Prof. 楊勝州 (Sheng-Joue Young)

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Department of Electronic Engineering, National United University

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I. Main Education (學歷)

2005/9 ~ 2008/6 Ph.D., Institute of Microelectronics, National Cheng Kung University, Taiwan
2003/9 ~ 2005/6 M.S., Institute of Electro-Optical Science and Engineering, National Cheng Kung University, Taiwan
1999/9 ~ 2003/6 B.S., Department of Physics, National Changhua University of Education, Taiwan

II. Research Fields (Expertise 研究專長)

Semiconductor physics、Optoelectronic devices、Nanotechnology、Sensors

III. Personal Experiences (履經歷):

Associate Editor of Journal of the Electrochemical Society (SCI Journal) 2023/03/01 ~
Associate Editor of ECS Journal of Solid State Science and Technology (SCI Journal) 2023/03/01 ~
IEEE Senior Member 2021/02 ~
Review Editor of Frontiers in Sensors, 2020/7~
Editor of Microelectronic Engineering (SCI Journal), 2020/1~
Editor of Micro and Nano Engineering, 2020/1~
Editorial Advisory Committee of Journal of the Electrochemical Society (SCI Journal), 2019/11~

Editorial Advisory Committee of ECS Journal of Solid State Science and Technology (SCI Journal), 2019/11~

Editorial Board Member of Sci, 2019/1~

Editor of Journal of Science and Innovation, 2018/1~

Editor of Journal of Cultural and Creative Industries Research, 2018/1~

Professor, Department of Electronic Engineering, National United University, Taiwan 2022/8 ~

Associate Professor, Department of Electronic Engineering, National United University, Taiwan 2020/8 ~ 2022/7

Associate Professor, Department of Electronic Engineering, National Formosa University, Taiwan 2013/8 ~ 2020/7

Assistant Professor, Department of Electronic Engineering, National Formosa University, Taiwan 2010/2 ~ 2013/7

Postdoctoral Research Fellow, Institute of Microelectronics, National Cheng Kung University, Taiwan 2008/8 ~ 2010/1

Visiting Research Student with the Graduate School of Engineering, Chiba University, Chiba, Japan 2007/7 ~ 2007/9

IV. Personal Honors (個人榮譽事項)：

World's Top 2% Scientists 2022

World's Top 2% Scientists 2021

VI. Publication Papers & Projects (近年發表之論文與研究計劃)

A. Journal Papers:

1. Sonali Verma, Bhavya Padha, **Sheng-Joue Young**, Yen-Lin Chu, Rajesh Bhardwaj, Rajneesh Kumar Mishra, Sandeep Arya*, "3D MXenes for supercapacitors: Current status, opportunities and challengess," *Progress in Solid State Chemistry*, October 01, 2023. (https://doi.org/10.1016/j.progsolidstchem.2023.100425) (IF:12, Q1, Subject Categories: CHEMISTRY, INORGANIC & NUCLEAR 2/42 = 4.76%)

2. Shradha Dutt, Sonali Verma, Anoop Singh, Prerna Mahajan, Bhavya Padha, Aamir Ahmed, **Sheng-Joue Young**, Vinay Gupta, Dena N Qasim Agha, Sandeep Arya*, "Flexible and Highly Stable Textile-Based Symmetric Supercapacitor Comprising Binder-Free MnO_2/rGO-CF Nanocomposite Electrodes," *Journal of Electronic Materials*, August 29, 2023. (https://doi.org/10.1007/s11664-023-10683-5) (IF:2.1, Q3, Subject Categories: PHYSICS, APPLIED 98/159 = 61.64%)

3. **Sheng-Joue Young***, Yi-Hsing Liu, Yen-Lin Chu and Jian-Zhi Huang, "Nonenzymatic Glucose Sensors of ZnO Nanorods Modified by Au Nanoparticles," *IEEE Sensors Journal*, vol. 23, no. 12, pp. 12503-12510, June 15, 2023. (IF:4.3, Q1, Subject Categories: INSTRUMENTS & INSTRUMENTATION 15/63 = 23.81%)

4. Yen-Lin Chu, **Sheng-Joue Young***, Hua-Chi Chang, Sandeep Arya, Yi-Hsing Liu, Tung-Te Chu, "Enhanced Nanogenerator Performances of 1D Al-Doped ZnO Nanorod Arrays through Ultrasonic Wave Systems," *ACS Applied Electronic Materials*, vol. 5, pp. 1277-1285, February 13, 2023.
(https://doi.org/10.1021/acsaelm.2c01746)
(IF:4.7, Q2, Subject Categories: ENGINEERING, ELECTRICAL & ELECTRONIC 76/275 = 27.64%)

5. Aamir Ahmed, Anoop Singh, **Sheng-Joue Young**, Vinay Gupta, Maheshwary Singh, Sandeep Arya*, "Synthesis techniques and advances in sensing applications of reduced graphene oxide (rGO) Composites: A Review"," *Composites Part A*, vol. 165, pp. 107373, February, 2023.
(IF:9.463, Q1, Subject Categories: ENGINEERING, MANUFACTURING 8/51 = 15.69%)

6. Yen-Lin Chu, **Sheng-Joue Young***, Yu-Jhih Chu, Yi-Hsing Liu and Tung-Te Chu, "High-Performance UV Photodetectors Based on 1-D Ag/ZnO Nanostructures With a Simple Photochemical Process at Room Temperature," *IEEE Electron Device Letters*, vol. 44, no. 1, pp. 124-127, January, 2023.
(IF: 4.9, Q2, Subject Categories: ENGINEERING, ELECTRICAL & ELECTRONIC 70/275 = 25.45%)

7. **Sheng-Joue Young*** and Yi-Hsing Liu, "Perspective—Doped ZnO Nanostructures Based on Ultraviolet Photosensors," *ECS Sensors Plus*, vol. 1, pp. 043602, October 27, 2022.

8. Yen-Lin Chu, Ren-Jie Ding, Tung-Te Chu, and **Sheng-Joue Young***, "UV-Enhanced Electrical Performances of ZnO:Ga Nanostructure Nanogenerators by Using Ultrasonic Waves," *IEEE Transactions on Electron Devices*, vol. 69 no. 10, pp. 5800-5807, October, 2022.
(IF:3.1, Q2, Subject Categories: PHYSICS, APPLIED 65/159 = 40.88%)

9. Yen-Lin Chu, Yi-Hsing Liu, Tung-Te Chu and **Sheng-Joue Young***, "Improved UV-sensing of Au-decorated ZnO Nanostructure MSM Photodetectors," *IEEE Sensors Journal*, vol. 22, no. 6, pp. 5644-5650, March 15, 2022.
(IF:4.3, Q1, Subject Categories: INSTRUMENTS & INSTRUMENTATION 15/63 = 23.81%)

10. **S. J. Young***, "Preface of Special Issue on Advanced Micro and Nanomaterials for various Sensor Applications (Selected Papers from ICASI 2020), " *Sensors and Materials*, vol. 34, no. 1(2), 2022.
(IF:1.2, Q4, Subject Categories: INSTRUMENTS & INSTRUMENTATION 54/63 = 85.71%)

11. **Sheng-Joue Young***, Shoou-Jinn Chang and Yi-Hsing Liu, "*Editorial* Advanced Nanomaterials for Applications in Photonic and Sensor Devices," *Journal of nanomaterials*, Volume 2022, Article ID 9895385, 2 page, February 12, 2022
(IF: 3.8, Q3, Subject Categories: MATERIALS SCIENCE, MULTIDISCIPLINARY 173/345 = 50.14%)

12. **Sheng-Joue Young*** and Ajit Khosla, “Special issue: innovation, communication and engineering 2018, ” *Microsystem Technologies*, vol. 28 pp. 1, January, 2022.
(DOI: 10.1007/s00542-021-05238-9)
(IF:2.1, Q3, Subject Categories: PHYSICS, APPLIED 98/159 = 61.64%)

13. Yen-Lin Chu, **Sheng-Joue Young***, Tung-Te Chu, Ajit Khosla, Kuei-Yuan Chiang and Liang-Wen Ji*, “Improvement of the UV-Sensing Performance of Ga-Doped ZnO Nanostructures via a Wet Chemical Solution at Room Temperature,” *ECS Journal of Solid State Science and Technology*, vol. 10, pp. 127001, December 07, 2021.
(IF:2.2, Q3, Subject Categories: PHYSICS, APPLIED 96/159 = 60.38%)

14. Yen-Lin Chu, **Sheng-Joue Young***, Du-Yi Cai and Tung-Te Chu, “Characteristics of Field-Emission Emitters Based On Graphene Decorated ZnO Nanostructures,” *IEEE Journal of the Electron Devices Society*, vol. 9, pp. 1076-1083, November 15, 2021.
(IF:2.3, Q3, Subject Categories: ENGINEERING, ELECTRICAL & ELECTRONIC 162/275 = 58.91%)

15. **Sheng-Joue Young*** and Ajit Khosla, “Special issue: innovation, communication and engineering 2018, ” *Microsystem Technologies*, October 22, 2021.
(DOI: 10.1007/s00542-021-05238-9)
(IF:2.1, Q3, Subject Categories: PHYSICS, APPLIED 98/159 = 61.64%)

16. **Sheng-Joue Young***, Yu-Jhih Chu and Yu-Long Chen, “Enhancing pH sensors performance of ZnO nanorods with Au nanoparticles adsorption,” *IEEE Sensors Journal*, vol. 21, no. 12, pp. 13068-13073, June 15, 2021.
(IF:4.3, Q1, Subject Categories: INSTRUMENTS & INSTRUMENTATION 15/63 = 23.81%)

17. Yen-Lin Chu, **Sheng-Joue Young***, Hong-Ru Dai, Yi-Mu Lee, Ajit Khosla, Tung-Te Chu and Liang-Wen Ji*, “Improved pH-Sensing Characteristics by Pt Nanoparticle-Decorated ZnO Nanostructures,” *ECS Journal of Solid State Science and Technology*, vol. 10, pp. 067001, June 07, 2021.
(IF:2.2, Q3, Subject Categories: PHYSICS, APPLIED 96/159 = 60.38%)

18. **S. J. Young**, T. H. Meen, Ajit Khosla and B. Michel, “Special issue: international Conference on applied system innovation (ICASI 2018), ” *Microsystem Technologies*, vol. 27, issue 4, pp. 1017 May 07, 2021.
(DOI: 10.1007/s00542-020-04928-0)
(IF:2.1, Q3, Subject Categories: PHYSICS, APPLIED 98/159 = 61.64%)

19. Kin-Tak Lam, **Sheng-Joue Young***, Yen-Lin Chu*, Chi-Nan Tsai, Tung-Te Chu, Ting-Sung Lu, and Liang-Wen Ji*, "Characteristics of Metal–Semiconductor–Metal Ultraviolet Photodetectors Based on Pure ZnO/Amorphous IGZO Thin-Film Structures," *Journal of nanomaterials*, vol. 2021, Article ID 6649200, 6 pages, April 12, 2021.
(https://doi.org/10.1155/2021/6649200)
(IF: 3.8, Q3, Subject Categories: MATERIALS SCIENCE, MULTIDISCIPLINARY 173/345 = 50.14%)

20. **Sheng-Joue Young*** and Yen-Lin Chu, "Hydrothermal Synthesis and Improved CH_3OH-sensing Performance of ZnO Nanorods with Adsorbed Au NPs," *IEEE Transactions on Electron Devices*, vol. 68, no. 4, pp. 1886-1891, April, 2021.
(IF:3.1, Q2, Subject Categories: PHYSICS, APPLIED 65/159 = 40.88%)

21. **Sheng-Joue Young*** and Yen-Lin Chu, "Characteristics of Field Emitters on the Basis of Pd-Adsorbed ZnO Nanostructures by Photochemical Method," *ACS Applied Nano Materials*, vol. 4, no. 3, pp. 2515-2521, March 12, 2021.
(IF:5.9, Q2, Subject Categories: MATERIALS SCIENCE, MULTIDISCIPLINARY 97/342 = 28.36%)

22. Yen-Lin Chu, **Sheng-Joue Young***, Ren-Jie Ding, Tung-Te Chu, Ting-Sung Lu, and Liang-Wen Ji, "Improving ZnO Nanorod Humidity Sensors with Pt Nanoparticle Adsorption," *ECS Journal of Solid State Science and Technology*, vol. 10, pp. 037003, March 10, 2021.
(IF:2.2, Q3, Subject Categories: PHYSICS, APPLIED 96/159 = 60.38%)

23. **Sheng-Joue Young*** and Yi-Hsing Liu, "Pd nanoparticle adsorption ZnO nanorods for enhancing photodetector UV-sensing performance," *IEEE Journal of the Electron Devices Society*, vol. 9, pp. 265-270, February 25, 2021.
(IF:2.3, Q3, Subject Categories: ENGINEERING, ELECTRICAL & ELECTRONIC 162/275 = 58.91%)

24. Sandeep Arya, Prerna Mahajan, Sarika Mahajan, Ajit Khosla, Ram Datt, Vinay Gupta, **Sheng-Joue Young** and Sai Kiran Oruganti, "Influence of Processing Parameters to Control Morphology and Optical Properties of Sol-gel Synthesized ZnO Nanoparticles - A Review," *ECS Journal of Solid State Science and Technology*, vol. 10, pp. 023002, February 05, 2021.
(IF:2.2, Q3, Subject Categories: PHYSICS, APPLIED 96/159 = 60.38%)

25. Yen-Lin Chu, **Sheng-Joue Young***, Liang-Wen Ji and Shih-Ping Yan, "Fabrication and characterization of a-IGZO thin-film transistors with and without passivation layers," *ECS Journal of Solid State Science and Technology*, vol. 10, pp. 027002, February 05, 2021.
(IF:2.2, Q3, Subject Categories: PHYSICS, APPLIED 96/159 = 60.38%)

26. **Sheng-Joue Young*** and L. T. Lai, "Investigation of a Highly Sensitive Au Nanoparticle-Modified ZnO Nanorod Humidity Sensor," *IEEE Transactions on Electron Devices*, vol. 68, no. 2, pp. 775-779, February, 2021.
(IF:3.1, Q2, Subject Categories: PHYSICS, APPLIED 65/159 = 40.88%)

27. Yen-Lin Chu, **Sheng-Joue Young***, Liang-Wen Ji*, Tung-Te Chu and Chang-Hsun Wu, "UV-Enhanced Field-emission Performances of Pd-Adsorbed ZnO Nanorods through Photochemical Synthesis," *ECS Journal of Solid State Science and Technology*, vol. 10, pp. 017001, January 11, 2021.
(IF:2.2, Q3, Subject Categories: PHYSICS, APPLIED 96/159 = 60.38%)

28. **Sheng-Joue Young***, Yi-Hsing Liu, Zheng-Dong Lin, Kumkum Ahmed, MD Nahin Islam Shiblee, Sean Romanuik, Praveen Kumar Sekhar, Thomas Thundat, Larry Nagahara, Sandeep Arya, Rafiq Ahmed, Hidemitsu Furukawa and Ajit Khosla, "Multi-Walled Carbon Nanotubes Decorated with Silver Nanoparticles for Acetone Gas Sensing at Room Temperature," *Journal of The Electrochemical Society*, vol. 167, no. 16, pp.167519, December 18, 2020.
(IF:3.9, Q2, Subject Categories: MATERIALS SCIENCE, COATINGS & FILMS 7/21 = 33.33%)

29. **Sheng-Joue Young***, Yi-Hsing Liu, MD Nahin Islam Shiblee, Kumkum Ahmed, Lin-Tzu Lai, Larry Nagahara, Thomas Thundat, Tsukasa Yoshida, Sandeep Arya, Hidemitsu Furukawa and Ajit Khosla, "Flexible Ultraviolet Photodetectors Based on One-Dimensional Gallium-doped Zinc Oxide Nanostructures," *ACS Applied Electronic Materials*, vol. 2, pp. 3522-3529, November 11, 2020.
(https://doi.org/10.1021/acsaelm.0c00556)
(IF:4.7, Q2, Subject Categories: ENGINEERING, ELECTRICAL & ELECTRONIC 76/275 = 27.64%)

30. **Sheng-Joue Young*** and Yen-Lin Chu, "Platinum Nanoparticle-Decorated ZnO Nanorods Improved the Performance of Methanol Gas Sensor," *Journal of The Electrochemical Society*, vol. 167, pp. 147508, November 05, 2020.
(IF:3.9, Q2, Subject Categories: MATERIALS SCIENCE, COATINGS & FILMS 7/21 = 33.33%)

31. Yu-Chi Chang, Jia-Cheng Jian, Ya Lan Hsu, Wei-Yun Huang and **Sheng-Joue Young**, "A Green Strategy for Developing a Self-Healing Gelatin Resistive Memory Device," *ACS Applied Polymer Materials*, vol. 2, pp. 5318-5326, November 04, 2020.
(https://doi.org/10.1021/acsapm.0c01119)
(IF:5.0, Q1, Subject Categories: POLYMER SCIENCE 16/86 = 18.60%)

32. **Sheng-Joue Young***, Yi-Hsing Liu, Shoou-Jinn Chang and Chieh-Fei Chiu, "Fabrication of Silicon Dioxide by Photo-Chemical Vapor Deposition to Decrease Detector Current of ZnO Ultraviolet Photodetectors," *ACS Omega*, vol. 5, pp. 27566-27571, October 13, 2020.
(IF:4.1, Q2, Subject Categories: CHEMISTRY, MULTIDISCIPLINARY 69/178 = 38.76%)

33. Yu-Chi Chang, Jia-Cheng Jian, Ming-Yueh Chuang, Ya Lan Hsu, Wei-Yun Huang and **Sheng-Joue Young**, "Metal and Carbon Filaments in Biomemory Devices through Controlling the Al/Apple Pectin Interface," *ACS Applied Electronic Materials*, vol. 2, pp. 2798-2805, August 03, 2020.
(https://dx.doi.org/10.1021/acsaelm.0c00483)
(IF:4.7, Q2, Subject Categories: ENGINEERING, ELECTRICAL & ELECTRONIC 76/275 = 27.64%)

34. Yen-Lin Chu, **Sheng-Joue Young***, Liang-Wen Ji, I-Tseng Tang and Tung-Te Chu, "Fabrication of Ultraviolet Photodetectors Based on Fe-Doped ZnO Nanorod Structures," *Sensors*, vol. 20, pp. 3861(1-12), July 10, 2020.
(IF:3.9, Q2, Subject Categories: INSTRUMENT & INSTRUMENTATION 19/63 = 30.16%)

35. **S. J. Young***, "Preface of Special Issue on Advanced Micro and Nanomaterials for various Sensor Applications (Selected Papers from ICASI 2019), " *Sensors and Materials*, vol. 32, no. 7(2), 2020.
(IF:1.2, Q4, Subject Categories: INSTRUMENTS & INSTRUMENTATION 54/63 = 85.71%)

36. Yen-Lin Chu, **Sheng-Joue Young***, Liang-Wen Ji, Tung-Te Chu, Kin-Tak Lam, Yu-Jen Hsiao, I-Tseng Tang and Tzu-Hao Kuo, "Characteristics of Gas Sensors Based on Co-doped ZnO Nanorod Arrays," *Journal of The Electrochemical Society*, vol. 167, pp. 117503, July 02, 2020.
(IF:3.9, Q2, Subject Categories: MATERIALS SCIENCE, COATINGS & FILMS 7/21 = 33.33%)

37. Yen-Lin Chu, **Sheng-Joue Young***, Liang-Wen Ji, Tung-Te Chu and Po-Hao Chen, " Synthesis of Ni-doped ZnO Nanorod Arrays by Chemical Bath Deposition and Their Application to Nanogenerators," *Energies*, vol. 13, pp. 2731(1-10), May, 2020.
(IF:3.2, Q3, Subject Categories: ENERGY & FUELS 78/115 = 67.83%)

38. Y. H. Liu, S. J. Chang, L. T. Lai, Y. P. Tu and **S. J. Young***, "Aluminum-doped zinc oxide nanorods and Methyl alcohol gas sensor application," *Microsystem Technologies*, April 25, 2020. (DOI: 10.1007/s00542-020-04856-z)
(IF:2.1, Q3, Subject Categories: PHYSICS, APPLIED 98/159 = 61.64%)

39. **S. J. Young***, S. J. Chang, Stephen D. Prior and L. W. Ji, "Special Issue: Selected Papers from IEEE ICASI 2019, " *Applied Sciences*, vol. 10(8), pp. 2652(1-4), April 11, 2020.
(IF: 2.7, Q2, Subject Categories: ENGINEERING, MULTIDISCIPLINARY 42/90 = 46.67%)

40. Yen-Lin Chu, Liang-Wen Ji, Yu-Jen Hsiao, Hao-Ying Lu, **Sheng-Joue Young**, I-Tseng Tang, Tung-Te Chu and Xin-Jia Chen, "Fabrication and Characterization of Ni-Doped ZnO Nanorod
Arrays for UV Photodetector Application," *Journal of The Electrochemical Society*, vol. 167, pp. 067506, March, 2020.
(IF:3.9, Q2, Subject Categories: MATERIALS SCIENCE, COATINGS & FILMS 7/21 = 33.33%)

41. **S. J. Young*** and L. T. Lai, "UV illumination and Au nanoparticles Enhanced ZnO Nanorods Field Electron Emission Device," *IEEE Transactions on Electron Devices*, vol. 67, no. 1, pp. 304-308, January, 2020.
(IF:3.1, Q2, Subject Categories: PHYSICS, APPLIED 65/159 = 40.88%)

42. Yen-Lin Chu, Liang-Wen Ji, Hao-Ying Lu, **Sheng-Joue Young**, I-Tseng Tang, Tung-Te Chu, Jhih-Siang Guo and You-Ting Tsai, "Fabrication and Characterization of UV Photodetectors with Cu-Doped ZnO Nanorod Arrays," *Journal of The Electrochemical Society*, vol. 167, no. 2, pp. 027522, January, 2020.
(IF:3.9, Q2, Subject Categories: MATERIALS SCIENCE, COATINGS & FILMS 7/21 = 33.33%)

43. Ravinder Kour, Sandeep Arya, **Sheng-Joue Young**, Vinay Gupta, Pankaj Bandhoria and Ajit Khosla, "Review—Recent Advances in Carbon Nanomaterials as Electrochemical Biosensors," *Journal of The Electrochemical Society*, vol. 167, no. 3, pp. 037555, January, 2020.
(IF:3.9, Q2, Subject Categories: MATERIALS SCIENCE, COATINGS & FILMS 7/21 = 33.33%)

B. Book Series Papers:

C. Conference Papers:

(1) **Sheng-Joue Young***, Yu-Jhih Chu and You-Ru Huang "Humidity Sensors based on 1-D ZnO nanostructure", 2023 International Conference on Consumer Electronics-Taiwan (ICCE-Taiwan), page: 727-728, July 17 - 19, 2023, Pingtung, Taiwan.
(DOI: 10.1109/ICCE-Taiwan58799.2023.10226763)

(2) **Sheng-Joue Young***, Po-Kai Chen, Y. F. Cho and Z. X. Qiu "ZnO nanorods adsorbed Au nanoparticles by sodium citrate reduction method for field emission applications", 9th IEEE International Conference on Applied System Innovation 2023 (IEEE ICASI 2023), paper ID:J230124, April 21 - 25, 2023, Chiba, Japan.
(Best Conference paper award)

(3) **Sheng-Joue Young***, S. H. Tsai, Z. X. Qiu and Y. F. Cho "One-dimensional ZnO nanostructures for PH sensor application", 9th IEEE International Conference on Applied System Innovation 2023 (IEEE ICASI 2023), paper ID:J230130, April 21 - 25, 2023, Chiba, Japan.
(Best Conference paper award)

(4) **S. J. Young*** and Y. J. Chu "Ultraviolet photodetector based on ZnO nanorod by hydrothermal method", 2022 IET International Conference on Engineering Technologies and Applications (IET-ICETA), paper ID:0665, October 14 - 16, 2022, Changhua, Taiwan.
(DOI: 10.1109/IET-ICETA56553.2022.9971539)

(5) **S. J. Young*** and Y. J. Chu "Field Electron Emission Properties of ZnO Nanorods With Pt nanoparticles adsorption", IEEE 2022 International Conference on Applied System Innovation (ICASI 2022), paper ID:J220308, April 21 - 23, 2022, Sun Moon Lake, Nantou, Taiwan.
(Best Conference paper award)

(6) **S. J. Young*** and Y. J. Chu "ZnO Nanorods with Adsorbed Au NPs for Methanol gas sensor application", IEEE 2021 International Conference on Applied System Innovation (ICASI 2021), paper ID:J210202, June 11 - 12, 2021, Alishan, Chiayi, Taiwan.

(7) **S. J. Young*** and H. Y. Lu “Enhanced ZnO Nanorods Field Electron Emission Device with UV-illumination and Au-nanoparticles”, IEEE 2020 International Conference on Applied System Innovation (ICASI 2020), paper ID:J200115, November 5 - 08, 2020, Taitung, Taiwan.

D. Patents 專利 ：

1. **楊勝州**、朱彥霖、姬梁文, "吸附鈀之氧化鋅奈米柱的製程方法", *ROC patent No. I 801776* (2023)
2. 姬梁文、朱彥霖、黃柏崴、盧廷松、**楊勝州**、朱東德, "低溫製造微型發電機的製程方法", *ROC patent No. I776196* (2022)

E. Award 獎項 ：

F: Research Projects:

年度	計畫名稱	補助或 委託機構	職務	核定經費 (新台幣)
111	新穎複合式氧化鋅奈米結構感測器結合奈米發電機之柔性自供電微奈系統研製 (優秀年輕學者研究計畫)	國科會	計畫主持人	5,635,000
111	複合型無機無鉛鈣鈦礦薄膜合成與多功能光電元件之應用研究	國科會	計畫主持人	3,039,000
110	高性能氧化鋅奈米複合結構葡萄糖感測元件之開發	科技部 微電子學門 產學合作計畫	計畫主持人	500,000 (廠商配合款 217,160)
109	前瞻複合式氧化物奈米結構合成技術與主動式元件、光動能自供電軟性感測元件模組系統之開發研究	科技部 光電學門 專題研究計畫	計畫主持人	2,814,000

109	一維氧化鋅奈米結構合成與高性能酸鹼感測器之應用研究	科技部 能源學門 專題研究計畫	共同主持人	1,094,000
108	軟性、低功耗奈米碳管碳氧化物氣體感測器開發	科技部 微電子學門 應用型 產學合作計畫	計畫主持人	620,000 (廠商配合款 217,100)
107	整合染料敏化光動能電池與多功能感測器之自供電元件開發(2/2)	科技部 光電學門 開發型 產學合作計畫	計畫主持人	872,000 (廠商配合款 315,950)
106	前瞻式半導體性單壁奈米碳管萃取技術與主動式元件、3D-CMOS 之開發製作及特性研究	科技部 光電學門 專題研究計畫	計畫主持人	4,358,000
106	整合染料敏化光動能電池與多功能感測器之自供電元件開發(1/2)	科技部 光電學門 開發型 產學合作計畫	計畫主持人	872,000 (廠商配合款 315,950)
106	兼具低耗能與高性能之環境監控二氧化碳氣體感測器開發	科技部 微電子學門 應用型 產學合作計畫	計畫主持人	500,000 (廠商配合款 154,050)