

# Tien-Yun Wei

*National Tsing Hua University*  
Institute of Electronic Engineering

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Lab: Yang Research Group

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## Research Interests

- Germanium and Germanium-Tin Alloys
- THz Optoelectronics
- Plasmonics
- Nanophotonics
- Surface Science

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## Education

2017—Present **M.S. in Electronic Engineering**, *National Tsing Hua University*, Hsinghu, Taiwan

2013—2017 **B.S. in Physics**, *National Tsing Hua University*, Hsinchu, Taiwan  
GPA : 3.34 / 4.00 (Last 60 : 3.78 / 4.00)

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## Awards and Honors

- 2016 • **Distinguished Presentation Award**  
The summer student program of Academia Sinica
- 2013 • **Second place** in the division III group (National Basketball Competition)  
National Zhong-Zheng Cup of Miaoli Basketball Association
- 2013 • **Third place** in the division II group (National Basketball Competition)  
University Basketball Association

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## Undergraduate Projects

- 2016 • **Introduction to Internet of Things and Applications**  
Used LinkIt One development board with Arduino IDE to program *Intelligent Parking System*
- 2015 • **Experimental Technique in Physics**  
Developed a *Temperature-Controlled Automatic Sprinkler System* programmed by LabView

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## Research Experience

- 2017     **Undergraduate Research**, Department of Electrical Engineering, *National Tsing Hua University*, Hsinchu, Taiwan  
Advisor: Prof. Shang-Hua Yang  
Topic: Improved Efficiency of Terahertz Device by Use of Magnetic Alloys and Germanium
- Simulated transmission and absorption of laser power of terahertz device
  - Investigated magnetic alloys which are possible to applied in terahertz device
  - Compared properties between direct band gap and indirect band gap materials
- 2016     **Summer Intern**, Institute of Physics, *Academia Sinica*, Taipei, Taiwan  
Lab: Tunneling Spectroscopic Imaging Lab  
Advisor: Dr. Tien-Ming Chuang  
Topic: Preparation and Characterization of Tungsten Tips Suitable for STM
- Characterized tungsten tips with Field Ion Microscopy
  - Etched tungsten tips into atomic level for Scanning Tunneling Microscope
  - Observed patterns of polycrystal tungsten tips
  - Preparation of ultra high vacuum system
- 2016     **Undergraduate Research**, Department of Physics, *National Tsing Hua University*, Hsinchu, Taiwan  
Advisor: Prof. Germar Hoffmann  
Topic: Different organization of Br<sub>2</sub>-Picene on the metal with STM
- Investigated molecules self-assembly behavior on Au(111) and Ag(111)
  - Distinguished three self-assembly patterns of Br<sub>2</sub>-Picene
  - Practiced molecules evaporation, metal sputtering and annealing
  - Operated Scanning Tunneling Microscope in cryogenic and vacuum system
  - Preparation of ultra high vacuum system

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## Other Experience

- 2017—Present     • **Research Assistant**  
Project Manager: Shu-Wei Chang  
Research Center for Applied Sciences, Academia Sinica, Taipei, Taiwan
- 2013—2015     • **Women Basketball Team Member**  
Coach: Li-Ying Chueh, Wen-Wei Hsieh  
*National Tsing Hua University*, Hsinchu City, Taiwan

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## Additional Skills

- Programming: Latex, Python, Labview, C

## Hobbies

- Play basketball
- Listen to music

## Others

- Favorite NBA player : Ricky Rubio
- Favorite film : Harry Potter

## References

- **Shang-Hua Yang**

Assistant Professor

Department of Electrical Engineering, *National Tsing Hua University*, Hsinchu, Taiwan

Office: Delta R909

E-mail: shanghua@ee.nthu.edu.tw

- **Germar Hoffmann**

Associate Professor

Department of Physics, *National Tsing Hua University*, Hsinchu, Taiwan

Office: PHYS R105

E-mail: germar.hoffmann@googlemail.com

- **Tien-Ming Chuang**

Assistant Research Fellow

Institution of Physics, Academia Sinica, Taipei, Taiwan

Office: P517

E-mail: chuangtm@phys.sinica.edu.tw

- **Shu-Wei Chang**

Associate Research Fellow

Research Center for Applied Sciences, Academia Sinica, Taipei, Taiwan

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