

CHIAO-HAN, KUO

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EDUCATION

- Master of Science in Electrical and Computer Engineering** Aug 2018-present
University of Florida, Gainesville, Florida
Project: “SRAM circuit and layout design”, “Modern process flow”
- Master of Science in Electronic Physics** Jul 2013-Aug 2015
National Chiao Tung University, Hsinchu, Taiwan
Thesis: “Using localized surface plasmon resonance to enhance the efficiency of a GaN metal-semiconductor-metal (MSM) photodetector”
- Bachelor of Science in Physics** Aug 2009-Jun 2013
National Cheng Kung University, Tainan, Taiwan
Projects: “Parallel Computing Efficiency of Finite-difference Time-domain in 2D & 3D Simulations”
“Study of Organic Light-Emitting Diode”

WORK EXPERIENCE (Industry)

- Engineer** Oct 2015-Jun 2017
Taiwan Semiconductor Manufacturing Company, Limited (TSMC)
Yield Excellent Department F15B, Hsinchu, Taiwan
- Improved front end yield up to 70% (10nm process)
 - Controlled front end wafer quality (10nm process)
 - Transferred Technology from R&D to Fab (10nm process)
 - Taught assistant engineers advanced process course “Front end process flow and defect type” (10nm process)
- Yield Excellent Department F15A, Taichung, Taiwan
- Improved middle end yield by 5% (28nm process)
 - Controlled middle end wafer quality (28nm process)

WORK EXPERIENCE (Academia)

- Research Assistant**
University of Florida, Department of electrical and computer engineering, Gainesville, Florida Mar 2019-present
Project: Texas Instruments sponsored research in “Measurement and Modeling of Stress/Strain on Analog Transistor and Circuit”
- Calculated the properties change of BJT that caused by stress
- Taiwan Academia Sinica, Research Center for Applied Sciences**, Taipei, Taiwan Dec 2017-Jul 2018
- Research properties of meta-surface
 - Maintained e-beam lithography and trained students to use
- National Chiao Tung University, Department of Electronic Physics**, Hsinchu, Taiwan Sep 2013-Aug 2015
Project: Epistar-cooperative production plan of Polar GaN substrate and LED development
- Produced polar GaN substrate by hydride vapor phase epitaxy for Epistar’s blue LED research
- National Cheng Kung University, Department of Physics**, Tainan, Taiwan Sep 2012- Jun 2013
Project: Ministry of Science and Technology sponsored research in “Numerical Simulation of Sub-wavelength Plasmonic Photonics”
- Simulated plasmon resonance behavior in sub-wavelength structures by using different parameters
- Teaching Assistant**
National Chiao Tung University, Department of Electronic Physics, Hsinchu, Taiwan Sep 2013-Aug 2015
- Lead all TA to assist professor with teaching instruction, solved problems and graded

SKILLS

Computer: 3DS MAX, Cadence, Python, Origin, NPGS system, designcad (Autocad), OA system, **IEDA**, **JMP**, Klarity, Odyssey, ECOP, Siview, Labview, Fortran, C, KaleidaGraph, MS Excel Macro, MS Excel, MS Power Point, MS Word

Instruments: E-beam lithography, KLA-Tencor's wafer manufacturing systems, SEM Vision, Scanning electron microscopy, atomic force microscope, Plasma-enhanced chemical vapor deposition, Mask Aligner, Electron Beam Evaporation, hydride vapor phase epitaxy, Wafer Laser De-bonding Equipment, chemical mechanical polishing machine.

Languages: Mandarin (Chinese traditional, Chinese simplified), English

ACTIVITIES

- Volunteer of Taiwan's Starlight Character Education Development, 2017
- Volunteer of National Museum of Natural Science, Taiwan Semiconductor Manufacturing Company, 2017