Dr. Tien-Jen Chang

COO and Co-founder of Mycro3D

CONTACT

Email

Mobile

LinkedIn

KEY COMPETENCES

- ✓ 3D Printing
- ✓ Instrument integration
- ✓ Machine design
- ✓ Atomic Force Microscope
- ✓ Product management
- ✓ Production process improvement
- ✓ ISO 9001
- ✓ Technical sales

LANGUAGES

TAIWANESE (Native)
CHINESE (Native)
ENGLISH (Fluent)
DANISH (Beginner)

PROFESSIONAL EXPERIENCE

Chief-Operating-Officer

Mycro3D ApS

Aug. 2023 – present

- Commercialization of high-precision 3D printing service.
- Design and development of advanced micro-stereolithography 3D printer and process.
- Supply chain management.

Postdoctoral researcher

Health Tech Dept., Technical University of Denmark

Oct. 2021 – Jul. 2023

- Design and development of vat-photopolymerization-based micro/nanoscale 3D printing technique.
- Commercialization of high-resolution and large-volume 3D printer.

Guest Scientist

PTB - The National Metrology Institute of Germany

May. 2018 – Jul. 2018

- Design and development of Microprobe CMM (Coordinate Measuring Machine) system.

Senior Engineer

R&D Dept., Forcera Materials, Taiwan

May. 2014 – Apr. 2018

Marketing and sales (2016 – 2018):

- Promoted spare parts products to world-leading semiconductor manufacturing companies, including TSMC, and UMC.
- Resolved the customer complaint.
- Implemented price strategy.

Research and development (2014 – 2015):

- Developed ceramic products (incl. alumina, alumni nitride, quartz, and silicon) for semiconductor manufacturing devices.
- Optimized the production line to improve the product yield rate.
- Established an advanced polish production line.
- Maintained quality system based on ISO 9001.
- Executed continuously improving project, FMEA and gauge R&R.
- Analyzed the cost structure and planned the cost-saving project.

CERTIFICATION

- Applied Material CE (Copy Exact)
- LabVIEW CLAD (Certified LabVIEW Associate Developer)

HONOR

- "Best Paper Award" in 18th International Conference on Mechatronics Technology

Corporal

R.O.C Marine Crops, Nansha Command, Taiping Island

Mar. 2013 – Feb. 2014

- Managed and maintained the desalination plant.

VOLUNTEER WORK

Chairman

Chinese Church in Copenhagen, Denmark

Sep. 2021 – Present

Organizer

Copenhagen Milk Tea Festival 2023, (4th Feb.)

Bartender

Friday bar of DTU HealthTech, Nanolab & Photonic

Aug. 2019 – Jul. 2020

EDUCATION

❖ **Ph.D. Health Technology, Technical University of Denmark, Denmark**

Sep. 2018 – Nov. 2021

PhD thesis

•Title: 3D Printed Microcontainers for Oral Delivery of Drugs and Probiotics

❖ **MSC. Mechanical Engineering, National Taiwan University, Taiwan**

Sep. 2010 – Jan. 2013

GPA 4.24/4.30, Ranking 1/45

Master's thesis

•Title: Design and Development Holographic Optical Element Atomic Force Microscope in Liquid

PUBLICATION

JOURNAL

- Pantazoglou, E., Tollemeto, M., Ezazi, N. Z., **Chang, T.J**., Hosta Rigau, L., Jacobsen, J., & Hagner Nielsen, L. Enhancing Buccal Drug Delivery: The Impact of Glycerol in Slot-Die-Coated Pectin Films. Molecular Pharmaceutics, 22(1), 433-445 (2024)
- **Chang, T.J.,** Kjeldsen, R.B. et al. 3D-Printed Radiopaque Microdevices with Enhanced Mucoadhesive Geometry for Oral Drug Delivery. *Adv. Healthcare Mater.* 12, 2201897 (2023)
- **Chang, T.J.** et al. Open-source Force Analyzer with Broad Sensing Range Based on an Optical Pickup Unit. *HardwareX* 11, e00308 (2022)
- Liao, H.S., Werner, C., Slipets, R., Larsen, P.E., Hwang, S., **Chang, T.J.,** Danzebrink, H.U., Huang, K.Y. and Hwu, E.T. Low-cost, open-source XYZ nanopositioner for high-precision analytical applications. HardwareX, 11, p.e00317 (2022)
- Christfort, J.F., Polhaus, C.J.M., Bondegaard, P.W., **Chang, T.J.,** Te Hwu, E., Nielsen, L.H., Zór, K. and Boisen, A., Open source anaerobic and temperature-controlled in vitro model enabling real-time release studies with live bacteria. HardwareX, 11, p.e00275 (2022)
- **Chang, T.J.,** Vaut, L., Voss, M. et al. Micro and Nanoscale 3D Printing Using Optical Pickup Unit from a Gaming Console. *Commun. Phys.* 4, 23 (2021)
- Liao, H.S., Huang K.Y., Hwang, I.S., **Chang, T.J.** et al. Operation of Astigmatic-detection Atomic Force Microscopy in Liquid Environments. *Rev. Sci. Instrum.* 84, 103709 (2013)

PATENT

- Boisen, A., Hwu, E., & **Chang, T.J.** (2022). High-throughput 3D-printing. (Patent No. WO2022184218)
- **Chang, T.J.,** Voss, M., Slipets, R., & Hwu, E. High-precision Measurement and Control to Manipulate Nanoscale 3D Printing. (EU patent with DTU, Sep 2023: EP23197977)