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Name **Yen-Liang Liu Ph.D.**

Current Positions Assistant Professor, Graduate Institute of Biomedical Sciences, China Medical University.
No. 91, Xueshi Road, North District, Taichung City, 404 Taiwan

Telephone **+886-4-2205-2121 Ext. 7720**
E-mail **allen.liu@cmu.edu.tw**
E-Portfolio Website **http://webap.cmu.edu.tw/TchEportfolio/index_1/allenliu**
Personal Website **www.liuscience.net**

Education

Ph.D. in Biomedical Engineering, the University of Texas at Austin	2013-2018
M.S. in Biomedical Engineering, National Taiwan University	2008-2010
B.S. in Life Science, National Taiwan University	2003-2008

Expertise

Fluorescence microscopy	Biophysics	Cell Biology	Cancer Detection
Stem Cell	Tissue Engineering		

Research Interests

- Three-dimension single-particle/molecule tracking in living cells to visualize biomolecule trafficking
- Multiphoton microscopy for imaging living cells and tissues
- Development of biomarkers for cancer diagnosis
- Noble metal (Ag)-based nanobiosensors: synthesis, characterization, and applications
- Tissue engineering and regenerative medicine: biomimetic lung and knee cartilage regeneration
- Scaffold fabrication by microfluidics

Selected Grants:

1. Young Scholar Fellowship, MOST 108-2636-E-039-001 (2019-11-01~2024-10-31).

Selected Publications

1. **Liu YL**, Perillo EP, Ang PYK, Kim M, Blocher K, Vu H, Chen YA, Dunn AK, Yeh HC. "Three-dimensional two-color dual-particle tracking microscope for monitoring DNA conformational changes and nanoparticle landings on live cells." ACS Nano, 2020, **IF: 14.588**
2. Chou CK*, **Liu YL*(co-first)**, Chen YI, Huang PJ, Tsou PH, Chen CT, Lee HH, Wang YN, Hsu JL, Yankeelov TE, Kameoka J, Yeh HC, and Hung MC. "Digital Receptor Occupancy Assay in Quantifying On-and Off-Target Binding Affinities of Therapeutic Antibodies." ACS sensors, 2020, **IF: 7.333**
3. **Liu YL***, Horning AM*, Lieberman B, Kim M, Lin CK, Hung CN, Chou CW, Wang CM, Lin CL, Kirma NB, Liss MA, Vasisht R, Perillo EP, Blocker K, Horng H, Taverna JA, Ruan J, Yankeelov TE, Dunn AK, Huang HM, Yeh HC, Chen CL. "Spatial EGFR dynamics and metastatic phenotypes modulated by upregulated EPHB2 and SRC pathways predicting poor prognosis." Cancers, 2019, **IF: 6.126**

Selected Patents

1. Yeh HC, Obliosca JM, Chen YA, Liu C, Liu YL. Metal nanocluster beacons for detection of epigenetic modifications. US Patent 10,407,715, 2019.
2. Lin KH, Mishra N, Liu YL, Wang CC. Scaffolds and other cell-growth structures using microfluidics to culture biological samples. US Patent 9,957,481, 2018.
3. Lin KH, Mishra N, Liu YL, Wang CC. Method for fabricating foam scaffolds to culture cells. US Patent 8,513,014 B2,2013