

## 葉宗翰 助理教授

	學歷	國立成功大學光電科學與工程學系博士
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	研究領域	太陽能電池、氣體感測器、紅外線感測器、半導體元件製程、光電材料應用與分析

### ※個人學歷：

學校名稱	國別	主修學門系所	學位	起訖年月 (西元年/月)
國立成功大學	中華民國	光電科學與工程 學系	博士	自 2016/09 至 2020/06
國防大學 理工學院	中華民國	電子工程研究所	碩士	自 2009/09 至 2011/06
海軍軍官學校	中華民國	電機工程系	學士	自 2002/07 至 2006/07

### ※個人經歷：

服務機構	服務部門/系所	職稱	起迄年月(西元年/月)
國防大學 理工學院	電機電子工程學系	助理教授	自 2020 年 6 月迄今

### ※研究領域：

1. 太陽能電池	2. 氣體感測器	3. 紅外線感測器	4. 半導體元件製程	5. 光電材料應用分析
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※教授課程：

大學部	1. 電路學	2. 近代光電工程
	3. 光電子學	4. 微電子技術
碩士班	1. 光電子學	2. 微電子技術

※ 論文著述：

(A) 期刊論文：

項次	年度	發表著作	收錄資料庫
1	114	Hsin-Ying Lee, Mu-Ju Wu, Shao-Yu Chu, Ting-Chun Chang, Yi-Feng, Tung, <b>Tsung-Han Yeh</b> , Ching-Ting Lee, "Highly sensitive NO <sub>2</sub> gas sensors based on heterostructured p-rGO/n-Ga <sub>2</sub> O <sub>3</sub> nanorods," <i>Appl. Surf. Sci. Adv.</i> , vol. 25, Art. no. 100679, 2025.	ELSEVIER /SCI
2	113	Shao-Yu Chu, Mu-Ju Wu, <b>Tsung-Han Yeh</b> , Ching-Ting Lee, Hsin-Ying Lee, "Sensing Mechanism and Characterization of NO <sub>2</sub> Gas Sensors Using Gold-Black NP-Decorated Ga <sub>2</sub> O <sub>3</sub> Nanorod Sensing Membranes," <i>ACS Sens.</i> , vol. 9, pp. 118-125, 2024.	ACS/SCI
3	113	Po-Hsun Chen, Chih-Yang Lin, <b>Tsung-Han Yeh</b> , Cheng-Yun Shou, "Cell Size Effects and Distinct Current Conduction Behaviors for Hafnium-Oxide-Based Selectors with Vanadium as Top Electrode," <i>Phys. Status Solidi A</i> , Art. no. 2300572, 2024.	WILEY/SCI
4	112	Jen-Wei Huang, Po-Hsun Chen, <b>Tsung-Han Yeh</b> , Xin-Ying Tsai, Pei-Yu Wu, "Analysis of the Extraction Method and Mechanism of Hot Carrier Degradation in Al <sub>2</sub> O <sub>3</sub> /Si <sub>3</sub> N <sub>4</sub> Bilayer Gate Dielectric AlGaN/GaN MIS-HEMTs," <i>IEEE Trans. Device Mater. Rel.</i> , vol. 23, no. 4, pp. 510-515, 2023.	IEEE/SCI
5	112	Jen-Wei Huang, Po-Hsun Chen, <b>Tsung-Han Yeh</b> , Chih-Cheng Yang, "Investigating the Effects of Sulfur Treatment on Material Characteristics and Resistance Switching Device Applications with Supercritical Fluid Technique," <i>Phys. Status Solidi A</i> , vol. 220, Art. no. 2300453, 2023.	WILEY/SCI
6	112	Po-Hsun Chen, Yu-Zhe Zheng, <b>Tsung-Han Yeh</b> , Tzu-Yun Nieh, "Investigating DC and AC Degradation Behaviors to P-type Low Temperature Polycrystalline Silicon Thin Film Transistor with Fin-like Structure," <i>J. Phys. D: Appl. Phys.</i> , vol. 56, Art. no. 435101, 2023.	IOP/SCI

7	112	Shao-Yu Chu, Mu-Ju Wu, <b>Tsung-Han Yeh</b> , Ching-Ting Lee, Hsin-Ying Lee, "Investigation of High-Sensitivity NO <sub>2</sub> Gas Sensors with Ga <sub>2</sub> O <sub>3</sub> Nanorod Sensing Membrane Grown by Hydrothermal Synthesis Method," <i>Nanomaterials</i> , vol. 13, Art. no. 1064, 2023.	MDPI/SCI
8	111	Shao-Yu Chu, <b>Tsung-Han Yeh</b> , Ching-Ting Lee, Hsin-Ying Lee, "Mg-doped beta-Ga <sub>2</sub> O <sub>3</sub> films deposited by plasma-enhanced atomic layer deposition system for metal-semiconductor-metal ultraviolet C photodetectors," <i>Mater. Sci. Semicond. Process.</i> , vol. 142, Art. no. 106471, 2022.	ELSEVIER /SCI
9	109	Shao-Yu Chu, Meng-Xian Shen, <b>Tsung-Han Yeh</b> , Chia-Hsun Chen, Ching-Ting Lee, Hsin-Ying Lee, "Investigation of Ga <sub>2</sub> O <sub>3</sub> -Based Deep Ultraviolet Photodetectors Using Plasma-Enhanced Atomic Layer Deposition System," <i>Sensors</i> , vol. 20, no. 21, Art. no. 6159, 2020.	MDPI/SCI
10	109	<b>Tsung-Han Yeh</b> , Po-Hsun Chen, Chih-Yang Lin, Yi-Ting Tseng, Wen-Chung Chen, Chun-Chu Lin, Ting-Chang Chang, Ching-Ting Lee, Hsin-Ying Lee, "Enhancing Threshold Switching Characteristics and Stability of Vanadium Oxide-Based Selector with Vanadium Electrode," <i>IEEE Trans. Electron Devices</i> , vol. 67, no. 11, pp. 5059-5062, 2020.	IEEE/SCI
11	109	Ting-Chun Wang, <b>Tsung-Han Yeh</b> , Shao-Yu Chu, Hsin-Ying Lee, Ching-Ting Lee, "Developed Diamond Wire Sawing Technique with High Slicing Ability for Multicrystalline Silicon Wafers," <i>Mater. Manuf. Process.</i> , vol. 35, pp. 1727-1731, 2020.	Taylor/SCI
12	109	<b>Tsung-Han Yeh</b> , Shao-Yu Chu, Hsin-Ying Lee, Ching-Ting Lee, "Performance Improvement of Nitrogen Dioxide Gas Sensors Based on Novel P-N Heterojunction Gold Black/VO <sub>x</sub> Bi-Sensing Membranes," <i>Mater. Sci. Semicond. Process.</i> , vol. 115, Art. no. 105125, 2020.	ELSEVIER /SCI
13	109	<b>Tsung-Han Yeh</b> , Hsin-Ying Lee, Ching-Ting Lee, "Performance Improvement of Perovskite Solar Cells Using Vanadium Oxide Interface Modification Layer," <i>J. Alloy. Compd.</i> , vol. 822, Art. no. 153620, 2020.	ELSEVIER /SCI
14	109	<b>Tsung-Han Yeh</b> , Cheng-Kang Tsai, Shao-Yu Chu, Hsin-Ying Lee, Ching-Ting Lee, "Performance Improvement of Y-Doped VO <sub>x</sub> Microbolometers with Nanomesh Antireflection Layer," <i>Opt. Express</i> , vol. 28, pp. 6433-6442, 2020.	OSA/SCI
15	109	Kai Cheih Chang, <b>Tsung-Han Yeh</b> , Hsin-Ying Lee, Ching-Ting Lee, "High Performance Perovskite Solar Cells Using Multiple Hole Transport Layer and Modulated FA <sub>x</sub> MA <sub>1-x</sub> PbI <sub>3</sub> Active Layer," <i>J. Mater. Sci.-Mater. Electron.</i> , vol. 31, pp. 4135-4141, 2020.	Springer/SCI

(B) 研討會論文：

項次	年度	發表著作
1	108	Cheng-Kang Tsai, <b>Tsung-Han Yeh</b> , Hsin-Ying Lee, Ching-Ting Lee, “Performance Investigation of Y-doped VO <sub>x</sub> Microbolometers,” <i>Taiwan Vacuum Society 2019 Annual Meeting (TVS-2019)</i> , November 1, 2019, Hsinchu, Taiwan.
2	108	Hsin-Ying Lee, <b>Tsung-Han Yeh</b> , Ching-Ting Lee, Junseok Heo, “Performance Investigation of the Perovskite Solar Cell with Vacuum Sputtered Vanadium Oxide Anode Interface Modified Layer,” <i>21st International Vacuum Congress (IVC-21)</i> , July 1-5, 2019, Malmö, Sweden, 2056-A-1902.
3	107	Cheng-Kang Tsai, <b>Tsung-Han Yeh</b> , Hsin-Ying Lee, Ching-Ting Lee, Shiang-Feng Tang, Wen-Jen Lin, “Development of Soldering Metal Ring on Long-Wavelength Light Window,” <i>Taiwan Vacuum Society 2018 Annual Meeting (TVS-2018)</i> , November 2, 2018, Chiayi, Taiwan.
4	107	Hsin-Ying Lee, <b>Tsung-Han Yeh</b> , Yen-Ting Liu, Shiang-Feng Tang, Wen-Jen Lin, Hsin-Chang Chen, “Investigated Performance of Uncooled VO <sub>x</sub> Microbolometers,” <i>The 12th Cross-strait Symposium on Optoelectronics</i> , May 2-6, 2018, Hong Kong.
5	106	Li-Han Kao, Yen-Ting Liu, <b>Tsung-Han Yeh</b> , Hsin-Ying Lee, “Performances of VO <sub>x</sub> -Based Microbolometers” <i>Optics &amp; Photonics Taiwan, International Conference, Annual Meeting of Taiwan Photonics Society (OPTIC 2017)</i> , December 8, 2017, Kaohsiung, Taiwan.
6	106	<b>Tsung-Han Yeh</b> , Li-Han Kao, Hsin-Ying Lee, Ching-Ting Lee, Shiang-Feng Tang, Wen-Jen Lin, Hsin-Chang Chen, “Performance Enhancement of VO <sub>x</sub> Bridge Microbolometers with Absorption Layer and Antireflection Layer,” <i>International Conference on Innovation, Communication and Engineering (ICICE 2017)</i> , November 5-11, 2017, Yunnan, China, pp. 76-77.
7	106	<b>Tsung-Han Yeh</b> , Hsin-Ying Lee, “Performance Investigation of Microbolometers with Small Pixel Pitch,” <i>Taiwan Vacuum Society 2017 Annual Meeting (TVS-2017)</i> , October 27, 2017, Tainan, Taiwan.