Zaki, **P.C. Chen***, Y. C. Yeh*, P. H. Lin, M. Y. Xu, "Developing A Monolithic 3D Paper-Based Analytical Device (μPAD) for Chemical Assays by Stereolithography 3D Printing and Sequential Digital Masks ".
2021	
43.	**P.-C. Chen***, P. T. Chen, "Using Stereolithographic Printing to Manufacture Monolithic Microfluidic Device with Extremely High Aspect Ratio", Polymers, 13, 3750, 2021 (SCI, IF: 4.329, Rank: 19/91, Q1)
42.	**P.-C. Chen**, K.H. Chen, C. Y. Lin, Y. C. Yeh," Rapidly and Simultaneously Quantifying Multiple Biomarkers of Tyrosine Hydroxylase Deficiency by Using Paper Microfluidic Devices and Smartphone-Based Analysis", Sensors and Actuators B, 349, 130722, 2021 (SCI, IF: 7.46, Rank: 3/64, Q1)
41	C. R. Brown, X. Zhao, T. Park, **P.-C. Chen**, B. Y. You, D. S. Park, S. A. Soper*, A. Baird, M. C. Murphy, "Leakage Pressures for Gasketless Superhydrophobic Fluid Interconnects (GSFI) for Modular Lab-on-a-Chip Systems", Microsystems and Nanoengineering, 7, 69, 2021 (SCI, IF: 5.048, Rank: 6/64, Q1)
40.	**Chen, P. C.**, Lin, Y. T., Truong, C. M., Chen, P. S., & Chiang, H. K. (2021). Development of an Automated Optical Inspection System for Rapidly and Precisely Measuring Dimensions of Embedded Microchannel Structures in Transparent Bonded Chips. *Sensors*, *21*(3), 698. (SCI, IF: 3.576,14/64, Rank: Q1).
39.	**P.-C. Chen ***, C.C. Chou, C.H. Chiang "Systematically Studying Dissolution Process of 3D Printed Acrylonitrile Butadiene Styrene (ABS) Mold for Creation of Complex and Fully-Transparent Polydimethylsiloxane (PDMS) Fluidic Devices", Biochip Journal,15, 144-151, 2021. (SCI, IF: 3.494, Rank: 28/83, Q2)
2020	
38.	**P.C. Chen***,L.T. Chen, C.S. Yeh "Tunable Microlens Array Fabricated By Silicone Oil-Induced Swelled Polydimethylsiloxane (PDMS) Membrane Bonded to Micro-milled Microfluidic Chip"**,** V28, n20,29815, *Optics Express* (SCI, IF: 3.669, Rank: Q1).
37.	**P.C. Chen**, Lin, J. C., Chiang, C. H., Chen, Y. C., Chen, J. E., & Liu, W. H. (2020). Engineering Additive Manufacturing and Molding Techniques to Create Lifelike Willis' Circle Simulators with Aneurysms for Training Neurosurgeons, *Polymers*, *12*(12), 2901. (SCI, IF: 3.426, Rank: 16/89, Q1).
36.	**P.C. Chen***,C.H. Chiang, "Taguchi Method for Investigation of Ultrasonication-Assisted Dissolution of Acrylonitrile Butadiene Styrene (ABS) Rod Enclosed Within Polydimethylsiloxane (PDMS) Bulk", *IEEE Access*, *8*, 114910-114915. (SCI, IF: 4.098, Rank: Q1).
2019	
35.	L.H. Duong, **P.C. Chen***,"Simple and Low-Cost Production of Hybrid 3D-Printed Microfluidics Devices", *Biomicrofluidics*, v13, 024108, 2019 (SCI, IF: 2.571, Rank: Q2).
34.	**P.-C. Chen ***, Ren-Hao Zhang and Liang-Ta Chen, "Using Micromachined Molds, Partial-Curing PDMS Bonding Technique, and Multiple Casting to Create Hybrid Microfluidic Chip for Microlens Array", *Micromachines*, v10, 572, 2019. (SCI, IF: 2.426, Rank: Q2)
2018	

33.	**P.-C. Chen***, C.M. Tsai, "Exploring Factors for Uniformly Distributing Liquid Droplet in a Bifurcation Tree Microfluidic Chip", *Sensors and Actuators B,* v259, p1123-1132, 2018. (SCI, IF: 5.401, Rank: Q1)
32.	L.H. Duong, **P.C. Chen***,"Novel Solvent Bonding Method for Creation of a Three-Dimensional, Non-planar, Hybrid PLA/PMMA Microfluidic Chip", *Sensors and Actuators A,* v280, n1, p350-358. (SCI, IF: 2.21, Q1).
31.	**P.-C. Chen***, C.Y. Lee, L.H. Duong, "Microfabrication of Nonplanar Polymeric Microfluidics", *Micromachines*, v9(10), p491, 2018 (SCI, IF: 2.222, Rank: Q2)
30.	I.-C. Liu, **P.-C. Chen**, L.-K. Chau, G.-E. Chang, "Optofluidic refractive-index sensors employing bent waveguide structures for low-cost, rapid chemical and biomedical sensing", *Optics Express*, v26, n1, p273-283. 2018. (SCI, IF: 3.436, Rank: Q1).
2017	
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