
Jen-Huang Huang, Ph.D.

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Education

1997-2001 B.S., Chemical Engineering, National Tsing Hua University, Taiwan
2001-2003 M.S., Chemical Engineering, National Tsing Hua University, Taiwan
2006-2012 Ph.D., Chemical Engineering, Texas A&M University, USA

Research and Professional Positions Held in Chronological Sequence

2013-2016 Postdoctoral Research Associate, Biosecurity and Public Health, Los Alamos National Laboratory, Los Alamos, New Mexico, USA
2016-2021 Assistant Professor, Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan
2020-present Joint Appointment Professor, Program of Molecular Engineering, National Tsing Hua University, Hsinchu, Taiwan
2021-2025 Associate Professor, Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan
2021-present Editor, Chemical Engineering, Taiwan Institute of Chemical Engineers
2021-present Joint Appointment Professor, PhD Program in Biomedical Artificial Intelligence
2021-present Joint Appointment Professor, PhD Program in Precision Medicine
2021-present Joint Appointment Professor, Innovative Design Program
2025-present Professor, Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan
2025-present Associate Editor, Journal of the Taiwan Institute of Chemical Engineers (IF 6.3)

Research Interests

My research focuses on microfluidic technologies for biomedical and chemical engineering applications. We develop advanced in vitro and ex vivo disease models that recapitulate 3D tissue microenvironments for personalized drug screening and precision medicine, including chemotherapy, targeted therapy, immunotherapy, and inhalation treatment. We also design integrated microfluidic diagnostic platforms for sample processing, reaction control, and rapid readout in applications such as circulating tumor cells, neonatal jaundice, and antimicrobial resistance. In parallel, we develop automated microfluidic process-control systems for continuous protein purification and apply microfluidic flow chemistry to sustainable synthesis of nanoparticles, biomaterials, and high-value chemicals.

Major Honors and Awards

2016 R&D 100 Awards

2019	R&D 100 Awards
2021	College Student Research Creativity Award (Advisor)
2021	MOST Excellent Young Scholars Award
2022	TwICHe Outstanding Chemical Engineering Article of the Year
2023	BEST Professor Shih-Yow Huang Memorial Award
2023	NSTC, Future Tech Award
2024	NSTC Taiwan Germination Program
2024	Boehringer Ingelheim 2023 Unicorn 2.0 - BioMedicine Innovation Program
2024	NTHU College of Engineering Outstanding Mentor Award
2024	National Innovation Award
2025	NTHU-YEH,KUN-MING Distinguished Young Scholar Award
2025	MOEA Technology Development Program for Academia