

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

## 2024 IIIC Silver Medal Award List 銀牌得獎名單

| SID    | Country | Inventor   | Organization   | Invention   |
|--------|---------|--|----------------|---|
| 297126 | 台灣      | LIN I-MIN, LIN MING-WANG, LIU PO-WEI   | 東豐纖維企業股份有限公司   | DUAL-SIDED FLUORINE-FREE WATER-REPELLENT MULTIFUNCTIONAL PROCESSED FABRIC AND ITS MANUFACTURING METHOD  |
| 299015 | 台灣      | You-Ping Wang, Jer-An Guo, Jui-Chen Cheng, Hsiu-O Kao                                      | 台灣大學醫學院附設醫院    | Adjustable oxygen adapter   |
| 300236 | 台灣      | Chung-Wen Kuo, Tzi-Yi Wu, Shang-Cheng Kuo, Jenq-Nan Yih, Yuan-Zhan Lu, Meng-Hong Chen      | 國立高雄科技大學       | Electrosynthesis of copolymer based on 9,9'-(oxybis([1,1'-biphenyl]-4',3-diyl))bis(9H-carbazole) and 2,2'-bithiophene for electrochromic device   |
| 301058 | 台灣      | Ya-Lan Chan, Chih-Han Chan, Qian-Yin Lian, Chih-Shan Liao, Ya-Jane Chaung                  | 長庚科技大學         | Handmade self-care picture book and teaching aids for children  |
| 301522 | 台灣      | Chung-Wen Kuo, Hsiu-Chung Tu, Tzi-Yi Wu, Yu-Chang Huang, Yi-Ling Hsu, Huan-Ting Guo        | 國立高雄科技大學       | Electrosynthesis of copolymer based on 3,3'-di(carbazol-9-yl)-5-cyano-1,1'-biphenyl and 2,2'-bithiophene and its application on satisfactory long-term switching stability and high optical contrast smart window |
| 304425 | 台灣      | Hsiu-Hui Yu, Yi-Nung Lee, Yu-Ling Pan, Chi-Chin Liu, Hsiu-Chen Lin, Wei-Ting Tai           | 三軍總醫院附設民眾診療服務處 | PRICE Elastic Compression Ice Wrap  |
| 304818 | 台灣      | Yi-Ling Chiou  | 輔英科技大學         | Antibiotic Shaker   |
| 305223 | 台灣      | HSIU-JUNG CHOU, JIA-HONG HUANG, TING-YING CHU, HONG-LIN WANG, MING-FENG ZHANG, YOU-CI ZENG | 正修科技大學         | Beauty Chair with Manicure UV Light   |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization   | Invention   |
|--------|---------|--|----------------|---|
| 305457 | 台灣      | Te-Tien Ku, Geng-Yu Lin, Chia-Hung Lin   | 國立高雄科技大學       | Application of Transformer Terminal Units to the Energy Management of PV Systems  |
| 305721 | 台灣      | Li-Fen Wu, Mieng-Feng Chang, Yu-Ling Pan, Kai-Jo Chiang, Shu-Yen Li, Mei-Jung Chen   | 三軍總醫院附設民眾診療服務處 | Sound and Visual Nursing Educational Learning Tools   |
| 306425 | 台灣      | Chia-Hung Chang, Cheng-Wei Xiao  | 國立雲林科技大學       | Mid-Field Wireless Power Transfer System for Medical Implant  |
| 306781 | 台灣      | Yu-Chen Lu, Hsiao-Fen Wang   | 弘光科技大學         | The Analysis of Thyme Extract and the Application in Pet-Friendly Fragrance Diffusers   |
| 306884 | 台灣      | Ming-Chuan Hung, Yi-Lian Huang, Fang-Yu Zhou, Chun-Yu Chen, Chi-Wei Wu, Yi-Long Chen | 中華醫事科技大學       | The Development of Plant-Based Mosquito Repellent Products and Devices.   |
| 307038 | 台灣      | Yu-Jing Yu, Jui-Che Tu   | 國立雲林科技大學       | Wear Ur Way   |
| 307086 | 台灣      | Ting-Hsuan Huang, Jui-che Tu   | 國立雲林科技大學       | Cheerish  |
| 307113 | 台灣      | Yung-Chi Chia, Xin-Tong Wu, Chia-Shun Chang  | 中原大學           | Implementation of Driving Fatigue Detection in the Situation of Wearing a Mask  |
| 307180 | 台灣      | YIH-RAN SHEU, JEEN-MIN LING, JIA-HONG WEI, KUAN-TE CHIANG, CHIEN-TE WU               | 南臺科技大學         | English Title MULTI-LASER FOCUSED SAFETY PEST CONTROL SYSTEM FOR UNMANNED VEHICLES  |
| 307181 | 台灣      | Yu-Han Huang, Yu-Hsun Nien, Jung-Chuan Chou, Jhih-Wei Zeng                           | 國立雲林科技大學       | Using different weight percentages of ZTO-SnO <sub>2</sub> /TiO <sub>2</sub> nanofibers as additional layers to modify the photoanode of dye-sensitized solar cells |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization         | Invention  |
|--------|---------|--|----------------------|--|
| 307187 | 台灣      | Da-Long Cheng, Xin-Yu Chen, Chia-Hsin Li, Yi-Hsiu Cheng, Bo-Yu Hong, Yu-Fong Yan         | 樹德科技大學               | Interactive Memory Training Game for Seniors   |
| 307189 | 台灣      | Xin-Han Chen, Yu-Hsun Nien, Jung-Chuan Chou, Po-Hui Yang, Chih-Hsein Lai, Po-Yu Kuo      | 國立雲林科技大學             | Utilizing g-C <sub>3</sub> N <sub>4</sub> /ZnS composite materials to enhance the sensitivity and selectivity of lactic acid sensors |
| 307243 | 台灣      | Min-Chie Chiu, Yu-Chen Wang, Yu-Jung Chen, Yu-Pai Lo                                     | 大同大學                 | IoT System for Smart Farm Management and Orchard Security  |
| 307260 | 台灣      | WANG KAI-JUN, HUA SHENG-HSIANG, CHAHG HUNG-YU, HSIEH CHANG-LE, SU YOU-REN                | 天主教光仁學校財團法人新北市光仁高級中學 | The Smart Hearing-Impaired Helmet with Directional Sound Alerts  |
| 307262 | 台灣      | Min-Chie Chiu, Kuan-Chin Chiu, Wei-Da Chung  | 大同大學                 | Onboard Autonomous Power Generation Device   |
| 307351 | 台灣      | Hsueh-Hsien Chang, Bo-Xun Chen, Jian-Xiang Huang   | 明新科技大學               | Non-intrusive load monitoring and identification systems using the transient features  |
| 307364 | 台灣      | Kuo-Tung Huang, Cheng-Han Wang, Qi-Hong Yang, Yang-Jie Fan, Pin-Tzu Huang, Li-Hsin Chang | 龍華科技大學               | New semiconductor optical receiver used in edge-emitting laser packaging module  |
| 307389 | 台灣      | Yuan-Ho Chen, Yen-Chiu Wu, Ming-Che Lee, Pei-Chun Ceng, Yun-Feng Ruan, Wen-Hui Chen      | 龍華科技大學               | A Flashlight With Lighting and Positioning Function by Vibration   |
| 307396 | 台灣      | Szu-Hui Lee, Hsi-Chao Chen, Xin-Ya Zheng, Ming-Ying Wu, Yi-Han Xue, Ting-Jun Lai         | 國立雲林科技大學             | Reactive Radio-Frequency Magnetron Sputtering of Epitaxial Rich-Carbon Silicon Carbide Wide Bandgap Semiconductor Thin Films         |
| 307401 | 台灣      | Yuan-Ho Chen, Yu-Hua Xue, Jia-Wen Xu, Yi-Tzu Chao, Shao-Bin Lin                          | 龍華科技大學               | Warm-Keeping Device for Motorcycle Rider   |
| 307420 | 台灣      | Tzu-Ho Wu, Yuan-Hong Ting, Jheng-An Chen, Jia-He Su                                      | 國立雲林科技大學             | Enhancing the energy storage capability of VO <sub>2</sub> cathode in aqueous Zn-ion batteries by decorating carbon quantum dots     |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization | Invention   |
|--------|---------|--|--------------|---|
| 307425 | 台灣      | Po-Yu Kuo, Jung-Chuan Chou, Ming-Tai Hsu, Chi-Han Liao, Wei-Shun Chen, Jyun-Ming Huang       | 國立雲林科技大學     | Instrumentation amplifier for dopamine biosensor  |
| 307496 | 台灣      | Uzu-Kuei Hsu, Cheng-Hsien Tai, Hong-Bin Chang, Yi-Ling Chen, Yao-Yu Tsai, Chen-Yu Wu         | 國立屏東科技大學     | High-Pressure Gas Power Generation Enhancement System   |
| 307666 | 台灣      | Gwo-Ching Liao, Bo-Tong Liao, You-Quan Zhou, Chin-An Liu, Meng-Ting Jheng, Sheng-Lung Lin    | 龍華科技大學       | Applying deep reinforcement learning to solve the low carbon economic dispatch problem in smart microgrids                |
| 307668 | 台灣      | Gwo-Ching Liao, Bo-Tong Liao, You-Quan Zhou, Qian-Ming Lin                                   | 龍華科技大學       | Methods and systems for accurate photoelectric power prediction   |
| 307675 | 台灣      | Ya-Lie Ku, Min Hua Tang, Ting-Ya Liao, Shih Ming Kuo   | 輔英科技大學       | Restraining Glove-Turning by Hand   |
| 307780 | 台灣      | Chien-Te Liu, Hung-En Shen, Wei-Liang Kuo, Yuh-Ping Chang                                    | 崑山科技大學       | Friction stir drilling method applied to polymeric material products  |
| 307796 | 台灣      | Yan-Shuo Huang, Yi-Wen Huang, Ting-Yu Huang, Yu-Hsun Nien                                    | 國立雲林科技大學     | Development of MoO <sub>3</sub> /TiO <sub>2</sub> Photocatalyst and Its Application for Photodegradation by Visible Light |
| 307838 | 台灣      | Kevin Kuan-Shun Chiu, Meng-Di Liao, Chia-Hui Wu, Pei-En Cheng, Tsai-Lin Lien, Chih-Hsien Yeh | 龍華科技大學       | A Hybrid Mechanism for Remote Control Airplanes.  |
| 307844 | 台灣      | Yow-Chyi Liu, Pin-Rong Chen, Yao-Bin Shan  | 台鋼科技大學       | Parallel Control Method of Hybrid Electrical Energy Storage Systems   |
| 307859 | 台灣      | Yow-Chyi Liu   | 台鋼科技大學       | Optimal Vehicle Coasting Based on Genetic Algorithm to Reduce Maximum Traction Power in Rail Train Systems                |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization | Invention  |
|--------|---------|--|--------------|--|
| 307905 | 台灣      | KUO-HAO LIN, WEI-XIANG LAN, JUN-WEI LIANG, ZHI-WEI WU, JUN-YAN HUANG                     | 國立臺東專科學校     | Eating for Two - A Conversational Pregnancy Diet Recommendation System and Method  |
| 307917 | 台灣      | Yu-Ting Lin, You-Cin Liou, Yu-Hsun Nien, Jung-Chuan Chou, Jhih-Wei Zeng                  | 國立雲林科技大學     | Development of Zn <sub>2</sub> SnO <sub>4</sub> -Modified Dye-Sensitized Solar Cells and Measurement of Their Photovoltaic Performance Under Indoor Illumination |
| 308080 | 台灣      | Tzi-Yi Wu, Jhu Jheng, Si-Jie Li, Chia-Yi Wei, Jing-Jie Zhan, Jun-Jie Ye                  | 國立雲林科技大學     | Electrochromic device prepared with triazole-containing polydithienylpyrroles  |
| 308112 | 台灣      | Chih-Hou Chen, Chih-Jie Chen, Hui-Qing Cai, Bao-Cheng Peng, Guan-Qi Chen, Ren-Jie Gao    | 空軍航空技術學院     | Artificial Intelligence Drone Bird Control Them-Waypoint Algorithms to Friendly Mannage Flocks of Birds on Airport Runways.                                      |
| 308347 | 台灣      | Yen-Chuan Chang, Hsin Tung, Syu-Jyun Peng  | 臺北醫學大學       | Machine Learning Model for Assessing Cognitive Function in Epilepsy Patients Based on Electroencephalogram Functional Connectivity                               |
| 308371 | 台灣      | LIANG-TSZ CHEN, QIAN-HUI XIE, YI-CHEN LIN, YU-YING HSU, SIN-JIE SHEN, HSING-YUN CHANG    | 中臺科技大學       | Communication Assistive Exchange Word Card Bag   |
| 308516 | 台灣      | Yeu-Torng Yau  | 國立勤益科技大學     | Hybrid Filter of Different and Common Mode Noise Currents  |
| 308531 | 台灣      | CHIN-LUN LAI, YU-MEI CHANG, YING-LING CHEN, QUAN-XIANG DENG, YUAN-ZHI LUO                | 亞東科技大學       | Force Feedback Simulation Operating System and Force Feedback Module   |
| 308554 | 台灣      | Sheng-Shih Wang, Pei-Chun Lee, Hong-Xiang Yang, Ting-Wei Kuo, Qi-You Liao, Yu-Cheng Ding | 龍華科技大學       | An AIoT-based Home Care Service System   |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor  | Organization | Invention   |
|--------|---------|---|--------------|---|
| 308567 | 台灣      | Bo-Yu Fan, Jia-Xiang Xu, Hong-Xiang Yang, Sheng-Shih Wang, Pei-Chun Lee, Li-Yu Huang  | 龍華科技大學       | An AI-based Smart Visual Acuity Testing System  |
| 308591 | 台灣      | Cindy, Sheng-Shih Wang  | 龍華科技大學       | AI-Assisted Environment Quality Monitoring Map  |
| 308650 | 台灣      | Cheng-Chung Jaing, Chao-Te Lee, Tan Dat Le, Hung-Pin Chen, Wei-Chun Chen              | 明新科技大學       | Multi-angle reflectance fitting to obtain optical constants of thin films at 13.5nm wavelength                |
| 308692 | 台灣      | CHYUN-CHAU LIN, YONG-YING CHANG, YI-SYUAN SHIH, XIN-YI ZHONG                          | 樹德科技大學       | Parent-Child Educational Game Tool for Danger Awareness   |
| 308694 | 台灣      | Chun-Pin Chang, Hong-Rui Wei, Xiao-Zhen Huang, Hung-Wei Chang                         | 嘉南藥理大學       | Intelligent system of ideal Parameters for indoor work environment  |
| 308696 | 台灣      | SHANG-HUNG YANG, SHU-JEN HU, BING-LUN WU, YI-XIANG HUANG, CHIA HSUAN LIN, JIA-HONG LI | 龍華科技大學       | Quick drying clothes device   |
| 308701 | 台灣      | CHING-HONG GUO, ZIH-JIE HE, YOU-CHEN LIOU, ZHONG-CHUN WU                              | 南臺科技大學       | Inline Skate Auxiliary Obstacle-Crossing Device   |
| 308707 | 台灣      | Shu-Yun Sheu, Chao-Min Cheng, Chung-Hsiang Lin  | 國立清華大學       | Antibacterial efficacy of nanostructures  |
| 308722 | 台灣      | Chih-Hsien Lai, Wen-Hao Chen, Jung-Chuan Chou, Po-Hui Yang, Yu-Hsun Nien, Po-Yu Kuo   | 國立雲林科技大學     | Exploring the Utilization of Molybdenum Disulfide Nanosheets in the Photoanode of Dye-Sensitized Solar Cells. |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor  | Organization   | Invention  |
|--------|---------|---|----------------|--|
| 308767 | 台灣      | Chia-Te Liao, Zhe-Kai Yang, Hua-Ming Chen, Ying-Yu Liao, Kun-Cheng Cai, Huang-Fu Lung | 空軍航空技術學院       | Energy-efficient and high-performance multi-antenna design for smart wearable devices incorporating a metal watch frame        |
| 308777 | 台灣      | Chun-Fei Hu, Neng-Ding Wang, Bi-Ling Dai, Yung-Jung Huang, Yi-Ching Chen              | 大葉大學           | High-Voltage Electronic Insulators Discharge Cloud IoT Monitoring and Controlling  |
| 308824 | 台灣      | Feng-Tsang Wu, Li-Feng Lin, Hong-Yi Lin, I-Hsiang Wu, Yu-Hsiang Chen, Chia-Te Liao    | 空軍航空技術學院       | Real-Time Personnel Location Reporting System  |
| 308836 | 台灣      | Hui-Fang Chiu, Hsin-Yu Hsieh, Hsin-Yu Lin   | 長庚學校財團法人長庚科技大學 | Mathematics and Festivals: Interdisciplinary Multicultural Teaching Aids   |
| 308850 | 台灣      | Ming-Sen Hu, Li-Feng Lin, Yu-Rui Chen   | 空軍航空技術學院       | Power Generation System Driven by Dual-Cycled High-Pressure Shock Waves  |
| 308901 | 台灣      | Jheng-Long Chen, Feng-Tsang Wu, Chin-Ang Li, Yu-Ting Peng, Jia-Yang Liu               | 空軍航空技術學院       | Device for Detecting Smoke and Temperature   |
| 308912 | 台灣      | Chin-Ang Li, Jie-Hang Cai, Feng-Tsang Wu, Jheng-Long Chen                             | 空軍航空技術學院       | IOT Applications of Facial Recognition   |
| 308915 | 台灣      | Tzi-Yi Wu, Jhu Jheng, I-Han Kuo, Chia-Yi Wei, Jing-Jie Zhan, Jun-Jie Ye               | 國立雲林科技大學       | Preparation of high efficiency and energy saving electrochromic glass using dithiophene-pyrrole and indenothiophene copolymers |
| 308935 | 台灣      | SUNG CHUNG-LIN, ZHUANG YI-LIN, ZHAO GUANG-DI, WU CHIH-YU, ZHAO YI-AN, TSAI TING-YI    | 建國科技大學         | Green Energy Plant Guardian  |



## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization | Invention   |
|--------|---------|--|--------------|---|
| 309014 | 台灣      | Chuan-Chou Tu, Yu-Ting Hsiao, Chun-Fei Hu, Bi-Ling Dai, Yung-Jung Huang, Yi-Ching Chen   | 員榮醫院/大葉大學    | AI Swallowing Training System   |
| 309135 | 台灣      | CHEN HONG-YI, LIAO SHUN-RONG, LIU XIANG-ZHAO, CHEN TIAN-WANG, LU YU-TING, TAN RUI-HONG   | 臺中市環保局       | Mobile Air Quality Monitoring and Automatic Dust Collection System for Construction Sites                     |
| 309138 | 台灣      | Hung-Wen Cheng, Po-Yen Lai, Yu-Ru Huang, You-Cheng Ye, Yu-Ning Yang                      | 修平科技大學       | Cart with Karakuri Mechanism  |
| 309140 | 台灣      | Po-Yen Lai, Ming-Yan Lin   | 修平科技大學       | Automated Material Handling and Transport Device  |
| 309145 | 台灣      | Po-Yen Lai, Shih-Lun Tien, Yu-Ru Huang, You-Cheng Ye, Yu-Ning Yang                       | 修平科技大學       | A Workbench with Error-Proofing and Served Production Karakuri  |
| 309146 | 台灣      | Shih-Chieh Chen, Po-Yen Lai, Yu-Ru Huang, You-Cheng Ye, Yu-Ning Yang                     | 修平科技大學       | Semi-Automated Slide Rack   |
| 309149 | 台灣      | Ming-Huseh Wu, Geeng-Jen Sheu, Chen-Shin Hung, Jyun-Tang Rao, Zhi-Han Lin, Yu-Chieh Lai  | 修平科技大學       | Water Sentinel: An IoT-Based Industrial Wastewater Quality Monitoring and AI-Enhanced Decision Support System |
| 309157 | 台灣      | Ming-Huseh Wu, Geeng-Jen Sheu, Zhi-Han Lin, Jhen-Sin Hong, Jyun-Tang Rao, Li-Yan Luo     | 修平科技大學       | IoT-Based Livestock Manure Resource Recycling, Monitoring, and Sales System                                   |
| 309173 | 台灣      | Chia-Jung Wu, Tsu-Chia Julia Hsu, Kuan-Hsun Chen, Shi-Qi Xu, Hsi-Hsin Su, Zong-Yuan You  | 龍華科技大學       | Intelligent monitoring of water surface height alarm system   |
| 309175 | 台灣      | Chia-Jung Wu, Tsu-Chia Julia Hsu, Kuan-Hsun Chen, Shi-Qi Xu, Hsi-Hsin Su, Ting-Shuo Wang | 龍華科技大學       | Smart fishing device  |



## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization | Invention  |
|--------|---------|--|--------------|--|
| 309250 | 台灣      | Chia-Chun Chao, Chung-Shun Feng, Yu-Tung Chien, Lu-Yu Chen                                   | 朝陽科技大學       | Ripple-Rocking Horse Set   |
| 309338 | 台灣      | Chia-Hung Lin, Ping-Tzan Huang   | 國立屏東科技大學     | Intelligent Endpoint Detection Technology and Deep Learning Classification Method for Non-Technical Electricity Losses in Smart Meters |
| 309416 | 台灣      | CHI CHUANG, YEN-CHUN LIN, AN-CHIAO CHENG, HENG-YUE LIAO, YU-XIANG JIAN                       | 中華大學         | MetaLab: A Virtual Lab in Metaverse for Computer Hardware Education  |
| 309559 | 台灣      | KUO CHIH-YEN, GUO JIN-MING, CHEN CHAN, CHEN YOU-WEI, YAN SHAO-YI, YANG SHIANG-AN             | 康寧大學         | Intelligent positioning rosary   |
| 309620 | 台灣      | Cheng-Han Chen, Ciao-Ming Tsai, Cheng-Hao Ko, Chit-Sung Hong, Ching-Fen Shen, Chao-Min Cheng | 台北榮民總醫院急診部   | ML-Powered LFA: Fast and Accurate PCR Ct Ratio Prediction for SARS-CoV-2   |
| 309668 | 台灣      | Pei-Yu Chen, I-Fong Chen, Hsiu-Chuan Lin, Ting-Yan Yu, Kun-Li Tsai, Yuan-Chen Chen           | 景文科技大學       | AI Plant Health Gatekeeper   |
| 309677 | 台灣      | Pao-Keng Yang, Nien-Ju Yeh   | 明新科技大學       | Novel method for detecting bubbles in the pipeline for delivering photoresist  |
| 309682 | 台灣      | Wang Guan-Zong, Chen Hsieh-Ping, Lee Shun, Yu Wei-Lun, Yu Bo-Chen, Wang Che-Yu               | 正修科技大學       | Environmental Monitoring System  |
| 309687 | 台灣      | Pei-Yu Chen, I-Fong Chen, Kun-Li Tsai, Wo-Yuan Chen, Xue-Yu Lin, Ho-Wei Xu                   | 景文科技大學       | Vivaldi Antenna design suitable for Micro signal detection   |
| 309703 | 台灣      | Chih-Yuan Chang, Sheng-Hong Shi  | 台鋼科技大學       | Gas-Permeable Membrane Assisted Composite Manufacturing Process  |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization                         | Invention   |
|--------|---------|--|--------------------------------------|---|
| 309714 | 台灣      | Ming-Hua Chang, Yih-Haw Jan, Jun-Da Chen, Sheng-Zhe Gao, Zhen-Hong Huang, Xin-Hao You    | 景文科技大學                               | Diversity AI Medical Mobile Human Posture Recognition System  |
| 309717 | 台灣      | Lin Yan-Hua, Ciou Pin-Ruei, Huang Ji-Ying, Tsai Zhi-Xiang, Wu Chung-Chun                 | 南臺科技大學                               | Multi-functional Positioning Assistive Device Cart  |
| 309739 | 台灣      | QIN-YU CAI, JIA-XUAN CHEN, SI-TING YOU, CI-EN LIN, MAN-LENG MA                           | 康寧學校財團法人康寧大學                         | Rotary Draining Umbrella Stand  |
| 309741 | 台灣      | WANG YU-HAN, WANG HUNG-CHUN, ZHAO GUAN-CUN, WANG YU-TENG, CHAO KUANG-HUI, WANG JIA-LE    |                                      | Breaking the barrier of silence - Microphone Hearing Assistance Technology  |
| 309758 | 台灣      | PAO-CHI CHEN, CHONG-EN ZENG, ZHONG-YI LIN  | 龍華科技大學                               | Recycling of waste nitric acid solution   |
| 309764 | 台灣      | Che-Hao Liao, Jia-Hung Hsu, Yu-Hsuan Tseng, Chia-Hung Chang, Ruei-Sung Yu, Shih-Hung Lin | 國立雲林科技大學                             | The Study and Fabrication of New Perovskite Dielectric Ca <sub>2-x</sub> Sm <sub>2x/3</sub> TiO <sub>4</sub> and 5G device applications |
| 309766 | 台灣      | Bi-Ling Dai, Yung-Jung Huang, Chun-Fei Hu, Chen-Yu Su, Yi-Ching Chen, Zi-Ning Luo        | 大葉大學環境工程學系/ 植寧寵物芳療美容作坊/ 台灣寵物長照安寧關懷協會 | Using Citrus Peel Extract to Improve Tear Secretion Problems and Hair Whitening for Doggy   |
| 309772 | 台灣      | PAO-CHI CHEN, JYUN-HONG JHUANG, YAN-ZUO YE, JYUN-YAO LIN                                 | 龍華科技大學                               | Performance improvement of CO <sub>2</sub> absorption using bubble-column scrubbers   |
| 309777 | 台灣      | Chi-Huang Lu, Zhe-Min Liu, Shang-Yi Wang, Wei-Hsuan Chen                                 | 修平科技大學                               | Cloud-Monitoring AI License Plate Recognition System for the Safety of Home Environment   |
| 309786 | 台灣      | Lin Yu-Cai, Lin Jun-Zheng, Peng Chen-You, Lin Jyun-Tang                                  | 僑光科技大學                               | 3D Printing Shaping the Future  |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization     | Invention  |
|--------|---------|--|------------------|--|
| 309789 | 台灣      | WANG HUNG-CHUN,<br>ZHAO GUAN-CUN,<br>WANG YU-HAN, WANG<br>YU-TENG, CHAO<br>KUANG-HUI, WANG<br>JIA-LE |                  | Portable mobile scooter warning<br>monitor   |
| 309801 | 台灣      | Samuel Y. Ruan, Ting-Ting<br>Chang, Ping-Hui Lee, Wei-<br>Zhi Ye, Bing-Chian Zhang,<br>Ting-Rui Guo  | 龍華科技大學           | Intelligent Medication Dispenser   |
| 309802 | 台灣      | Xuan-Yu Hou, Ming-Chun<br>Lu, Po-Yang Lu, Wen-Yu<br>Chen, Hua-En Li                                  | 國立中興大學           | Rebirth of Incineration Fly Ash:<br>Promoting Carbon Capture and<br>Waste Reuse through Calcium<br>Regeneration Technology   |
| 309826 | 台灣      | Chen-Wei Lee, Yu-Wun<br>Chen, Yi-Ting Gong,<br>Xuan-Ying Cao, Chang-Yi<br>Liao, Chen-Zhi Liu         | 景文科技大學           | Design of an Intelligent Indoor<br>Positioning and Navigation System<br>Combining BLE Beacon and AI<br>Large Language Models |
| 309831 | 台灣      | Wen-Cheng Lai, Pei-Tsen<br>Ko, Tong-En Lee   | 明志科技大學           | Multi-functional Jewelry Storage<br>Box  |
| 309835 | 台灣      | Ting-Yun Liu, Li-Chuan<br>Hung, Pei-Shan Chung   | 康寧學校財團<br>法人康寧大學 | Eco-Friendly Multifunctional<br>Transformable Handbag  |
| 309880 | 台灣      | Pei-Shan Chung, Hong-Rui<br>Guo, Zhong-Xuan He,<br>Peng-Yu Chen, Ting-Wei<br>Li                      | 康寧學校財團<br>法人康寧大學 | Easy-to-Thread Floss (Designed for<br>Braces Wearers)  |
| 309950 | 台灣      | Huang Yi-Liang, Wang I-<br>Yu, Chen Ying-Ting, Li<br>Tzu-Yi, Tang Jia-Qi, Chang<br>Ya-Hui            | 中華醫事科技<br>大學     | Star Dream Soothing Baby Pillow  |
| 309961 | 台灣      | I-Chuang Wang, Jun-Zheng<br>Lin, Chen-You Peng,<br>Chun-Bo Lin                                       | 僑光科技大學           | Smart Food Waste Compost Machine   |
| 309966 | 台灣      | Ying-Yu Chen, Yu-Pin Lo,<br>Cheng-Yao Chen, Ming-<br>Chun Lu   | 國立中興大學           | Synthesis of Granular Copper-Iron-<br>Nickel Trimetallic Catalyst for<br>Catalytic Oxidation of Organic<br>Pollutants        |
| 309968 | 台灣      | Chia-Hua Liang, You-Jie<br>Feng, Leong-Perng Chan,<br>Pin-Ju Chen, Han-Ting<br>Chan, Yu-Ting Tu      | 嘉南藥理大學           | Morning Radiance and Nighttime<br>Repair: Dual-Effect Coffee Extract<br>Essence to Revitalize and Illuminate<br>Your Skin    |
| 309973 | 台灣      | Ya-Kuan Chou   | 國立雲林科技<br>大學     | The Fan Equipment for Indoor Dust<br>Collection  |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization                                | Invention  |
|--------|---------|--|---|--|
| 309975 | 台灣      | ANNABEL T. CHU,<br>CHUNG-YUNG TU,<br>SHIH-YANG YANG, PEI-<br>JUNG LU, TUNG-FANG<br>WANG, YU-XIANG TSAI     | 康寧學校財團<br>法人康寧大學                            | Home Fire Escape System- AI Life-<br>Saving Robot  |
| 309997 | 台灣      | Chii-Zen Yu, Jia-Mian Yu   | 高雄大學  | Smart Roadside Parking System<br>Function Expansion  |
| 310007 | 台灣      | Chien-Wei Yang, Yi-Shan<br>Wu, Yung-Chiao Yang   | 國立苗栗高級<br>中學、苗栗縣<br>立大同高中、<br>新北市板橋高<br>級中學 | Speed reduction mechanism  |
| 310013 | 台灣      | Yung-Sheng Lin, Ben-Yi<br>Liau, Cheng-You Chen, Po-<br>Jui Chou, Yeun-Tsong<br>Chang                       | 國立聯合大學                                      | Composition with neuromodulatory<br>activity and preparation method and<br>use thereof         |
| 310019 | 台灣      | Yu-Cheng Wang, Yu-Kai<br>Shen, Ya-Ge Huang, Guan-<br>Lin Li, Wel-Long Wang,<br>Tzu-Chen Tsai               | 龍華科技大學                                      | Interactive Device Integrating<br>Mobile Communication and Pet<br>Feeding Platform             |
| 310028 | 台灣      | Wei-Wu Liu, Wan-Chin<br>Wang, Pin-Hsuan Chen   | 宏國德霖科技<br>大學                                | A quick decanter that produces<br>musical note and rotatable decanting<br>device set           |
| 310055 | 台灣      | CHUNG-TING CHANG,<br>CHIH-NI TING, CHIH-<br>CHI WANG, PEI-FANG<br>LIN, WU-HSIUNG<br>HONG, YEN-TING<br>WANG | 康寧大學  | "Vacuum Cleaner - The Smart New<br>Choice for Cleaning"  |
| 310061 | 台灣      | Po-Yu Huang, Hong-Yi<br>Chen   | 竹北高中  | Research and Implementation of<br>Impact-Resistant and Shock-<br>Absorbing Composite Materials |
| 310065 | 台灣      | Ming-Chun Hsieh, Ta-<br>Chun Chai, Shih-Chieh<br>Kao, Tung-Lin Chen, Ting-<br>Yu Chuang                    | 崑山科技大學                                      | Multifunctional earthquake warning<br>device   |
| 310068 | 台灣      | Shin-Yun Chen, Hsiao-<br>Chin Jen, You-Syuan Li,<br>Ciao-Wen Li, Cheng-En<br>Wu, Sho-Yin Nian              | 開南高中  | Smart Dressing Mirror Wardrobe   |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor  | Organization | Invention   |
|--------|---------|---|--------------|---|
| 310070 | 台灣      | HUNG-SHAO WANG,<br>DE-JYUN HOU  | 誌磊實業股份有限公司   | Fire-Preventive Shell Structure for Lithium Batteries   |
| 310071 | 台灣      | Rui-Yu Zhang, Yun-Hsuan Chang, Yong-Shun Shi, Yan-Ting Hou, Hsien-Ru Chu                                | 僑光科技大學       | Modular asymmetric passive upper limb exoskeleton   |
| 310074 | 台灣      | Kuan-Chi Tu, Tee-Tau Eric Nyam, Nai-Ching Chen, Che-Chuan Wang, Chung-Feng Liu, Ching-Lung Kuo          | 奇美醫療財團法人奇美醫院 | Machine Learning Prognostic Models for Discharge to Long-Term Care Centers in Traumatic Brain Injury Patients Admitted to the ICU |
| 310076 | 台灣      | Pi-Heng Chung, Yi-Chien Lin, Shih-Qing Wu   | 宏國德霖科技大學     | Dot-Style Dripper   |
| 310078 | 台灣      | Chien-Hsin Yang, Zhong-Quan Liao, Chin-Hua Huang  | 僑光科技大學       | Humanized climbing backpack   |
| 310090 | 台灣      | Zhao-An Chan  | 臺南市私立德光高級中學  | Magnetic Sensor Array - AI Chessboard Abstract  |
| 310091 | 台灣      | Kuo-Hao Lee, You-Bin Lin, Jun-Long Deng, Chia-Ming Yang, In-Gann Chen, Lien-Chung Hsu                   | 明新科技大學       | The application potential of nano silver pastes on body temperature sensing   |
| 310099 | 台灣      | Chuan-Ta Chao, Pei-Yun, Tsu-Hung Chen, Pei-Rong Lin, Xin-Jing Chen, Yi-Li Lin                           | 龍華科技大學       | Eco-Friendly Toothbrush with Cleaning and Sterilizing Function  |
| 310100 | 台灣      | Yih-Shing Lee, Tsung-Cheng Tien, Kai-Ching Ma, Vo Truong-Thao Nguyen, Thi-My Tien Nguyen, Ngoc Nam Dang | 明新科技大學       | A method for process optimization of indium gallium zinc oxide thin film transistor device  |
| 310101 | 台灣      | Yu-Ting Tsai, Vincent F.S. Tsai, Yuan-Hung Peng, Guan-Yu Peng, Chia-Hsien Ho, Ssu-Yuan Sung             | 逢甲大學         | Development of a Home Intelligent Urination Monitoring Device Based on IoT Technology   |
| 310109 | 台灣      | CHIA-TI WU, WAN-RU YAO, CHENG-YU HSIEH LU   | 國立高雄科技大學     | Development of High-Efficiency Optical Fiber Splicing Quality Detection System  |
| 310113 | 台灣      | Wei-Lung Wu, Chia-Te Liao, Feng-Tsang Wu, Ying-Xian Chen, En-Tzu Yeh, Ying-Yu Liao                      | 空軍航空技術學院     | Measurement System  |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization      | Invention  |
|--------|---------|--|-------------------|--|
| 310121 | 台灣      | MING-LING KUO,<br>CHAN-YU KUO, YU-HAN HSU, BO-GANG LIN, JUN-HOME JIANG, YI-EN HONG           | 康寧學校財團<br>法人康寧大學  | Energy-savin Design Box Carrying Harness   |
| 310123 | 台灣      | CHIH-WEN CHEN, PO-HSUN CHEN, YONG-JUN HAN, HONG-WEI WU, AN-CHIEH HSIAO, DONG-XIAN LI         | 龍華科技大學            | Gas stove multifunctional safety device  |
| 310124 | 台灣      | Che-Hao Liao, Shih-Hung Lin, Chien-Sheng Huang, Chih-Chiang Yang, Jing-Yun Huang, Jui-En Kuo | 國立雲林科技大學          | Far-UVC Photodetector Fabrication by RF Sputter and Thermal Interdiffusion Alloying Method for Sterilization Light Source Sensing and Environmental Protection |
| 310129 | 台灣      | Shan-Yi Shen, Yuan-Kai Chang   | 大葉大學              | Recycling of copper and nickel metals in water using graphene oxide modified by biomass  |
| 310132 | 台灣      | Ming-Chung Hsieh, Shu-Feng Yang, Mei-Chu Wei, Ya-Ling Huang                                  | 嘉南藥理大學            | Shi Liang-fashion beauty filter  |
| 310138 | 台灣      | CHIH-WEN CHEN, CHIN-I KAO, PO-HSUN CHEN, GUAN-MING SU, CHENG-SHENG CHENG, HAO LU             | 龍華科技大學            | Earthquake survival device for backpacks   |
| 310152 | 台灣      | Yuan-Hsiou Chang, Hsiao-Ling Lu, Zhi-Xian Lin, Ting-Yun Wang, Kang-Jun Lu, Chien-En Li       | 國立臺中科技大學/國立虎尾科技大學 | AIoT Multi-Functional Wardrobe   |
| 310153 | 台灣      | Yuan-Hsiou Chang, Hsiao-Ling Lu, Zhi-Jia Feng, You-En Zhong, Zong-Ying Liu, Ya-Chun Kao      | 國立臺中科技大學/國立虎尾科技大學 | Sustainable Intelligent Green Building Exterior Structure  |
| 310203 | 台灣      | Cheng-Lee Lai, Yu-Ching Su, Rong-Zih Wu  | 嘉南藥理大學            | Iridium electrode reduction system   |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor  | Organization | Invention  |
|--------|---------|---|--------------|--|
| 310249 | 台灣      | Tai-Yueh Li, Chih-Hung Wu, Ching-Hung Lai, Chia-Cheng Hung, Ting-Hsiang Li, Chun-Hsiang Tsao  | 建國科技大學       | Waterproof Rubber Ring Easy to Apply Hand Tool   |
| 310401 | 台灣      | Ta-Lun Sung, Ming-Yun Chou, Li-An Hsu, Tzu-Yi Hsu, Bo-Chin Chang, Tai-Yang Lin                | 龍華科技大學       | Eye-Tracking Electronic billboards   |
| 310406 | 台灣      | Ta-Lun Sung, Wei-Juan Huang, Mao-Kai Fu, Kuan-Yi Lu, Bo-Hung Lee, Chuan-Ting Lee              | 龍華科技大學       | Vision Correct Diasplay  |
| 310416 | 台灣      | Chien-Chih Chiang, Jeou-Long Lee, Chih-Shenh Chen, Xin-Yu Chen, Jing-Tan Wang, Chuan-Ting Lee | 龍華科技大學       | Using Semiconductor Copper Wastewater to Prepare Nano-Copper Ink for Through-Silicon Via (TSV) process |
| 310420 | 台灣      | Chien-Chih Chiang, Jeou-Long Lee, Yi-Zhen Yu, Yong-Zhi Hong, Jing-Tan Wang, Chuan-Ting Lee    | 龍華科技大學       | Environmentally friendly lead-free high temperature energy storage battery                             |
| 310424 | 台灣      | Chien-Chih Chiang, Jeou-Long Lee, Chi-Jung Lee, Yi-Shuan Tshng, Bo-Hung Lee, Chuan-Ting Lee   | 龍華科技大學       | Power generation steps   |
| 310436 | 台灣      | Shih-Hsiang Chen, Jeou-Long Lee, Yi-Fan Lu, Jhih-Jhu Huang, Bo-Hung Lee, Shang-Hua Yang       | 龍華科技大學       | Nanogenerator composite PM2.5 sensor   |
| 310446 | 台灣      | Shih-Hsiang Chen, Kwan-Nin Kuo, Kuo-Sung Hsiang, Tzu-Chien Huang, Bo-Hung Lee, Shang-Hua Yang | 龍華科技大學       | Triboelectric Nanogenerator Wristband  |
| 310461 | 台灣      | Xin-Liang Chen, Chia-Ling Chen, Shih-Chang Cho, Kuan-Yi Lu, Jing-Tan Wang, Shang-Hua Yang     | 龍華科技大學       | Gallium oxide semiconductor thin films are used in gas sensor detection                                |



## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor   | Organization | Invention   |
|--------|---------|--|--------------|---|
| 310465 | 台灣      | Xin-Liang Chen, Chia-Ling Chen, Pei-Xong Liou, Jia-Zi Ye, Jing-Tan Wang, Chuan-Ting Lee  | 龍華科技大學       | Application of polybutylene adipate and terephthalate biodegradable composite agricultural mulch film |
| 310503 | 台灣      | Yuan-Ming Chiu, Chih-Yuan Weng, Ya-Wen Yang, Yu-Fan Weng, Yu-Chen Weng, Chien-Chin Su    | 空軍航空技術學院     | Multi-purpose Comprehensive Protection Vest   |
| 310504 | 台灣      | Chih-Yuan Weng, Yuan-Ming Chiu, Ya-Wen Yang, Li-Kai Liou, Yu-Fan Weng, Yu-Chen Weng      | 空軍航空技術學院     | Hydraulic ventilation & Fire suppression Device   |
| 310505 | 台灣      | Yuan-Ming Chiu, Chih-Yuan Weng, Ya-Wen Yang, Chien-Chin Su, Yu-Fan Weng, Yu-Chen Weng    | 空軍航空技術學院     | Virtual reality fire fighting training device   |
| 310784 | 台灣      | CHANG-HIS WU, RUEY-CHANG HSIAO, TZU-YI LIU, CHIUNG-HSUAN LIU, JUN-DE LEE, GUAN-YU LIN    | 龍華科技大學       | Waterwheel generator set with adjustable condensing guide plate and folding blades                    |
| 310786 | 台灣      | WEN-HSIUNG LIN, RUEY-CHANG HSIAO, CHIN-WEN CHEN, TZU-YI LIU, JIN-LONG DU, BING-HUA LEE   | 龍華科技大學       | Ventilation block to allow the mold to breathe  |
| 310787 | 台灣      | RUEY-CHANG HSIAO, WEN-HSIUNG LIN, CHIN-WEN CHEN, TZU-YI LIU, YUN-JU LIN, SHAO-SIANG WONG | 龍華科技大學       | Composite breathable plug for mold  |
| 310800 | 台灣      | Ming-Che Sung  | 內政部消防署       | Fire scene rescue carrying bag  |
| 310802 | 台灣      | Ming-Che Sung  | 內政部消防署       | Electric vehicle indoor fire extinguishing system   |
| 311191 | 台灣      | Shan-Yi Shen, Yan-Bin Chen   | 大葉大學         | High-efficiency water purification materials made from agricultural waste                             |
| 311467 | 台灣      | Weng Yun-Han   | 萬能科技大學       | Scroll side table structure   |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country  | Inventor  | Organization  | Invention   |
|--------|----------|---|---|---|
| 311495 | 台灣       | HSIN-HSIUNG HUANG,<br>SHENG-HUANG SU,<br>KAN-HSUN LEE, YOU-<br>CHENG LIN, HAN-WEN<br>CHANG, BIN-ZHI GAO   | 龍華科技大學  | Festival system by Image<br>Recognition   |
| 311732 | 台灣       | CHANG CHIN-CHIH,<br>HUANG SAI-YI, HSIEH<br>YUN-EN, SHIH PING-<br>SUNG, YU WEN-HSIN,<br>CHEN TING-JEN  | 仁德醫護管理<br>專科學校  | Mobile Reading Board  |
| 311733 | 台灣       | CHANG CHIN-CHIH,<br>LIAO YUN-TING, LI<br>YING-YUN, CHANG YU-<br>WEI, LIANG YU-FANG,<br>LAI YUN-CHEN   | 仁德醫護管理<br>專科學校  | Smart Electronic Device Moisture<br>Eliminator  |
| 312004 | CHINA    | WenZhen Liang, GuiFang<br>Deng, Sygne Sxing,<br>MiaoMing He, BaiYu Lin  | Guangdong<br>Polytechnic of<br>Water Resources<br>and Electric<br>Engineering | Anti-backdown Drainage Pipe   |
| 312116 | Thailand | Asst.Prof.Dr.Natnaporn<br>Aeknarajindawat,<br>Mr.Nathaphat Teja,<br>Dr.Natthachai<br>Aeknarajindawat,<br>Ms.Yhardthip Devahasdin<br>Na Ayuttha,<br>Ms.Napatsanun<br>Aeknarajindawat | Suan Sunandha<br>Rajabhat<br>University                                       | Zero-waste Handwoven Cotton   |
| 312564 | Peru     | Mauricio Alfredo Horna<br>Saenz, and Gabriel<br>Sabasrian Horna Saenz   |   | Multi-functional Charger: Can<br>charge multiple electronic devices<br>simultaneously and features fast<br>charging capabilities.           |
| 312565 | Peru     | Gabriel Sabasrian Salcedo,<br>Valeria Liliana Fox, and<br>Julio Fernando Morales<br>Garcia  |   | Smart Trash Can: Automatically<br>senses and sorts waste, and can even<br>be linked to a mobile app to remind<br>you to take out the trash. |
| 312566 | Peru     | Christianna Rafaella<br>Villarreal Sanchez and Mya<br>Ann Arguedas Cespedes   |   | Solar-powered Air Purifier:<br>Effectively purifies indoor air while<br>reducing energy consumption.  |

## 2024 International Innovation &amp; Invention Competition Silver Medal Award List

| SID    | Country | Inventor  | Organization | Invention  |
|--------|---------|---|--------------|--|
| 312567 | Ecuador | Ortiz Luna Martillo Ochoa and Amarilis Martillo Ochoa                                     |              | Edible Utensils: Made from natural materials like corn starch and can be directly consumed, reducing the waste of disposable utensils. |
| 315648 | 台灣      | Jeou-Long Lee, Kwan-Nin Kuo, Pei-Ying Chen, Shang-Hua Yang, Jing-Tan Wang, Chuan-Ting Lee | 龍華科技大學       | Titanium surface coated with strontium calcium phosphate to enhance surface biological activity and antibacterial properties           |