Yu-Cheng **Chiou**

(+886) 916772645 | Justin.yucheng@gmail.com | yc-chiou.github.io/

"If At First the Idea Is Not Absurd, Then There Is No Hope for It." ***Albert Einstein***

Education

National Taiwan University — *Taipei, Taiwan*

POSTGRADUATE EDUCATION IN MATERIALS SCIENCE AND ENGINEERING — *Sep. 2013 - Feb. 2015*

- Professional Education and Continuing Studies in Semiconductor Physics, (Total Credits Earned: 28)

University of Manchester — *Manchester, UK*

M.S. IN ADVANCED ENGINEERING MATERIALS — *Jun. 2010 - Dec. 2011*

- Master Thesis: Microwave Dielectric Ceramics, (Second-class honours, upper division)

Skills

Programming	C/C++, Python, Scheme, Matlab
Simulation	Sentaurus TCAD, Quantum Espresso, python-meep
Fabrication	CVD, ALD, Sputtering, Thermal and E-beam Evaporator
Characterization	SEM, Optic Microscopy, XRD, Raman Spectroscopy
Languages	Mandarin, English

Work Experience

University of Tromsø — *Tromsø, Norway*

DOCTORAL RESEARCH FELLOW — *Apr. 2019 - Dec. 2021*

- Developed a visualization framework with Python for adaptive industrial and household electricity price plans in Arctic Norway.
- Investigated in transfer-free Graphene growth on the various semiconductor substrate.
- Led the hands-on experiments in two courses, Solar Energy and Energy Storage and undergraduate Physics.
- Installed and maintained Raman spectroscopy lab and designed the training courses.
- Rebuilt, refined, and maintained the solar cell measurement equipment.

Masdar Institute — *Abu Dhabi, UAE*

MASTER RESEARCH ASSISTANCE — *Sep. 2016 - May. 2018*

- Al-doped ZnO TFT for wearable device applications.
- TA in two courses, Semiconductor Physics and Semiconductor Manufacturing.

Research Experience

Two-dimensional Materials — *Tromsø, Norway*

PROJECT — *Apr. 2019 - Dec. 2021*

- Direct growth graphene on conventional semiconductor substrates.

Graphene growth mechanism and its challenges on various substrate — *Taipei Taiwan & Tromsø, Norway*

PROJECT — *May. 2018 - Dec. 2021*

- Graphene growth on semiconductor substrates for remote epitaxy focused on Ge, GaN, and GaAs.(MIT-MI Flagship research project).

Van der Waals force interaction corresponds to single, bi-, and multi-layers graphene — *Abu Dhabi, UAE*

PROJECT — *Sep. 2016 - Apr. 2018*

- The possibility of representing van der Waals force interaction via Hamaker constant.

Publication

Link **Publications list**, Yu-Cheng Chiou — *2011 - 2021*