

第26屆

2019

中小企業創新研究獎

The 26th Taiwan SMEs Innovation Award

機械

自動化

材料

服務

生技

資訊

電子

綜合



創新卓越
超越巔峰

得獎專輯

主辦單位



經濟部

承辦單位



經濟部中小企業處

執行單位



中華民國全國中小企業總會

目錄 Content

(依公司名稱筆畫順序排列)

- 02 部長序文
Foreword
- 04 一 etc 一科技股份有限公司
e-Excellence Inc.
- 05 力鼎精密股份有限公司
Leading Precision Inc.
- 06 上陽光學股份有限公司
Sun Yang Optics Development Co., Ltd.
- 07 凡立橙股份有限公司
Fun Lead Change Co., Ltd.
- 08 大數據股份有限公司
Big Data Co., Ltd.
- 09 元進莊企業股份有限公司
Yuan Jin Chuang Enterprise Co., Ltd.
- 10 世堡紡織股份有限公司
Super Textile Corporation
- 11 台灣安麗莎醫療器材科技股份有限公司
Taiwan Aulisa Medical Device Technologies, Inc.
- 12 禾生科技股份有限公司
Gintel Technology Inc.
- 13 光禾感知科技股份有限公司
Osense Technology Co., Ltd.
- 14 佐益企業股份有限公司
Geo-Year Enterprise Co., Ltd.
- 15 佑順發機械股份有限公司
A-Lumen Machine Co., Ltd.
- 16 怡凌股份有限公司
I.n.t International Inc.
- 17 明躍國際健康科技股份有限公司
Strength Master Fitness Tech Co., Ltd.
- 18 油順精密股份有限公司
Ashun Fluid Power Co., Ltd.
- 19 泛宇科技教育有限公司
Funsky Science&Technology Education Co., Ltd.
- 20 建信資源科技股份有限公司
Jian Shin Resources Corporation
- 21 洛科儀器股份有限公司
Rocker Scientific Co., Ltd.
- 22 英霸聲學科技股份有限公司
Xround Inc.
- 23 恩可語股份有限公司
En Ke Yu Co., Ltd.
- 24 益詮精密股份有限公司
Echaintool Precision Co., Ltd.
- 25 乾唐軒美術工藝股份有限公司
Artcera Corporation
- 26 彬騰企業股份有限公司
Bintronic Enterprise Co., Ltd.
- 27 捷騰光電股份有限公司
Solteam Opto, Inc.
- 28 統百食品股份有限公司
Tong Bae Food Co.,Ltd.
- 29 凱記科技股份有限公司
Cargico Corporation
- 30 智耕創新股份有限公司
Dr. Plant Co., Ltd.
- 31 群揚材料工業股份有限公司
Ef-Materials Industries Inc.
- 32 義晶科技股份有限公司
Avisonic Technology Corp.
- 33 聖僑資訊事業股份有限公司
S & J Corp.
- 34 達佛羅企業有限公司
Buffalo Machinery Co., Ltd.
- 35 漢穎科技股份有限公司
Han-Win Technology Co., Ltd.
- 36 碩奇科技股份有限公司
CCI TECH INC.
- 37 歐群科技股份有限公司
OCEAN Technologies Co., Ltd.
- 38 緯和有限公司
Welcome Co., Ltd.
- 39 賽米資訊股份有限公司
Signmi Inc.
- 40 耀欣數位科技股份有限公司
MOCI Technology Co., Ltd.
- 41 第26屆中小企業創新研究獎申請須知
Application Guide
- 45 第26屆中小企業創新研究獎評審委員會
Member of the Review Committees

部長序文

中小企業在國家經濟發展中扮演關鍵角色，無論是就業、經濟成長或創新，皆發揮重要作用。目前臺灣中小企業已逾 146.6 萬家，占全體企業家數近 98%，相較於大型企業雄厚資金及市場規模的優越性，中小企業更須持續提升技術與研發能力，在面對數位經濟蓬勃發展時，展現不凡的創新精神與競爭力。



為獎勵自行從事創新研發而有具體成效之中小企業，經濟部自 82 年起辦理「中小企業創新研究獎」，以期促進中小企業自主投入創新研究發展，藉由創新研發的投入來提升技術與服務競爭力。本獎辦理至今已邁入第 26 屆，共有 4,164 件標的提出申請，歷屆所遴選出來的卓越標的共 897 件，乃創新研發之標竿企業典範。本屆共計 133 件標的參選，透過初審、決審委員專業及嚴謹的審查，遴選出 37 件優秀標的獲此殊榮，獲獎標的於創新性、實用性、研發構想及營運等方面均有卓越的競爭力，彰顯臺灣中小企業在各領域創新研發的新價值。

因應經濟環境變化與數位網路時代發展所需，本部積極推動各項政策，帶動我國產業轉型加值應用，包含產業創新計畫，加速臺灣產業轉型升級；推動技術、產品與服務創新研發計畫，及推動社會創新實驗計畫等，以社群連結、共享共創之概念，協助產業各類跨域創新應用及提升競爭力，使中小企業得以永續經營、成長茁壯。

恭喜今年度獲獎企業，期許各位持續追求創新，也期盼中小企業互相交流與合作，將臺灣優秀產品推向海外市場行銷全球。在此，謹對各得獎企業獻上最誠摯的恭賀，期盼大家再創佳績！

經濟部 部長 沈榮津

中華民國 108 年 11 月 13 日

Foreword

Small and medium enterprises play a key role in the development of a country's economy and have been effective with respect to employment, economic growth and innovation. At present, there are more than 1.46 million SMEs in Taiwan, accounting for nearly 98% of all enterprises. Compared with the superior capital position and market scale of the large enterprises, SMEs must continue to improve technology and research and development capabilities, in the face of the rapid development of the digital economy, showing extraordinary spirit of innovation and competitiveness.

In order to reward the SMEs who have demonstrated concrete achievements in their innovation and R&D, the Ministry of Economic Affairs has organized the Taiwan SMEs Innovation Award since 1993 in the hope of encouraging SMEs operators to invest in innovative R&D, further improving their technology and service competitiveness. The Award has entered its 26th year and a total of 4,164 candidates have submitted their applications. Over the years, a total of 897 cases have been selected for their excellence, setting benchmarks as innovative companies. 133 candidates have participated in this year's competition. Through the professional and rigorous review of preliminary and final review committee members, a total of 37 top-performers have won this award. The award winners have excellent competitiveness in innovation, practicality and research and development concept and operation,, highlighting the new value of innovation and research and development in various fields of Taiwan's SMEs.

In response to the changes in the economic environment and the development of the digital age, the Ministry is actively promoting various policies to lead the industrial innovation and transformation. The policies include industry innovation programs to accelerate Taiwan's industrial transformation and upgrading, technology, product and service innovation and R&D program and social innovation experiments program, etc., through community bridging and sharing, hoping to assist industry in various cross-domain innovation applications and enhance competitiveness, so that SMEs can continue to operate and grow.

Congratulations to this year's award-winning enterprises. We hope that you will continue to pursue innovation, and we also hope that SMEs will exchange and cooperate with each other, and promote Taiwan's outstanding products to overseas markets and market them globally. Here, I would like to extend my most sincere congratulations to all the award-winning enterprises, and look forward to your continue success!

Jong-Chin Shen Minister
Ministry of Economic Affairs
NOV. 13, 2019



一 etc 科技股份有限公司 e-Excellence Inc.



U-Office Force 雲端辦公室4.0
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◆ 簡介

一 etc 科技以自行研發優勢，針對企業客戶在辦公室自動化軟體上的需求，創新研發了全方位 U-Office Force 雲端辦公室，此平台擁有高度原創性並具備多樣完備功能及軟體元件，不但彈性大其擴充能力更是最大優勢。身為企業發展的最佳策略夥伴，我們秉持對專業與創新的堅持，致力於開發人性化的使用者介面，及高附加價值的資訊產品。並在眾多成功客戶的見證下，持續以超越現況為目標，為客戶提供絕佳的技術支援與產品服務。

◆ 評語

- 本標的所研發之兩個新模組，可提升使用企業辦公的方便性，進而提升效率。也可協助使用企業產出有用的數據分析結果，幫助企業管理、營運。以往這些功能多為分散、獨立之模組，本標的將與原 UOF 平臺整合，形成更強大的平臺，可促使客戶更有接受之意願。
- 該企業長期以來都有穩健的研發腳步，產品一步一步擴充，技術申請專利保護持續進行，歷年來也不斷獲得多種獎項之肯定。本標的已有專利保護之。

◆ Introduction

e-Excellence Inc. has developed her own U-Office Force platform based on the enterprise needs, which in response to the needs of customers in office automation software. This platform is highly original and has a variety of complete functions and software components. Not only is it flexible, but its expansion capability is the biggest advantage.

As the best strategic partner for business development, we uphold the persistence of professionalism and innovation, and committed to the development of a user-friendly interface and high value-added information products. Under the witness of many successful customers, we continue to provide superior technical support and product services to our customers.

◆ Commentary

- The two new modules developed by the candidate can improve workplace convenience and efficiency. They can also help companies generate useful results of data analysis to facilitate better management and operation. In the past, these functions were mostly in separate and independent modules. The candidate integrates them into the original UOF to form a more powerful platform, which encourages better acceptance by customers.
- The company has shown steady progress in research and development for a long time. The product line has gradually expanded and the patent protection is ongoing. It has also won various awards over the years. The candidate project is patented.



力鼎精密股份有限公司

Leading Precision Inc.



連續式超高真空輻射加熱反應腔室

Super Mini Batch Degas
(MBD 2)

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◆ 簡介

此反應腔室是在力鼎公司既有的產品基礎下 (Robusta300+)，根據客戶需求而特別設計的反應腔室。具備高產能，可控式溫控調整及高抽氣效能的特性。其中的晶圓承載傳送機制可以滿足客戶短期需要的高溫須求，真空反應腔體的設計特別考量客戶中長期可能需要更高的真空需求而預留擴充空間，輻射加熱模組具備調整燈管之數量及位置之靈活性，可針對腔室中不同位置或不同特性之晶圓作最佳化調整。

除此之外，力鼎將提供客戶未來一定期間內無限制的持續改善專案，使各戶能不斷使用該反應腔室從事新製程開發驗證。

◆ 評語

- 本標之特色為整合超高真空泵浦模組，真空反應腔體，輻射加熱模組，紅外線溫控模組及腔室隔熱遮罩等相關技術，組成提供 300°C 高溫及可排除廢氣之高值設備。
- 本標的創新技術用於加熱晶圓之除溢散熱設備已獲專利。

◆ Introduction

Features

- High throughput
 - ☑ Mini-batch chamber with 4 wafer stages
- Flexible temperature setting
 - ☑ Individual SCR controlled lamp heated module at each stage with IR sensor for real time temperature reading
- Fast pump out
 - ☑ 250 mm diameter opening plus combination of turbo pump and water pump

Strength

- Combining Robusta300+ cluster mainframe to achieve high vacuum integrity (< 5E-8 torr)
- Independent & adjustable heating mechanism to accommodate different outgassing requirements of various materials (PI, PBO, molding, ShellcaseOC, ... etc.)
- Unique fast pump out design to achieve ultra effective evacuation of different gas molecules

◆ Commentary

- The project features ultra-high vacuum pump module, vacuum reaction chamber, radiant heating module, infrared temperature control, chamber insulation mask and other related technologies assembled as a high-value equipment which can provide 300°C temperature and eliminate waste gas.
- The innovative technology used in the de-heating equipment for heating wafers has been patented.



上暘光學股份有限公司

Sun Yang Optics Development Co., Ltd.



SP02投影鏡頭設計

SP02 Projection Lens Design

吳昇澈

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◆ 簡介

本公司開發之 SP02 投影鏡頭，為市場上第一支可同時滿足家用及商用投影需求，具有 4K2K 解析度、高可靠度的短焦投影鏡頭。採用高耐候性的全玻璃材質鏡片，以及自有專利的熱飄移補償設計，在高能高熱的投影系統中，依然可提供優異且安定的畫質。而本產品可搭載於更高亮度之 LED、Laser 等光學引擎運用，滿足未來投影趨勢。

◆ 評語

- 本標的為短焦、高解析度 (4K2K)、高亮度投影機用鏡頭，特點為全玻璃鏡片設計，以因應高功率 LED、雷射光源的需求。
- 其營運模式為鏡頭版的 IC 設計，以收取設計費、權利金及精密組件進行銷售，搭載天貓、ASUS、VIEWSONIC 等知名品牌，具有市場潛力。

◆ Introduction

SP02 Projection Lens is the first short throw projection lens, with both 4K2K resolution and high reliability on market, designed for both business and consumer applications. With whole glass lens elements and patented thermal drift compensation design, the projection quality is excellent and stable even under high power and high temperature environment within projection system. The product is also ready for higher powered LED or Laser optical engines to meet the expectation on projection quality in the future.

◆ Commentary

- The candidate is a short-focus, high resolution (4K2K) and high-brightness projector lens featuring a full-glass lens design to meet the needs of high-power LED and laser sources.
- The business model relies on the IC design of lens boards to collect design fee, licensing fee and precision components for sales. They are installed on products of well-known brands such as Tmall, ASUS and Viewsonic and have market potential.



凡立橙股份有限公司

Fun Lead Change Co., Ltd.



ECOCO循環經濟系統
ECOCO Circular Economy
System

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◆ 簡介

藉由 ECOCO 智慧回收機與 APP 軟硬整合之智慧化回收系統，提供兼具環保、教育、趣味意涵之回收體驗，並整合公益商家提供折扣優惠誘因，進而提高民眾環保意識與意願，形成良性循環。

ECOCO 循環經濟結合 ECO 與 Coin 之概念，實踐資源永續的理念：

- 環保變 EASY
- 點數折抵消費
- 回收有意義

台南是 ECOCO 的第一站，我們正前往更多城市，與更多人一起為地球動起來！

◆ 評語

- 運用適當的商業模式，達到環保、店家與廠商三贏，確實很有創意。而且目前已有不錯的營運成果，而使用的店家回收率及續約率都不錯。加上為店家帶來人潮，具有很大的商機。
- 利用遊戲化的趣味機制來吸引人群，顯見團隊成員具有活潑的行銷概念與執行力。

◆ Introduction

ECOCO Intelligent Recycling System combines software and hardware service by ECOCO Intelligent Recycling Machine and ECOCO APP. It provides users with an environmental friendly, educational and interesting recycling experience. ECOCO's brand partners offer users discount coupons as rewards. The whole system enhances people's environmental awareness and willingness, furthermore, forms a virtuous circle.

The name ECOCO consisted of ECO and COin, represents the concept of resource regeneration and sustainable development:

- An easy way to protect the environment
- Get coupons as rewards
- Meaningful recycling behavior

Tainan is the first station of ECOCO. We will move forward and make recycling become enjoyment in every city.

◆ Commentary

- Use the right business model to achieve win-win games with respect to environmental protection, clients and vendors, and it has proven its creativity. So far, the operating results are good, as well as the recycling rate of clients and their renewal rate. It brings crowds to clients' stores and there are great business opportunities.
- Adopt the gamification approach to attract crowds, showing that the team members have lively marketing ideas and good execution.

KEYPO

大數據股份有限公司

Big Data Co., Ltd.



KEYPO大數據關鍵引擎
KEYPO

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◆ 簡介

為提供更平易近人的大數據分析服務，本團隊研發介面簡單的大數據分析平台—「KEYPO 大數據關鍵引擎」。由本公司自行開發的語意分析技術，透過雲端資料庫存取功能，建立數據分析引擎。為提供客戶不同市面的數據分析服務，除了將開發結合大數據的警報通知系統外，更計畫運用品牌網站及菁英行銷團隊，針對客戶的數據分析報告，提供精準廣告行銷服務。本計畫將結合巨量資料、數據分析技術、各領域 Domain 專家顧問等優勢，打造出大數據之新服務型態。透過人工智慧與機器學習技術，精準高效的抽取高階語意概念，感知文章的上下文脈絡，進而分析網友意見。

◆ 評語

- 營運模式與產品服務具有服務創新價值。
- 團隊在數據分析技術上具有獨特性且具備研發整合分析能力，得以形成競爭優勢與建構競爭對手之進入障礙。
- 產品具有前瞻性架構，透過人工智慧與機器學習技術，可以抽取高階語意概念，分析網友意見，具技術開發特色。

◆ Introduction

KEYPO is a tool which can get the trends and customer comments from every corner of the public web. Also, KEYPO is able to discover the insight into the posts quickly by AI application. The database updates per 15 minutes and has accumulated more than 1 billion documents in one year. To fulfill different requirements, we also provide an online service, so that big data usage will no longer be limited to enterprises.

The difference from other competitors is that Big Data Co., Ltd. is both the developer and user. After many years investigation, we have started to develop big data analytic system.

As an AI big data explorer, Big Data Co., Ltd. integrates BDA (Big data analytics) and marketing strategy to provide smarter solutions. Our team keeps developing the social media monitoring tools to find out what are the people really caring. By applying the service, it's easier to catch the needs, then meet the needs. Making big data applications and artificial intelligence be closer to people's life is our corporate social responsibility. We not only build a social monitoring system which can understand the insight into the internet, but also use the AI chatbot to bring the new experience to our daily life. Big Data Co., Ltd. has been recognized by various units in recent years. And we are committed to finding more multivariate and innovative applications in big data technologies in the future.

◆ Commentary

- The operating model, product and service are innovative.
- With respect to the data analysis technology, the team is unique and has the analytical skills in research and development to form competitive advantages and barriers to entry.
- The product is forward-looking in that it extracts high-level semantics through artificial intelligence and machine learning to analyze user opinions and it features high technology development.



元進莊
YUAN JIN CHUANG

元進莊企業股份有限公司

Yuan Jin Chuang Enterprise Co., Ltd.



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◆ 簡介

元進莊滴雞精的開發，其創新特色在於以專利技術去除滴雞精中過多的脂肪（臺灣專利申請案號 105112861），減少腥味、避免胺基酸、膠原蛋白與其他營養素流失，保有滴雞精之鮮度、香氣與金黃色澤（臺灣專利申請案號 105112862），領先業界，於2018年建造一條龍體系可溯源的食安追溯系統，給消費者透明即時的生產履歷。精萃出的滴雞精經全自動充填後，在不影響整體口感的條件下依最嚴謹的殺菌技術滅菌，使元進莊滴雞精可以在常溫下保存，適合產前、產後、病後或讓隨時想藉滴雞精補充元氣的顧客可以用最簡單、最方便及最安心的方式享用到滴雞精。

◆ 評語

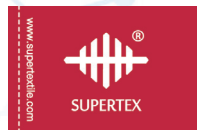
- 本標的運用研發之專利萃取製程技術，可以去除雞精中過多的脂肪，減少腥味，避免胺基酸等營養素流失，以及不添加水分。其生產線有相當令人驚豔之工業 4.0 內涵，包含了 IOT 以及大數據等。該工廠具 HACCP 及 ISO22000 驗證。
- 本標的於市場上已有實際行銷及出售，同時多以 ODM 方式客製化具區別性養分之滴雞精，而由於整廠具 halal 認證，行銷人口眾多的回教國家或回教徒是一優勢。

◆ Introduction

To develop Yuan Jin Chuang concentrated chicken essence, the innovative features include using proprietary technology to remove excess fat from concentrated chicken essence, reducing gamy, avoiding loss of amino acids, collagen and other nutrients and preserving the freshness, aroma and golden yellow of concentrated chicken essence. Yuan Jin Chuang acts as a leader in the field. Build up a one-stop system with traceable food safety traceability system. Provide consumers a open and real time production information. Extract through traditional techniques and make the frozen form chicken essence into different storage way which can be storage at room temperature by secondary sterilization. It's suitable for people who are trying to recover body function after illness, nurse pregnant women's health after delivery of a baby, help child growth and development and overworking brainworker. Customers can enjoy the concentrated chicken essence in the simplest, most convenient and most comfortable way.

◆ Commentary

- The candidate uses its patented extraction technology to remove excess fat from chicken essence, reduce the smell and prevent the loss of nutrients such as amino acids while not adding water. The production line has demonstrated the principle of industry 4.0, incorporating the ideas of IoT and big data. The factory is HACCP and ISO22000 certified.
- The candidate has the actual marketing and sales experience in the market, and it provides ODM customization service to offer chicken essence in different varieties. As the factory is Halal certified, it has the advantage of selling to Muslim-populated countries.



世堡紡織股份有限公司

Super Textile Corporation



FIR遠紅外線馬術用品 FIR Equestrian Products

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◆ 簡介

1. 將遠紅外線技術與環保概念布料結合馬具用品之設計與製作生產，透過遠紅外線波長 4-20 微米與水分子產生接近的振動頻率，深入馬體皮膚組織，有效保健與緩解不適。
2. 使用奈米級潑水加工讓產品容易去除髒汙且透氣快乾。
3. 考量使用者方便，在產品設計上兼具功能性、方便性及舒適性

◆ 評語

本標的將陶瓷粉末混入聚酯纖維中，紡織成遠紅外線針織布料，應用於馬術系列產品，運用遠紅外線滲透皮膚原理，促進馬匹血液循環、改善新陳代謝，達到運動後的舒緩療癒效果。並藉由諮詢馬術專家，設計、裁縫製作符合馬匹的各式護具，有別於傳統上的皮革製品，係為遠紅外線針織布料創新應用。

◆ Introduction

1. To combine the far-infrared technology with eco-friendly concept fabrics in our equestrian products' design and manufacture, the fabric emits far-infrared rays with wavelengths between 4~20 micrometers to deeply penetrate into horses' skin layer and resonate with water molecules of the whole body system. This helps in increasing blood circulation and relieving pain in order to maintain the horses' healthiness.
2. Adding Nano moisture wicking technology to easily remove fabric stains, stay breathable and quick-dry.
3. With consideration of users' expectations for convenience, we aim to design our products with functionalities, conveniences and ultimate comforts.

◆ Commentary

The candidate mixes ceramic powder into polyester fiber and then woven into far infrared knitted fabrics to be used in equestrian products. It adopts far infrared treatment on the skin to promote blood circulation and metabolism of horses, achieving the soothing and healing effects after their exercise. The fabrics are designed and tailored into a variety of protective gear for horses based on the recommendations from equestrian experts. They are different from the traditional leather products and are considered an innovative application of far infrared knitted fabrics.



台灣安麗莎醫療器材科技股份有限公司

Taiwan Aulisa Medical Device Technologies, Inc.



“安麗莎”生理訊號監控系統
Aulisa Digital Vital Sign
Monitoring System

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◆ 簡介

“安麗莎”生理訊號監控系統為透過微型化生理訊號量測模組之技術，以連續量測人體之血氧濃度、心率等生理訊號，並透過影音監控設備暨無線傳輸技術，運用藍芽及 Wi-Fi 進行傳輸，於異常狀態時發出警報提醒及儲存資料至雲端。爰此，本系統可使用於醫療院所，亦可用於家居護理，可應用於睡眠呼吸中止症等呼吸疾病、心血管相關疾病或需長期照護慢性病患者族群之全球廣大市場。本系統具備完整專利佈局並取得國內外多項專利，亦取得美國 FDA 510 (K)s、台灣 TFDA 查驗登記證及歐洲 CE Mark 合格等醫療器材認證。目前已大量生產內銷臺灣及外銷美國。

◆ 評語

本標的創新特點包括非侵入式檢測血氧與反射式量測系統、微小性與生物相容性材料、穿戴式無線連續監控、獨特精準的生理跡象演算法、p2p 監控與雲端儲存、長期配戴舒適等。並具市場上 TFDA 認證之唯一性與獨特性。是全世界第一臺無線穿戴生理監控系統與結合生理訊號與影音訊號的雲端監控穿戴系統。已獲取國內外發明或新型專利共 9 項，並取得美國 FDA510(K) 上市許可、臺灣 TFDA 查驗登記證及 CE Mark 等數項認證，具備產品完整專利佈局。

◆ Introduction

Aulisa digital vital sign monitoring system, miniaturized from larger medical measuring instruments, wearable by user, measure human vital signs, and then transmit user data via BLE 4.0 wirelessly, in real time, to a Receiver/Transponder (RT); RT in turn transmits user data via Wi-Fi to a “cloud” server. The data can then be accessed and displayed by any internet-connected device after APP installation. The user can therefore be monitored anywhere in the world with no limitation of distance or time, continuously 24/7, seamlessly without effort of the users or medical professionals. More importantly, Aulisa system is designed for giving alarms, alerting caretakers to intervene and help users when user’s vital signs are in dangerous conditions. Moreover, Aulisa system is now in mass production and being sold in Taiwan and US market.

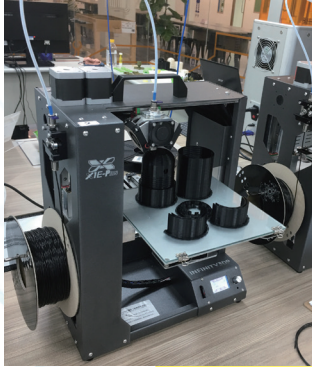
◆ Commentary

The innovative features include non-invasive blood oxygen and reflective measurement systems, micro- and biocompatible materials, wearable wireless continuous monitoring, unique and precise physiological signal algorithm, P2P monitoring and cloud storage, long-term wearing comfort and others. It is one of a kind and its uniqueness has earned the TFDA certification. It is the world's first wireless wearable monitoring system integrating physiological signal monitoring and video and audio signals. It has obtained 9 utility or design patents at home and abroad, as well as the FDA 510(K), TFDA and CE Mark certifications and product has complete patent planning.



禾生科技股份有限公司

Gintel Technology Inc.



雲端智慧水產養殖有毒濃度快速 監控追蹤系統

Cloud AI Quick Monitoring and
Tracking System for Aquaculture
Water Toxic Concentration

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◆ 簡介

由於地球暖化和海洋資源耗竭，水產養殖未來在蛋白質供應將具有舉足輕重的地位。水產養殖生物死亡導致水產品安全和消費者健康受到極大威脅，水質有毒濃度和弧菌是造成水產養殖死亡的主因。本產品整合智聯網、行動科技、水產養殖、軟硬體設計、物理複合式感測等跨領域科技，致力於水質快速監測，追蹤、預警，並預測水質有毒濃度和弧菌主要來源且提供無毒解決方案，高穩定高準確，精準掌握水質變化，提高養殖成功率，確保水產品安全。產品榮獲 CES2019 等超過 22 項大獎與發明專利，技術領先全球，為水質提供快速監測、無毒解方的先驅。

◆ 評語

- 相較於傳統化學式感測元件，本標的可測 30 種有毒參數，具有穩定度高、準確性佳，壽命長等優點，透過多重複合式的感測更能有效檢測水質的變化。
- 已取得「水質監測系統及其監測方法」臺灣專利，並獲有數項國內外參展獎項。
- 已銷售至越南、馬來西亞及印尼，進入技術門檻高，水產養殖市場需求未來看好。

◆ Introduction

Due to global warming and depletion of marine resources, aquaculture will play a pivotal role in the future of protein supply. The death of aquatic creatures threatens seafood safety and consumers' health. The toxic concentrations and Vibrio in water are the main factors to the high death rate. The product is developed by the integration of trans-disciplinary majors, such as AIoT, mobile technology, aquaculture, software and hardware integration design. The composite physical sensor makes the data measured with high stability and accuracy. The system provides quick monitoring, predicting, pre-warning, and non-toxic solutions. The functions will keep seafood safe by predominating the change of aquaculture water parameters precisely. The product has awarded more than 22 global competitions, such as CES2019, and invention patents. The unique technology is a global pioneer and leader in quick monitoring of water parameters and predicting the non-toxic solutions in aquaculture.

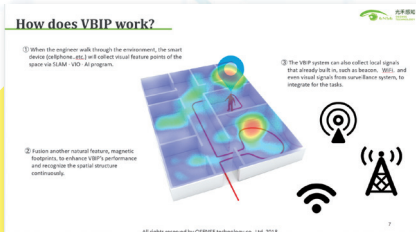
◆ Commentary

- Compared with the traditional chemical sensor components, the candidate can test for 30 kinds of toxic parameters and has the advantages of high stability, good accuracy and long service life. The integrated measurement capabilities make it more effective in monitoring the changes in water quality.
- Has obtained a patent in Taiwan for the "water quality monitoring system and method" and won numerous awards in exhibitions both at home and abroad.
- Has been shipped to Vietnam, Malaysia and Indonesia. The technology has established a high barrier to the entry and the demand in the aquaculture market is promising in the future.



光禾感知科技股份有限公司

Osense Technology Co., Ltd.



室內地圖創建系統 Vision Based Indoor Positioning, VBIP

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◆ 簡介

透過行動裝置或智慧眼鏡上經使用者之步行測距，結合環境訊號準確繪製室內地圖之地圖建置器，並可經由AR使用者介面，展現室內定位及導航功能，實現不同需求的創新智慧空間服務，為獨家開發之國際發明型專利技術。

◆ 評語

本標的具室內地圖建置、地磁場濾波技術等創新特色，並結合AI機器學習技術，不需藍芽或wifi即能定位，與同類產品相較具創新價值。未來自動室內定位的應用應会更廣泛，本標的實用性甚佳，與同類產品的實用差異也很明顯，極具競爭性。

◆ Introduction

Vision Based Indoor Positioning, VBIP, an United States Patent, provides indoor applications, cloud platforms and smart modules focusing on space recognition to achieve positioning, navigation, location based services, smart space, O2O services by OSENSE cutting-edge computer vision and signal fusion technology.

◆ Commentary

The candidate offers innovative features such as indoor mapping and geomagnetic field filtering technology. It incorporates AI and machine learning and does not require Bluetooth or Wi-Fi for positioning, making it more innovative than other similar products. The application of automatic indoor positioning in the future is expected to be more extensive. The product has good practicality and it also differentiates itself from other similar products, making it very competitive.



佐益企業股份有限公司

Geo-Year Enterprise Co., Ltd.



環保花式紗
Recycled Fancy Yarn

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◆ 簡介

GreenRiver® 環保花式紗 是專為針織、紡織品設計的環保紡織材料。

- 本紗線結構以仿羽毛之立體化概念設計，並導入特殊之花式撚紗工藝織造而成，使織物可兼具美觀、細緻觸感與保暖特性，適用於各類紡織品，包含居家、嬰幼兒產品等。
- 主原料為回收保特瓶，經過清洗、打碎、研磨、溶融、重新聚合、抽絲、織造等步驟再製成紗。
- 本環保紗之原料亦可搭配不同環保材質混合織造，例如再生纖維、有機纖維、天然纖維...等，藉此豐富紗線之變化性，以增加應用範圍、經濟價值與環保效益。
- 本環保紗之設計已取得多國專利，此設計概念亦榮獲 2019 年德國綠色產品獎。

◆ 評語

- 本標的使用資源再生之纖維（如廢寶特瓶材料等），與一般原纖維材料混合，經過專利之結構設計所織製而成的花式紗線產品。本標之原料皆為國內紗線大廠，並皆是取得 GRS 驗證之環保紗線原料，再委外製成環保花紗。
- 市場對環保訴求的產品需求逐年提升，本標的產品未來以不同結構種類花式紗線申請專利，具有極大的延伸性。目前正導入研發機能性與環保特性設計，開發醫療紡織品。

◆ Introduction

GreenRiver®, Recycled Fancy Yarn is an eco-friendly textile material designed for knitwear and textile.

- The yarn's structure is designed with the three-dimensional concept of feather-like and is woven by the special fancy spinning process, which brings the fabric nice looking, soft hand feeling and warming. The yarn is suitable for most knitwear and textile, including home use, infant products, etc..
- The main material is from the recycled PET bottles from the end-users. It is recycled with the GRS certificate and is processed through grinding, washing, melting, re-polymerizing, spinning, texturizing, and making to the yarn.
- The materials of the recycled fancy yarn can also be mixed with different eco-friendly materials, such as recycled fiber, organic fiber, natural fiber, etc., to enrich the variability of the yarn, broaden the application scope, enhance economic value and increase environmental benefits.
- The design of the recycled fancy yarn was patented at many countries and this design's concept was also awarded the Green Product Award Selection 2019 in Berlin, Germany.

◆ Commentary

- The candidate is a type of patterned yarn made of recycled fiber (such as the materials from waste PET bottles) together with general fibril materials by using its patented structural design. The raw materials all come from well-known domestic yarn manufacturers and have obtained GRS certification before being contracted out to be made into environmentally friendly yarns.
- The market demand for environmentally friendly products has been increasing year by year. The candidate will apply for patents for different structures and types of patterned yarns, and this demonstrates its product extension. Currently, features such functionality and environmental protection are being incorporated into its design to develop more medical textiles.



佑順發機械股份有限公司

A-Lumen Machine Co., Ltd.



奈米級鋁膜處理含浸氣浮設備
Nano-Aluminum Laminated Film
Dip-Coating Equipment with
Floating Oven

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◆ 簡介

特色

1. 同時雙面進行含浸塗佈，形成薄膜。
2. 非接觸式乾燥烘箱，具有最佳的熱傳效率、氣流及溫度分佈。
3. 自動張力控制系統，適用於不同張力需求，操控人機介面簡單易懂。
4. 配備靜電消除裝置、濃度管理裝置、二次黏塵裝置。
5. 搭配紙管裝卸，一貫作動上裝及成品卸下作業。

功能

可生產光學膜、智能膜、照明塗佈、硬化保護塗層、電子膠帶、紡織面料、生醫藥佈及鋁箔、銅箔等捲材塗佈。

◆ 評語

本標的之特色為因應軟包鋰電池之需求，整合鋁膜之放料、水洗、含浸雙面塗佈及收料等且四個主要模組，相對於蒸鍍或濺度方法，能夠大幅降低成本，另配置自動張力控制系統，在製程增減速過程中提供穩定張力。

◆ Introduction

Characteristic

1. At the same time, impregnation coating is performed on both sides to form a film.
2. Non-contact drying oven with optimum heat transfer efficiency, airflow and temperature distribution.
3. The automatic tension control system is suitable for different tension requirements, and the HMI control system is easy to understand.
4. Equipped with the static eliminator, concentration management device and secondary dust-proof device.
5. It is equipped with a paper core loader for consistent loading and unloading of finished products.

Functions

They can produce optical and smart films, luminous coatings, hardened protective coatings, electronic tapes, textile fabric, biotechnology transdermal patches and aluminum foils, and copper foils.

◆ Commentary

The candidate features the integration of four main modules of soft-packing lithium batteries, which include aluminum film discharge, water wash, double-sided coating and retrieval. Compared with the evaporation and sputtering methods, it can greatly reduce cost. An automatic tension system is also installed to provide stable tension during the acceleration and deceleration of the manufacturing process.



怡凌股份有限公司

I.N.T. International Inc.



FlexoPlast Mixing Base NPC

FlexoPlast Mixing Base NPC

全環保低溫熱固油墨

Environmental Low-Temperature Thermosetting Ink And Method For Manufacturing Film Using The Same

蔡明宏 / 董事長

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◆ 簡介

熱固油墨為用於紡織品及皮革上的印花用漿料，可以通過平版絲網印刷和冷撕熱轉印的方法達到傳統膠漿、水漿所達不到的理想效果。然而，目前的熱固油墨經過高的加熱溫度會導致許多紡織品收縮、變形、變色及手感不佳等不良後果；本產品提供一種新穎全環保熱固油墨，其中不含聚氯乙炔樹脂及或含有鄰苯二甲酸酯類的增塑劑，可在低溫下，約 100℃烘烤 1 分鐘即可快速固化且具有環保功能，並可應用於現今大量使用於流行服飾或運動服飾中使用的聚酯纖維布上，因其較低的熱成溫度不會破壞聚酯纖維的機械強度，保持機能布原有的彈性及功能性。

◆ 評語

- 本標的創新性為：(1) 具較低的固化溫度，可快速固化紡織品，不會產生變形變色的問題。(2) 不含鹵素化合物與甲醛對人體無害 (3) 不具 PVC 樹脂與增塑劑等有害環境的化學物質。(4) 可以節省固化時間、節省能源、有效提高產能、降低對人體與環境污染。已獲得一項我國的專利。
- 本標的是目前市場上唯一的低溫固化環保產品，市場獨特性高，對於市場的競爭性可藉由產品獨特性，定位市場區隔性，並延伸產品生命週期。全球市場對產品的環保節能與高效率生產之需求日益提升，本標的具市場優勢。該公司是國內染料產業中唯一以建立國際品牌導向的染料品牌企業。

◆ Introduction

Thermosetting ink is key-material in textile and leather screen-printing. By using thermosetting ink and thermal transfer method we can reach ideal result in final product. However long-time heating on thermosetting will cause textile shrinking, deformation and discoloration. I.N.T group develop a new environmental thermosetting ink excluding Polyvinyl chloride resin and Phthalate. They can be heated 100 degree about one minute and apply on polyester fabric and sports wears. Owing to low-temperature process, the polyester clothes can maintain elasticity and function. In the meantime energy saving and carbon reduction can happen.

◆ Commentary

- (1) has a low curing temperature and can quickly cure on textiles without causing deformation or discoloration, (2) does not contain halogen compounds and formaldehyde and is harmless to the human body, (3) does not contain PVC resin or plasticizer which are harmful to the environment, (4) can save the curing time and energy and effectively increase productivity and reduce the effects to the human body and environment. It has obtained a domestic patent.
- The candidate is the only low-temperature curing environmentally friendly product in the market. Its competitiveness in the market is defined by its product uniqueness and positioning, which extends its product life cycle. The world's demand for environmentally friendly, energy-saving and high-efficiency products is increasing, and this product has its advantage in the market. The company is the only domestic dye brand aiming to establish an international brand.

STRENGTH
MASTER

明躍國際健康科技股份有限公司 Strength Master Fitness Tech Co., Ltd.



拳擊腳踏車
Cycle Boxer

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◆ 簡介

本產品為首創革命性獨一無二的 Total Immersion Fitness，是一種結合拳擊和踩踏運動的身、心、腦之健康器材，從高強度心肺訓練的 Exercise Bike 開始，結合全身肌肉訓練的 Boxing，再藉由科學化互動設計之打擊板，訓練大腦反應、改善記憶力、反應時間與身體協調能力，只要一週3天，每次15分鐘，就能讓身體變健康且緩解身心壓力，本產品將是你做過最有趣、最高強度且更具吸引力的 Total Immersion Fitness。

對使用者來說，使用 Cycle Boxer 不僅是創新式運動，更傳遞出生活態度。透過網紅行銷，Cycle Boxer 現已成功在美國社群曝光，吸引許多年輕、嘗鮮並挑剔身材的使用者目光。

◆ 評語

- 本標的以創新的拳擊複合腳踏車之健身運動模式作為運動器材，提供手、眼協調之訓練；並可搭配電子錶及 App 使用，俾利提供使用者之運動軌跡與運動數據的參考。
- 已獲臺灣及大陸新式樣專利各一；同時申請多國發明專利中。

◆ Introduction

Cycle Boxer is the breakthrough product, combine boxing and pedaling. It is the first and only workout that delivers the all new revolutionary total immersion fitness. Durable design and nice color matching, Cycle Boxer will lead a trend you'll ever do.

It provides the good experiencing to those who loving fun, brain storming and challenges. We don't just sell product, but fashion attitude. Through KOL marketing and social media, we targeting on young, early adopters, self-compassion and body demanding white collar persons who love sharing and afraid of out-trend.

APP helps the customer relationship manage and provides bonus system to user. All of these are our main strategy in marketing.

It's the most fun, intense, and engaging workout you'll ever do that's totally immersion fitness. Just 3 minutes to get fit, ripped and blast away mental and physical stress. From the workout, look, feel and think your best in every area of your life.

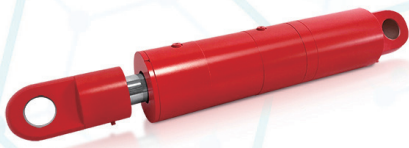
◆ Commentary

- The candidate is a sports equipment incorporating boxing and pedaling as a fitness model to provide hand-eye coordination. It can be used with electronic console and App, providing users with references to their motion trajectories and sports data.
- It has obtained design patents in both Taiwan and China and is currently applying for utility patent in several countries.

ASHUN

油順精密股份有限公司

Ashun Fluid Power Co., Ltd.



遠端監控阻尼器

Remote Monitoring Damper

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◆ 簡介

遠端監控阻尼器結合傳統阻尼器以及智慧資訊回饋分析功能，當阻尼器安裝至建築物後，因地震或是颶風所產生的位移狀況，智慧遠端監控阻尼器皆會經由內部的高精密位置傳輸裝置將所有的位移資訊透過 CABLE 或是無線通訊的方式傳送至後台，進行數據分析。此產品跳脫傳統液壓阻尼器需人工定期檢查與補漏的缺點，提供更智慧的使用模式，同時提供即時資訊回饋與自動填補微洩漏的便利性，讓監控與維修人員即時掌握阻尼器的狀況，並可將洩漏狀況與阻尼器位移狀況及時回傳給使用者，讓遠端監控阻尼器成為建物安全守護者。

◆ 評語

本標的之特色為用於建築之阻尼器，具有即時資訊回饋與自動填補油洩漏之智慧遠端監控功能，跳脫傳統液壓阻尼器需人工定期檢查與補漏之缺點，且可將洩漏狀況及阻尼器位移狀況即時回傳給使用者，可方便管理。

◆ Introduction

The Remote Monitoring Damper combines the functions of traditional type and intelligent feedback analysis. When it's installed in building, it will pass through the internal high-precision position transmission device when earthquake or hurricane is displaced. The damper transmits all displacement information to the background through cable or wireless communication by internal high-precision position transmission device for data analysis. This product offers a smarter usage mode, instant information feedback and automatic filling of micro-leakage. The condition of leakage and displacement can be transmitted back to the user in time, so it becomes the safety guardian of building.

◆ Commentary

The candidate is a damper used in buildings. It has the smart and remote monitoring capability which provides real-time information feedback and automatic refill of oil leaks. It is better than the traditional hydraulic damper as the traditional type requires manual regular inspection and refill. The candidate can instantly transmit the leak status and damper displacement to the user instantly for easier management.



FUNSKY

泛宇科技教育有限公司

Funsky Science & Technology Education Co., Ltd



可調整時間緯度的天球儀與雷射指星裝置
Funsky Celestial Globe and
Star Pointer

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◆ 簡介

FUNSKY 星球儀，可以藉由調整時間、緯度，呈現地球上任何時間、地點的天空。在星空下，配合指星筆，可以用雷射光直接指向對應的星星；配合地平半球，可以描繪、紀錄天體的位置和運行軌跡。

FUNSKY 星球儀像是一個縮小的宇宙，使用者以上帝視角操控宇宙，藉由調整日期時間，穿越時間，調整緯度，環遊世界。當宇宙可以被掌控，天文就變簡單、有趣。讓我們對全世界的天文科普教育帶來革新！讓小朋友覺得天文是很簡單、有趣的科學科目。

◆ 評語

- 本標的以創新的天球儀搭配雷射指星的裝置，可在天球儀上作時間及緯度之定位，並以雷射指星器快速定位直接指向對應星辰位置。
- 已獲美國發明專利，臺灣新型專利 2 件，並獲得 2017 臺北國際發明金牌獎。

◆ Introduction

The FUNSKY celestial globe can present the sky any place any time on the Earth by setting date, time and the latitude of the location. By putting Star Pointer on the FUNSKY celestial globe, the laser or spotlight can shoot directly at the star under the stars. By putting the hemisphere on the FUNSKY celestial globe, students can draw the position and motion of the celestial bodies and watch the sky from the earth's perspective. The markets are astronomical equipment, science education, camping, scientific toys and gifts, safety equipment of navigation, astrology and decoration.

The FUNSKY celestial globe is like a shrinking Universe. User control the universe from God's perspective. Travel through the time by setting date and time. Travel around the world by setting latitude. When the Universe(sky) can be control, astronomy become easy and fun. Let's guide the reform of basic astronomy education around the world. Let children feel astronomy is a easy and fun scientific subject.

◆ Commentary

- The candidate is a celestial sphere with a laser star pointer. Time and latitude can be marked on the celestial sphere and the laser star pointer can quickly locate and point to the corresponding star position.
- Has obtained a utility patent in the US and two design patents in Taiwan and won a gold medal in the 2017 Taipei International Invention Exhibition.



建信資源科技股份有限公司

Jian Shin Resources Corporation



鉛爐渣回收再利用技術
Lead Slag Recovery and Reuse
Technology

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◆ 簡介

台灣每年回收12萬噸廢鉛蓄電池，產生1萬5千噸含鉛爐渣。以往台灣無鉛爐渣處理技術，只能將這些含鉛50%的爐渣，當作有害廢棄物，採固化掩埋處理，每噸費用2~3萬元。此治標不治本方法，可能在20-30年後，重金屬滲透外露，造成二次污染，影響超過百億的環境成本。

建信以台灣唯一，獨特轉爐冶煉、富氧燃燒技術，還原爐渣，熔煉出所有鉛。剩餘物通過 TCLP（毒性特性溶出檢測），屬一般事業廢棄物。

- 三贏：供應商減少處理費用、建信降低原料成本、友善環境。
- 鉛資源回收，減少天然礦開採。
- 爐渣、爐石回收提煉，垃圾變黃金。
- 解決鉛廢料污染，替代高成本固化掩埋，減少 87%鉛廢料。
- 火法製程替代高耗能、高污染的電解純鉛製程。
- 引進空汙防制設備，符合空汙排放標準。

◆ 評語

- 本標的將原有鉛廢電池回收後之爐渣，透過技術予以回收再利用，並以特有的轉爐技術，達成爐渣（鉛爐渣）有效的回收。
- 本標的之旋轉爐由法國引入，廠商自行進行電控與原物料的測試，並具自有技術之建立。此回收技術，可解決含鉛廢料的固化掩埋問題，以含氧氣氛做完全燃燒，並提煉爐渣中接近 50% 的鉛，相當具環保與循環經濟指標。
- 目前其他同業無相同技術，具市場競爭力，將來營收將能持續成長。

◆ Introduction

In Taiwan, yearly recycle of 120000MT of waste Lead Acid Batteries equals to 15000MT of Lead (Pb) Slag.

Pb slag recycling technic used to be a barren area in Taiwan. Slag contains 100% of Pb is classified to hazardous waste. Disposal of Cement Based Solidification Technic, cost NT20000 to 30000/MT. Decades later, penetration of heavy metals can be a concern and might cause pollution again.

JS facility and technic are applied to reduce Pb from Slag by smelting. Remaining substance is classified to Industrial Waste, compliance with TCLP testing.

- Less cost on disposal and material. Environmental Friendly.
- Recycle of Pb, Reduction of Mining, Transformation of Worthly Goods.
- Resolution of lead waste pollution and a replacement of costly Cement-Based Solidification. Reduction of 87% Pb Waste.
- Pyrometallurgy instead of costly and high polluted Electrolysis process.
- Facility accordance with emission standard.

◆ Commentary

- The candidate recycles and re-uses the slag from recycled waste lead batteries by using its unique converter technology. It accomplished effective recovery of slag (lead blast furnace slag).
- The rotating furnace is introduced by France. The company develops its electronic control and the testing of raw materials and has its own in-house technologies. The recycling technology can solve the solidification and burying issues with lead-containing waste. It uses an oxygen-containing atmosphere for complete combustion and extracts nearly 50% of lead in the furnace slag, making it a valuable indicator for environmental protection and circular economy.
- At present, other industry peers do not have the same technology so the candidate is competitive in the market. The future revenue will continue to grow.



洛科儀器股份有限公司

Rocker Scientific Co., Ltd.



Alligator 200隔膜式抽水真空幫浦
Alligator 200
Diaphragm Liquid Pump

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◆ 簡介

洛科 Alligator 200隔膜式抽水真空幫浦主要目的為提供較「傳統抽氣式幫浦」更有效率的過濾選擇。Alligator 200 的創新特色如下：

- (1) 節省 40% 空間
內建抽水幫浦，可直接排水，不需傳統過濾必要的廢液瓶，節省40%實驗空間。
- (2) 節省30%時間
直接排水設計，不需拆裝廢液瓶、倒除廢液等步驟，簡化流程，加速實驗進行。
- (3) 高效能、低震動
內部抽水幫浦採專利「雙緩衝區」設計，減少流體衝擊的震動並提供較傳統抽氣式幫浦更佳的流量。
Alligator 200 隔膜式抽水真空幫浦主要應用於學界、業界的過濾實驗，如食品、飲料、藥廠的微生物檢測、環境監測產業的懸浮固形物檢測等。

◆ 評語

- 本標的使用於實驗室懸浮物、微生物檢測，以直接抽取液體方式，取代廢液瓶過濾，創新結構在於設立後緩衝區（吸收水壓及流體衝擊並預留氣道），以降低噪音、震動，體積也較過去減少許多具使用方便性。
- 公司定位清楚成為全球實驗室真空設備的領導品牌，海外參展也獲得良好的回饋與訂單。

◆ Introduction

The purpose of Alligator 200, Diaphragm Liquid Pump is to provide the more effective filtration method. The innovation features are listed below:

- (1) **Save 40% Bench Space**
Alligator 200 built in a liquid pump that transfers liquid directly to waste. No need of any waste bottle that is necessary for traditional vacuum pump. Saving 40% working space by getting rid of tubing and waste bottle.
- (2) **Save 30% Time**
Alligator 200 transfers liquid directly to waste, this brings a great time saving by simplifying filtration process including removing tubing and waste bottle, empty liquid waste, cleaning and installing the tubing and waste bottle.
- (3) **High Efficiency, Low Vibration**
The patented "buffer zone" of liquid pump does not only reduce the vibration caused by fluid impact but also offers a better flow rate than traditional vacuum pump.
Alligator 200, Diaphragm Liquid Pump is applied on various filtration experiments, such as microbiological test in food, beverage or pharmacy industries and suspended solid (SS) test in environmental monitoring industry etc.

◆ Commentary

- The candidate is used in the testing of laboratory suspended matters and microbials. It adopts direct liquid extraction to replace the filtering in liquid waste bottles. Its innovativeness is in its rear buffer zone (absorbing water pressure and fluid impact and preserving the airway) which reduces noise and vibration and the size which is much smaller than in the past, providing users with convenience.
- The company has clearly established itself to becoming a leading brand of laboratory vacuum equipment in the world.



英霸聲學科技股份有限公司 Xround Inc.



XPUMP Premium 3D 智慧音效
處理器
XPUMP Premium 3D Audio
Processor

李鵬

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◆ 簡介

XPUMP premium 3D 智慧環繞音效引擎，其核心技術搭載XROUND專屬音訊演算法。透過XROUND音訊演算法可以使普通的雙聲道喇叭或耳機（約市價新台幣1000元以上之產品）擁有環繞效果與音效細節加強的效果，使用戶能輕易的擁有沉浸式的聽感享受。相較於過去的家庭劇院產品往往需要足夠大的空間與距離，並需要專業的團隊進行佈線與施工，同時在價格上也略顯昂貴單價甚高，透過平價的XPUMP就能讓普通的雙聲道喇叭或耳機具有環繞效果，突破過往消費者對家庭劇院或是環繞音效的想像。在雙聲道的設計條件下使用XROUND音訊處理技術，使任何雙聲道產品即可擁有家庭劇院組等級的效果。

◆ 評語

- 本標的利用獨家研發的音訊演算技術，且使用普通的雙聲道音箱、耳機等設備，即可提供音場寬度至175度擴展之沉浸式音響，音場深度可達100%延伸，相較於常見之環繞音效技術，提供兩倍以上的音場深度與寬度，同時具高兼容性，讓普通用戶用最簡單的設備，就可以擁有家庭劇院般的體驗，重新定義聆聽體驗。
- 本標的利用其獨特之音訊演算法，技術門檻高，已取得臺灣專利「新訊處理方法及音訊系統」，美國專利申請中。

◆ Introduction

XPUMP Premium is the flagship product of Embrace Audio Lab Inc. The patented XROUND audio technology is embedded in the product. It enables any pair of stereo speaker for headphones with immersive sound easily with the specially designed audio processing algorithm. In the past, to enjoy the premium home theater listening experience required expensive equipment, spacious living room and even custom construction with interior design. Now XPUMP brings the premium listening experience to customer with an affordable price and easy installation.

XROUND audio technology disrupts the stereo sound with its capability of extraordinary sound stage expansion and details enhancement. It does not require proprietary audio format or codec like Dolby or DTS, any stereo sound source can be upgraded into a virtual multichannel 3D sound in real time like listening to an actual home theater.

◆ Commentary

- The candidate uses its proprietary audio signal processing to make regular two-channel speakers and headphones provide immersive sounds with 175 degrees in the sound field width and 100% in the depth. Compared with the common surround sound technology, it provides more than twice the depth and width. It also has high compatibility, allowing ordinary users to enjoy home theater-like experience with the simplest equipment, redefining the listening experience.
- The candidate uses its unique audio signal algorithm which has a high barrier to entry. It has obtained a "new signal processing and audio signal system" patent in Taiwan and now is applying for a patent in the US.



恩可語股份有限公司 En Ke Yu Co., Ltd.



BiACE「AIoT智慧冰機節電服務」
BiACE AIoT Energy Saving Solution

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◆ 簡介

『BiACE』(Business Intelligent Air-Condition Expert)，是一針對 100 坪以上的商業空間所使用的冰水空調系統電力管理平台，本系統採用專利技術及設備，透過資料蒐集、人工智慧運算與管理控制來提升設備效能，以達到節電節費的目的，以利用大數據分析來產生精準有價值的資訊，同時增加企業客戶與合作夥伴的價值。

\$0 設備成本：不需購買軟硬體設備

30 天免費試用：無效關閉服務零風險

15% 節電保證：新舊主機皆可安裝

◆ 評語

本標的特色為裝置控制器與環境溫度感測器，蒐集冰水主機運轉資訊及辦公區環境溫溼度，透過雲端智慧模組學習原有系統運轉模式，建立冰水主機與環境溫溼度關係模型，管理空調主機運轉容量及冰水主機群組控制，可大幅改善節能效益。

◆ Introduction

BiACE is providing AIoT end-to-end energy-saving solutions for commercial spaces over 330 sq. meters, such as hotels, business buildings, hospitals, governmental organizations etc. Its patented service helps customers to collect real-time data via sensors, wirelessly transmit to cloud to get the AI-learning parameters, then optimize the chiller output to save electricity up to 30%. The BiACE service features

* \$0 cost for equipment: no equipment purchase necessary

* Min. 15% saving: for both old and new chillers

* 30-day free trial: simply stop service if no saving

* 4-hour fast installation: to minimize impact on customer's daily business

◆ Commentary

The candidate installs plug-in device and field sensors to collect data of how chiller works, field temperature and humidity, transmit to cloud for AI-learning, then build the relation model among key factors, further optimize chiller output to achieve substantial energy saving.



益詮精密股份有限公司

Echaintool Precision Co., Ltd.



出水端面切槽刀架
Coolant Face Grooving

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◆ 簡介

益詮堅持 MIT、CIT，具有優秀的研發團隊，重視創新與研發。出水端面切槽刀架在工具機上的用途主要針對各式工件所需加工條件，進行切槽加工。其特色如下：

1. 工件在加工過程會因切削阻力造成溫度升高，需以切削液輔助降溫，全球首創的端面中心出水設計，加強整體降溫效果，提升排屑能力，且能延長刀具及刀片使用壽命。
2. 採用圓柄設計不用拆裝整組刀座快速更換刀架，可有效減少整組刀座磨耗以延長使用壽命，另外可以縮短更換的時間並能快速定位使用，降低成本、有效提升加工效率。

◆ 評語

本標的之特色為具有中心出水設計之端面切槽刀架，不須手動調整出水口位置，可降低加工過程中因切削阻力而造成之溫升，圓柄設計之刀把不用拆裝整組刀座，快速定位使用提升加工效率。

◆ Introduction

ECHAITOOL adheres to MIT and CIT, we have an excellent R&D team, and attaches importance to innovation and R&D. The use of the venting end face grooving and tool holder on the machine tool is mainly for the processing conditions required for various workpieces, and grooving is performed. Its characteristics are as follows:

First, the workpiece will be increased in temperature due to cutting resistance during processing. It needs to be cooled by cutting fluid. The world's first central effluent face grooving design enhances the overall cooling effect, improves chip removal capacity, and extends tool and blade life.

Second, the use of the round handle design does not need to disassemble the entire set of tool block to quickly change the tool holder, which can effectively reduce the wear of the entire set of tool holders to extend the service life, and it can shorten the replacement time and quickly locate to use, reduce the cost and effectively improve the processing efficiency.

◆ Commentary

The candidate is an end grooving holder with coolant supply in the center which does not require manual adjustment of coolant supply position. It can reduce the temperature rise caused by the cutting resistance during the machining process. The round handle design of the tool makes it unnecessary to take apart the whole tool set, and the quick positioning can improve the machining efficiency.

乾唐軒
ACERA

乾唐軒美術工藝股份有限公司 Artcera Corporation



遠紅外線陶瓷內膽搭載避震結構
之活瓷金石保溫杯
Far-Infrared Shock-Proof
Mineral Container And Mounting
Structure Thereof With The
LIVEN Metal Mug

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◆ 簡介

活瓷金石保溫杯以陶瓷內膽與 304 不鏽鋼外殼結合，運用礦質避震容器內膽搭載結構專利設計，具獨特之安全性。陶瓷內膽釉面以「具遠紅外線放射效果之塗佈基材組成工法」技術，經過繁複工藝燒製而成，產品具釋放遠紅外線及負離子功能，可讓人擁有如甘泉般純淨愉快的飲水口感及體驗。

本產品為原創設計傳承文化瑰寶，外觀以古代金屬捶打紋飾表現，並以特殊的內外層樁接技術設計，不使用任何接合劑，將內外不同材質結合固定，環保又安全。具優良的保溫保冷功效，且由於是陶瓷內膽，故可不挑飲品，咖啡、茶類、中藥、果汁、果醋及牛奶等皆可盛裝。

◆ 評語

- 本標的採用陶瓷內膽結合真空不銹鋼外殼設計，可抗拒飲品酸、鹼、鹽的影響。運用活瓷材料可釋放遠紅外線的原理，提升飲品口感；並以矽膠成型避震結構克服陶瓷易碎的缺點。
- 已獲有臺灣及美國發明專利。
- 現代人注重健康養生，本標的具有市場遠景。

◆ Introduction

LIVEN Metal Mug comes with a ceramic interior and a stainless steel exterior. The use of an insulated container with an interior made of mineral materials and equipped with a shock-absorbing structure endows the product with unique safety properties.

The proprietary technology, the method of forming a complete far infrared radiation on the surface of ceramic wares and its resultant products, The finished product has the function of releasing far infrared rays and negative ions, which gives users a pleasurable experience when using it for drinks.

This product is original design, the overall appearance of the product displays a pattern created by shaping the metal, which has aesthetic qualities of modern craft and anti-slip effects.

Joggle joint, rather than adhesive, is used for joining the interior and the exterior of the product. By joining and fixing different materials in place, this special technique is eco-friendly and safe.

LIVEN Metal Mug has excellent hot and cold insulation properties. and since this metal mug has a ceramic interior, it can be used for coffee, tea, Chinese herb decoction, juice, fruit vinegar, and milk.

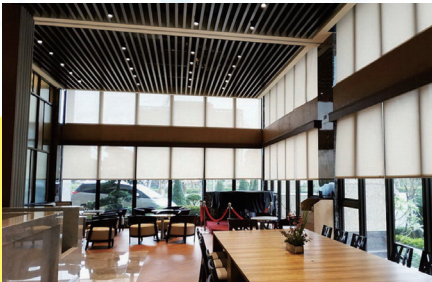
◆ Commentary

- The candidate is designed with a ceramic inner part with a vacuum stainless steel casing to resist acid, alkali and salt in the beverage. It adopts the idea of using active far infrared ceramics to improve the taste of beverage and uses silicone-based suspension structures to overcome the brittleness of ceramics.
- It has obtained utility patents in Taiwan and the US.
- People nowadays value health and well-being. The candidate has long-term market potential.



彬騰企業股份有限公司

Bintronic Enterprise Co., Ltd.



物聯網控制之全自動智慧捲簾
IoT-Controlled Intelligent Roller
Blinds

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◆ 簡介

Bintronic 物聯網控制之全自動智慧捲簾為國內獨創且世界領先產品，率先將窗簾結合物聯網技術，除完全無繩化，採全自動、半自動、手動多種控制方式，透過大數據分析與物聯網技術達到全自動化精準智慧控制，使窗簾不僅是遮陽與隔熱，也兼具採光，減少燈光、空調使用量，提供建築物節能減碳方案，充分達到環保節能效果。

◆ 評語

- 本標的將窗簾結合物聯網技術，藉由自動、半自動、手動與語音辨識操控等多種方式，讓窗簾不僅是遮陽隔熱，並兼具採光與減少能源消耗（降低燈光與空調之耗能）的效果。標的技術具創新性，與競爭者亦有所區隔。
- 該公司原以生產門窗控制系統為主，累積許多客戶與經驗。藉由本標的轉型跨足電動智慧窗簾生產，並與相關智慧家庭產品設計廠商結合，值得肯定。
- 本標的追日系統之全自動智慧捲簾已順利導入臺積電的半導體廠房中，未來於高端客戶的應用，極有潛力。

◆ Introduction

It is the cordless roller blind and apply multi-control mode to which, including fully automatic, semi-automatic and manual control.

Through big data analysis and IoT technology, it achieves precise and smart control which is fully automatic.

Bintronic IoT-controlled Intelligent roller blind can not only shade the glare of the sun, but also reduce the electric light and air condition usage. This product provides the energy saving and carbon reduction solutions for an architecture to achieve the environmental protection and energy saving.

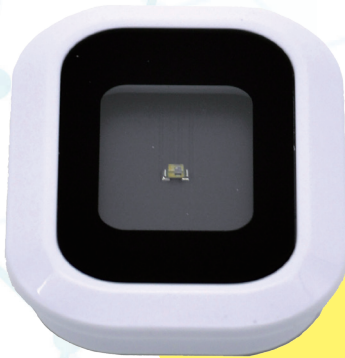
◆ Commentary

- The candidate incorporates the IoT technology into curtains. Through automatic, semi-automatic, manual and voice recognition control modes, curtains have lighting and energy reduction effects (reduce the use of indoor lights and air-conditioning), in addition to providing shades and insulation. It is innovative and has differentiated itself from competitors.
- The company originally manufactured door and window control systems and has accumulated many customers and experience. With this product, the company attempts to transform itself into a manufacturer of smart electric curtains. It also has collaborated with other design companies for smart home products and is worthy of recognition.
- The automatic solar tracking smart roller blinds have been successfully installed in TSMC's fabs. It has shown future potential in the adoption by high-end customers.



捷騰光電
solteamopto

捷騰光電股份有限公司
Solteam Opto, Inc.



光容積感測系統
Optical Volume Detection
System

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◆ 簡介

● 創新說明

近年來由於使用者對於環保意識與健康生活的重視，一天24小時運作的電冰箱變成綠能 / 健康家電的首要改革目標，捷騰針對冰箱平台開發了光容積感測系統，可以依照客戶需求，提供不同等級的容積偵測系統；此系統與物聯網或冰箱制冷機制結合後，可以利用手機提醒使用者冰箱食材容量，或是依據各層感測容量提供風機訊號分層制冷，維持冷藏空間溫度恆定以強化食材保鮮效果。

捷騰目前量產的光容積感測系統，利用3顆光容積感測模組提供的訊號來調整風機分三層獨立送風制冷，達到節能的目的並恆定溫度以強化保鮮的功能。

● 創新特點

1. 利用光學整合技術實現容積檢測提供訊號，達到智能冰箱控制的目的。
2. 提供的訊號可用來控制獨立風機分層制冷，達到節能的目的。
3. 使用光容積系統恆定溫度以強化保鮮的功能。
4. 提供易安裝 / 低成本的優勢方案。
5. 容積演算法可快速 / 彈性導入客戶冰箱的延伸機種。

◆ 評語

- 本標的利用光容積感測模組搭配合適的演算法，結合電冰箱的冷風控制，形成光感互動用以智能調控冰箱，期能達到瞬間保鮮與高冷房效能的目的。產品具創新性與實用價值。
- 已通過專利證書I 503526號以保護申請標的，而標的物目前主要與中國大陸知名大廠合作，順利配置於該公司的智能冰箱並進行銷售。
- 未來規劃將產品行銷至歐美廠商，具發展潛力。

◆ Introduction

● Innovation description

In recent years, due to the attention to environmental awareness and healthy living by users, the refrigerators running 24 hours a day have become the major target for energy efficiency reforms. Solteam Opto has developed a light volume sensing system for the refrigerator platform, which can provide different signal scale to meet customer requests. By combining with the Internet of Things or the refrigerator cooling mechanism, the system can remind the user about the food capacity via mobile phone, or provide the signal of capacity by layers to cooling control unit to adjust the air flow individually. In this way, the refrigerators can keep the constant temperature to enhance the performance of the food preservation. Solteam Opto's current mass-production volume sensing system uses three light volume sensing modules to adjust cooling air flows to three separated layers by different outlets to achieve energy-saving purposes and to enhance the performance of the food preservation.

● Innovation characteristics

1. Using optical integration technology to put intelligent control into practice.
2. The provided signal can be used for controlling the separated cooling air outlets (divided by layers) to achieve energy saving.
3. Using light volume sensing system to keep the constant temperature which can enhance the performance of the food preservation.
4. Providing an easily installed solution with competitive price.
5. The volumetric algorithm can be applied into various models of refrigerator rapidly and flexibly.

◆ Commentary

- The company integrates Optical Volume Detection System, appropriate algorithm and combined the cold air controlling of refrigerators, making the smart refrigerator with light-sensing interactive capability. Which is able to achieve the purpose of instant fresh preservation and high-efficient cooling performance. Optical Volume Detection System is with innovativeness and practicality.
- Has obtained a patent certificate (Certificate No. I 503526), besides, the company is working with world famous Chinese appliance brands, installed the system to refrigerator for market already.
- The company is planning to promote the system to Europe market now. It will be a potential product for home appliance.



統百食品股份有限公司 Tong Bae Food Co., Ltd.



有機100%純米星星餅-紫米口味
100% Organic Rice Star Cookie
- Purple Rice Flavor

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◆ 簡介

- 成分單純：有機白米（台灣）、有機糙米（黑糯米）（台灣）
- 適合 4~12 個月嬰幼兒
- 非油炸品
- 100% 純米精製餅身
- 無任何化學添加物及無添加調味
- 星星造型獨特，餅身大小適中
- 遇口水即化，適合輔助正在長（換）牙期的嬰幼兒穀物輔助食品

◆ 評語

- 本標的特色包括：(1) 餅體使用臺灣國產有機米、(2) 膨發成型，星星造型，無化學添加物使用、(3) 入口即化，化口性佳，不硬不黏牙、(4) 水分控制在 3% 以下，保存性佳，適用於國內及外銷運輸。
- 本標的研發期間突破因「無添加」所造成僅有 40% 半成品可做成米果的限制，修改膨發設備及製程技術，達成無需化學添加物協助即可達到 100% 無添加自然成型。
- 本標的為嬰幼兒副食品，餅身酥脆，遇水則化，保有米香氣，無添加化學添加物，保存性可達一年，市場潛力大，且可供外銷。

◆ Introduction

- Ingredients: Organic rice(Taiwan), Organic purple rice(Taiwan)
- Suitable for baby 4-12 months old
- Non-fried products
- 100% Pure rice refined biscuit
- No chemical additives, No seasoning
- Star shape is unique, the size of the cake is moderate
- Will melt when it meets wate, It is suitable for assisting infants and toddlers in the long tooth period

◆ Commentary

- The candidate has these characteristics: (1) use organic rice locally produced in Taiwan, (2) puffed rice to be made into little stars that have no chemical additives, (3) melt in the mouth right away and is not hard and does not stick to the teeth, (4) the moisture is controlled at under 3%. The storability is good and it is suitable for domestic and export transportation.
- The research and development of the candidate had a breakthrough in that it was no longer held back by the limitation that only about 40% of semi-finished products can be made into rice cracks if there are no additives used. The puffing equipment and manufacturing technologies were revised, and the candidate finally achieved the goal of 100% natural forming without additives.
- The candidate is a type of non-staple food for infants and young children. The cracker is crispy and melts immediately with water, while keeping the rice aroma. It does not contain chemical additives and can be stored up to one year. The market potential is big and it can be exported.

CARGICO

凱記科技股份有限公司

Cargico Corporation



Bio-Kil奈米動態殺菌機及環境防疫服務

Bio-Kil Nano Dynamic Sterilization Equipment And Environmental Epidemic Prevention Service

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◆ 簡介

全球獨創之 Bio-Kil 奈米動態殺菌機及環境防疫服務，具備高殺菌功能、安全無副作用、低人力、省時高效率、檢測監控等特色。是全方位的防疫解決方案，可以有效降低醫療院所（包含：手術室及實驗動物中心）及公共場所中的微生物量，進而降低疫情感染。

本標的為應用綠色環保的 Bio-Kil 殺菌技術，利用物理方式破壞微生物的細胞膜，以避免微生物孳生與降低交叉感染風險。此技術兩度受邀於亞太經濟合作會議發表，榮獲多國發明獎肯定，並發表多篇國際論文。

◆ 評語

- 本標的內容包括殺菌機本體與系統及防疫服務（含診斷、建置、維護、監測、諮詢等）。
- 標的創新性包括（1）殺菌設備體積小、移動方便、噴霧大、殺菌率高；（2）無毒、刺激性低；（3）提供客製化專屬防疫服務流程。已獲得國內外共 4 項發明專利，服務模式具有創新性。
- 不賣設備與藥劑。未來市場將擴及產後護理之家、照護中心、幼兒園、實驗室、機場等。公司以研發為主，行銷與服務皆交給經銷商。

◆ Introduction

"Bio-Kil nano dynamic sterilization equipment and environmental epidemic prevention service" is the world-leading antibacterial service and helps to prevent the spread of diseases through air and touch surfaces. By elimination through physical contact, it reduces the possibility of bacteria and viral mutation. Being a physical biocide process, mutation in the pathogens will not affect its effectiveness. The features are effectively improve indoor environmental quality, safe, economize manpower, and contain inspection and monitoring. It is the best solution of nosocomial infection prevention for operating room.

Bio-Kil is a non-toxic, non-allergenic, non-caustic, and non-leaching, environmentally friendly technology to keep the environment safe. Bio-Kil was invited twice by APEC Technomart. In addition, Bio-Kil has won a number of innovation awards and published many international papers. Bio-Kil is a highly effect antibacterial solution provider to fight off bacteria and viruses commonly existing in the environments (such as Legionella pneumonia, E. coli, Listeria monocytogenes, MRSA, as well as others.)

◆ Commentary

- The candidate includes the sterilizer itself, the system and epidemic prevention services (including diagnosis, construction, maintenance, monitoring and consultation).
- The innovation includes: (1) the sterilization equipment is small in size and convenient to move around and provides large spray coverage with a high sterilization rate; (2) non-toxic and low irritation; (3) customization for an exclusive epidemic prevention service procedures. Has obtained four utility patents at home and abroad. The service model is innovative.
- The market segment mainly focuses on medical institutions. Collects revenue from customization, not the sales of equipment and pharmaceuticals. In the future, the market will be extended to post-natal care centers, long-term care centers, kindergarten, laboratory and airport. The company focuses on research and development. The marketing and services are handed over to its distributors.



dr.Plant
永續 | 天然 | 安心 | 健康

智耕創新股份有限公司

Dr. Plant Co., Ltd.



低鉀蔬菜之量產與商業化 The Mass Production And Commercialization Of The Low Potassium Content Vegetables

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◆ 簡介

慢性腎臟病為我國高發生率之重要疾病，2018 年全台洗腎人口更達到 9 萬人。高血鉀症是洗腎患者最常發生的併發症，造成心律不整甚至死亡。飲食控制是目前唯一的方法，患者食用蔬菜前皆須切碎並汆燙，使鉀離子溶出，此調理方式不僅不便也使得營養跟著流失。本公司以低鉀蔬菜營養配方及專利栽培技術，克服植物缺鉀的生理障礙，成功栽培出低鉀蔬菜，且在風味和口感上皆與正常栽培的蔬菜沒有差異。因此低鉀蔬菜可作為慢性腎臟病患者飲食之選擇，不僅免去繁瑣的烹飪步驟，還能吃得健康又安心，進而提升其生活品質。

◆ 評語

- 本標的利用獨特營養配方與栽培技術，栽培出低鉀含量之蔬菜（目前已完成六種以上之蔬菜生產技術），可降低植體內鉀離子含量 30~60%，而不影響植體內鈉、磷、鎂離子和硝酸鹽的含量。
- 目前國內尚無相關產品，本標的為國內首創，相關技術已申請專利，栽培技術非水耕，可以保留天然營養成分，食用時免川燙，可避免營養成分流失，本標的亦非基因改造產品。
- 慢性腎臟病患者占比相當高，本標的低鉀綠色蔬菜可以提供患者安全、方便、營養的蔬菜選擇，市場發展潛力大。

◆ Introduction

Chronic kidney disease is an important disease of high incidence in Taiwan. Hyperkalemia is the most common complication of dialysis patients, resulting in cardiac arrhythmia and even death. Diet control is the only way for hyperkalemia prevention currently, patients must cut them into small pieces and boiling before eating vegetables, in order to reduce the potassium content of vegetable, this dietary guideline is not only inconvenience also makes the loss of nutrition. Our company developed the nutrition formula and specialized technique to overcome the plant physiological disorders of potassium deficiency, has successfully cultivated low-potassium vegetables, and in the flavor and the taste is not difference with the normal cultivation of vegetables. So that dialysis patients can eliminate annoying cooking steps, provide the convenient, safe and nutritious vegetables.

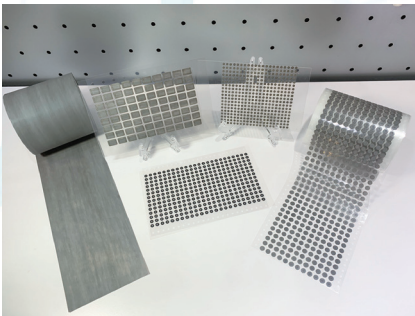
◆ Commentary

- The candidate uses its proprietary nutrition formula and cultivation technology to grow vegetables that are low in potassium (more than six types of vegetable production technologies have been developed). They can reduce the potassium ion content in the plant by 30 to 60% without affecting the sodium, phosphorus, magnesium ions and nitrates.
- At present, there are no related products in the domestic market. The candidate is the first of its kind in Taiwan and has applied for patents. The cultivation is not hydroponic. It can retain natural nutrients. Blanching the vegetables to prevent the loss of nutrients. The candidate is not a genetically modified organism.
- There are a lot of patients with chronic kidney diseases. The low-potassium green vegetables can be used to provide patients with safe, convenient and nutritious vegetables. The market has great potential.



群揚材料工業股份有限公司

EF-Materials Industries Inc.



增強型聚四氟乙烯防水防塵透氣
通音膜
Advanced Multi-Functional
ePTFE Vent

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◆ 簡介

【防水 30 公尺並保有透氣孔洞的聚四氟乙烯薄膜】

本產品為此材料在市場上之創進，國內目前無其他廠家可製作。群揚克服市場及材料的既有規格限制，成功解決高科技產業使用防水但不透氣材料所造成機構內部因壓力或溫度變化而發生變形或導致內部零件無法正常運作等問題。

【聚四氟乙烯薄膜結構強化並減少雜音產生的複合薄膜】

此產品之網布複合結構為群揚自主開發，有別於國內外市場上眾多不織布複合材料之聲音傳導表現不佳，此產品改善並加強材料特性，成功導入客戶裝置，滿足對聲音品質的高規格追求，同時兼顧防水防塵透氣的高效綜合性能。

◆ 評語

- 本標的以聚四氟乙烯拉伸薄膜為基礎開發兩項產品：(1) 防水 30 公尺並保有大量透氣孔洞的 ePTFE 薄膜；(2) ePTFE 薄膜結構強化並減少雜音產生的複合薄膜。本標的相關技術已取得美日臺多國專利。
- 本標的已應用至警用對講機、網路攝影機、手機保護殼、無線藍芽數據機，未來更可拓展至穿戴裝置（例如智慧手機手環、智慧眼鏡、無線藍芽耳機）、智慧安控（例如智慧門鈴、無線網路監控、室外警示器）及其他設備（例如工業用無人機、戶外網路通訊裝置）等相關產品，具有相當的市場發展潛力。

◆ Introduction

【30-METER WATERPROOF AND BREATHABLE ePTFE VENT】

This high specification ePTFE vent is developed by EFM, the only domestic manufacturer having technology for it. This product efficiently solves issues that the high-tech industries have on the waterproof but non-breathable materials, the mechanical deformation or breakdowns caused by pressure or temperature differentials inside the device as the environment changes.

【STRUCTURE-STRENGTHENED AND NOISE CANCELLATION ePTFE VENT】

The mesh composite ePTFE vent is designed and developed by EFM independently. It is different from other non-woven products in the market which are unsuitable for acoustic applications. This product enhances the vent properties and be used in customer's products successfully to achieve high audio quality. Besides, it performs the high efficiency of waterproof, dustproof and air permeability.

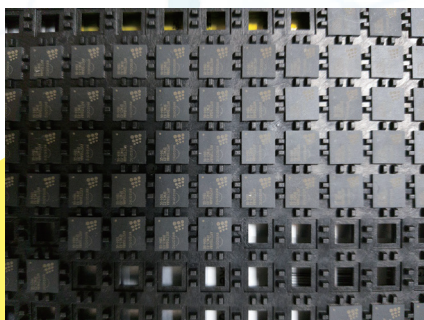
◆ Commentary

- The candidate develops two products based on PTFE films: (1) ePTFE film that is 30m water resistant and has a large number of venting holes; (2) composite film with strengthened ePTFE film structure and noise reduction. The technologies have obtained patents in the US, Japan and Taiwan.
- The candidate has been applied to police walkie-talkies, network cameras, mobile phone cases and wireless Bluetooth data machines and can be extended to other wearable devices (such as smart phones, bracelets, glasses and Bluetooth headsets), smart security control (door bells, wireless network monitoring and outdoor warning devices) and other equipment (such as industrial drones and outdoor network communication devices) and other related products. It has good future market potential.



義晶科技股份有限公司

Avisonic Technology Corp.



AVS7150-360° 百萬畫素全景攝影機之影像處理晶片
AVS7150- Image Processor
for 360° Mega-pixel Panorama
Camera

葉儀皓 / 董事長

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◆ 簡介

1. AVS7150 重要功能包括
 - 補償360° 影像扭曲，且無視角損失
 - 提供多分割畫面 (multi-window) 與子母畫面 (Picture-in-Picture)
 - 支援無間斷式數位 ePTZ (Pan, Tilt, Zoom) 功能，以取代體積大，且易損壞的機械雲台
 - 提供 Privacy masking 與多國語言 OSD
 - 提供各種影像輸入 / 輸出格式轉換，例如，CMOS Sensor 輸入格式轉換到 CVBS 輸出格式等
 - 內建 8bit 8051 MCU
2. 解析度：輸入 / 輸出 up to 2Mpixel and Full-HD 1080p
3. 內建 64Mbits 記憶體
4. 內建 TV DAC 提供類比高清與數位影像輸出
5. 包裝：68-pin QFN
6. 體積：8 公釐 (長) * 8 公釐 (寬) * 0.75 公釐 (高)
7. 工作溫度：-40°C ~ 105°C

◆ 評語

- 該公司以其專利技術，提出目前市面上最小單晶片，AVS7150，為一具有百萬畫素超廣角鏡頭影像扭曲補償的單晶片。本標的提供全影像矯正、鳥瞰分割與子母畫面的功能，利用超廣角鏡頭無死角之特性，系統廠商僅需以一支攝影機即可達到全景攝影、類比輸出影像，解析度可達 FHD 高畫質，功率消耗低並可高度整合其他影像影片，影像流暢無延遲，並能夠有效降低系統製造成本與體積，加速車用產品導入市場、提供光電與汽車產業之另一種突破性技術。
- 本標的價格與特色係針對安控產業、車用電子和門禁系統的需求，區隔並避免與數位相機、手機等消費電子市場產生劇烈競價，符合日本、德國高品質影像需求，可維持合理利潤。

◆ Introduction

1. AVS7150 Feature
 - Support 360 degree fisheye lens distortion compensation at wall mount
 - Support multi-window and Picture-in-Picture
 - Support electronic pan, tilt, and zoom (ePTZ) function
 - Support privacy masking after fisheye compensation and on screen display(OSD)
 - Support various YUV format video source input and various video output
 - Embedded 8bit 8051 MCU
2. Resolution: video input and output resolution can up to 2Mpixel and Full-HD 1080p
3. Built-in 64Mbits Memory
4. Built-in TV DAC and support FHD analog output
5. Chip package: 68-pin QFN
6. Chip dimension: 8 mm (W) x 8 mm (L) x 0.75 mm(H)
7. Operating temperature: -40°C ~ 105°C

◆ Commentary

- The company uses its patented technology to offer AVS7150, the smallest million-pixel ultra wide-angle lens single chip with image distortion compensation. The candidate provides full image correction, bird's-eye segmentation and picture-in-picture. With the ultra wide-angle lens, system manufacturers only need a camera to achieve panoramic photography and analog output image. The resolution can achieve FHD, the power consumption is low and it has integration with other video films. The images are smooth without delay. It can effectively reduce the manufacturing cost and size of systems and accelerate the introduction of automotive products into the market, providing the optoelectronics and automotive industries with another breakthrough technology.
- The price and features are to meet the needs of security control, automotive electronics and access control system industries. The market segmentation is to avoid fierce and direct competition with the digital camera, mobile phone and other consumer electronics markets. The product meets the high-quality image needs of Japan and Germany and the profit level can be reasonably maintained.



聖僑資訊事業股份有限公司

S & J Corp.



JPC-AI 智能客服系統

JPC-AI Smart Customer Service System

陳柏君

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◆ 簡介

「JPC-AI 智能客服系統」包含產品銷售、客服追蹤、售服查詢三大系統，以 Job (工作力)、Performance (執行力) 與 Communication (溝通力) 三個面向規劃，利用科技為製造業提升產業服務能量，協助臺灣製造業做到精準行銷，進而帶動產品銷售與服務品質的提升。

「JPC-AI 智能客服系統」是以 AI 人工智慧結合對話機器人研發而生的創新智能客服系統，為企業建置專業且精準的機械參數資料，提供完善且可以快速搜尋的客服系統與精準到位的產品銷售溝通機器人；同時運用「全球線上聯展」AI 線上展覽 - 產品影像發表會，結合各國專業展覽會與產品關鍵字，運用排序演算法在各國 Google 搜尋引擎，無所不在的提供產品資訊給世界各國買主立即查詢。

◆ 評語

- 企業之智能客服系統主要整合 AI，聊天機器人，以及由以往經驗所累積之工業大數據。
- 該智能客服系統，針對工具機以及部分機械業者，可以進行線上即時銷售及售後服務互動。以售後服務而言，可以涵括 70% 以上之客戶問題。
- 因為該公司長期深耕工具機及機器產業，因此在大數據之累積可以形成獨特的競爭優勢。

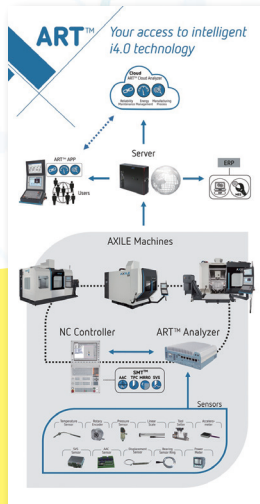
◆ Introduction

"JPC-AI Smart Customer Service System" includes product sales, customer service, and troubleshooting for Taiwan's manufacturing industry. It's based on the Job, Performance, and Communication to plan and enhances the capabilities of industrial services. Above all, it assists with targeted marketing, drives sales and improves service quality.

"JPC-AI" is an innovative intelligent customer service system developed with AI combined with a chatbot module. It also provides an accurate and searchable parameters module for machine searches and a troubleshooting customer service system. In addition, it can also be connected to our "Global Online Exhibition". This is an AI online exhibition of product video presentations in conjunction with worldwide exhibitions and keywords, using sorting algorithms in the global Google search engine, omnipresent to provide product information to buyers around the world to inquire about.

◆ Commentary

- The company's smart customer service system mainly incorporates AI, chat bots and the industrial big data accumulated by past experience.
- The smart customer service system can conduct real-time online sales and after-sales service interaction for machine tools and machinery businesses. In terms of after-sales services, it can cover more than 70% of customer inquiries.
- The company has long been cultivating the machine tool and machinery industry, so it creates a unique competitive advantage in terms of the accumulation of big data.



符合I4.0工具機智能型監控器
Smart Monitoring Device –
Adapting Industries 4.0 Machine
Tool

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◆ 簡介

提昇生產效率為高階金屬加工機的發展焦點，例如在航太與醫療產業之應用。當生產高價值產品時，若發生非預期停機，其所影響之經濟風險和生產效能甚劇烈。本產品以機器的預期性維護功能作為產品特點，搭配感測器可蒐集機械元件狀態，監控並診斷機器元件壽命，預先通知機器維護與管理人員。此外，本產品基於全面品質管理 (TQM) 精神，整合 IoT 技術、感測器技術，連線至 I4.0 的智能型 ERP，提供 AI 演算後的數據，協助管理階層可更流暢地營運公司以提昇競爭力。

◆ 評語

- 本標的之特色為具備自主開發之感測器監控零組件壽命，可提供預期性維護保養，搭配客戶 ERP 系統可控制進料，避免存量負擔，透過主軸振動監控系統可提升加工精度，且具備 24 小時追蹤統計機器能源消耗資訊之能源管理。
- 本標的創新成果如軸承監控裝置，工具機注油控制系統，工具機壽命偵測系統，工具機主軸溫升及補償控制等已獲國內外 12 件專利。

◆ Introduction

The productivity improvement of high-end machine tool has been the one of major concerns, such as those used in aerospace and medical industries. In metal cutting application, the occurrence of unexpected downtime may cause economic risks and affect productivity, when producing high-value workpiece. The smart monitoring device enhances the high-end machine tool to achieve the predictive maintenance capacity. The sensors collect the status of the mechanical components to monitor and diagnose the lifetime of machine components, and in further to send out signals to inform maintenance engineers and management persons in advance. In addition, to support the decision of management team and enhance the company competitiveness, IoT technology and sensor technology are integrated to collect the data and connect with the I4.0-intelligent-ERP, then, providing decision data generated by artificial intelligence algorithm.

◆ Commentary

- The candidate features sensors developed in-house which can monitor the service life before preventive maintenance is conducted. Once integrated with customers' ERP systems, it can control incoming materials to prevent storage burden. The main shaft vibration monitoring system can improve the machining accuracy. It also offers 24-hour monitoring to compile the power consumption of machinery for the purpose of energy management.
- The candidate's innovation results, such as bearing monitoring device, machine tool oil control system, service life detection, temperature rise and compensation control of machine tools have obtained 12 domestic patents.



漢穎科技股份有限公司

Han-Win Technology Co., Ltd.



超智能安全鋰電池管理系統
INNO-Safety® BMS (Battery
Management System)

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◆ 簡介

INNO-Safety BMS 技術為漢穎科技推出的超智能安全電池包系列產品的核心技術。此技術是針對目前市場上鋰電池的應用出現許多安全性及壽命性的問題所提出的解決方案。

INNO-Safety BMS 技術引入創新專利的「多階式軟啟動程序」可以消除電池電源開啟時所產生的巨大湧浪電流。運用「外部迴路短路預檢測與預保護功能」可在電源開啟的程序中，預先檢測外部系統是否有短路問題，若沒有短路問題則正常電力輸出，若有短路問題則停止電力輸出，避免短路發生所帶來的系統安全性及壽命的危害。採用「超低功耗設計」，可解決市場上BMS 功耗過大而造成電池長時間置放的過度放電問題。

◆ 評語

- 本標的和其他市面上現有之智能安全鋰離子電子管理產品相較，具技術創新性，例如多階軟啟動、短路偵測等，避免了突波電流的產生、增進了鋰離子電池的安全性及壽命，故本標的被稱為超智能安全鋰電池管理系統。
- 該企業將此功能良好的申請標的應用於自家銷售的鋰離子電池組，產品獲得顧客好評，因此近兩年迅速且持續衝高營業額，明顯顯示此申請標的之功效佳。
- 本標的主要是應用於電動自行車上的鋰電池組，由於電動自行車愈來愈普及，國外大訂單越來越多，本標的未來發展與實用性甚佳。

◆ Introduction

Han-Win's patented core-technology, INNO-Safety® BMS Technology, is the latest innovative solution for battery applications for LEV/E-bike market. It solves the existing battery safety and lifecycle problems in the market.

The key features of INNO-Safety® are as follows.

1. Soft-Start Function: This helps reduce the inrush current when the battery system powers on. It not only prevents the cells from micro-short issue, but also prolongs the battery life cycle.
2. External System Short-circuit Pre-Detection and Pre-Protection Function: During the battery power-on process, it can Pre-Detect whether the external system has short-circuit issue. If short-circuit is detected, it will stop the power-on process and show warning signal to prevent short-circuit issue..
3. Ultra Low Power Consumption Design: Under Power-Down mode, the power consumption of BMS is only below 3μA. It means that the battery will not be over-discharged for long period storage.

◆ Commentary

- The candidate offers technology innovation when compared with other commercially available smart and safe lithium-ion electronic management products. It features multi-step activation and short-circuit detection to prevent the generation of surge and improve the safety and service life of lithium-ion batteries. The candidate is called ultra-smart and safe lithium battery management system.
- The company applied the capable candidate on its lithium-ion battery packs manufactured in-house and the products were well received by customers. The growth has been rapid the past two years and the sales revenue continues to rise, clearly showing the performance of the candidate.
- The candidate is mainly applied to lithium battery packs on electric bicycles. As they become more popular and there are more overseas orders, the candidate will experience better future development, and it also offers good practicality.



碩奇科技股份有限公司 CCI TECH INC.



多錠單紗漿紗機
Taroko

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◆ 簡介

Taroko 採用一顆紗即可運作的設計，高效率完成整個漿紗流程。採模組化設計，可提昇使用靈活性。以4錠漿紗機為一模組，最多可擴增至16錠，也有2錠模組可選擇。特別適用於小批量生產，並仍可高速運行而不影響生產效率。為有效地烘乾紗線，每錠烘箱皆配備獨立的熱風機，能保持穩定一致的溫度。另有紅外加熱裝置可搭配熱風機。為確保穩定的漿紗品質，烘箱的紗線能在均勻的低張力下運行而不損壞。每錠皆裝設彩色觸控螢幕，可設定和監控每錠的速度和溫度，以確保穩定運行。Taroko 還配備工作主機，能讓使用者監控每錠的狀態，並可進行群組設定與分析。

◆ 評語

- 本標的特色為採用單紗即可運作的設計概念，運用模組化設計整合紗線上漿，紗線烘乾，上漿率監控等關鍵技術，且每一錠的烘箱配備獨立熱風機與控制器以監控機臺狀況。
- 本標的創新技術已獲台灣三件新型專利，並已銷售至國外。

◆ Introduction

Designed with bobbin to bobbin sizing (single-end sizing) concept, Taroko, a multi-spindle sizing machine, is capable of giving intelligent control throughout the whole sizing process. Taroko comes with the unique modular design which can further increase the flexibility in use. There are 4 spindles per module, adding up to maximum 16 spindles while the option of 2 spindles is also available. Taroko is especially suitable for small batch production, and still can operate at high speed without compromise in terms of efficiency.

For effective yarn drying, each spindle is equipped with two hot air blowers so the heating temperature in Drying Chamber can be kept at a uniform temperature. Optional Infra-red heating elements are available for increasing drying efficiency and to work in combination with the hot air blowers if it is necessary. To ensure stable quality, the Drying Chamber is specially designed to make it operate in uniform low tension without damaging the yarn properties during sizing process. Besides, Taroko's speed and temperature can be set and monitored individually for each spindle through a color touch-screen panel to ensure precise control in each unit. The Central Station allows operator to monitor not only the production status of each spindle, but can also carry out group settings and analyzing.

◆ Commentary

- The candidate features a design concept which operates with single yarns. It adopts a modular design to apply paste to the yarns. It also dries the yarns and monitors paste application rate. Every oven is equipped with an independent hot air blower and controller to monitor the condition of the machinery.
- The innovative technology of the candidate has obtained three design patents in Taiwan and been sold abroad.



歐群科技股份有限公司 OCEAN Technologies Co., Ltd.



River800 航太專用細孔放電加工機 – 放電銑削功能
EDM Drilling River 800 for Aerospace Industry – EDM Milling function

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◆ 簡介

細孔放電機為放電加工之延伸機種，以三軸或五軸運動床台與放電加工單元所組合之加工母機，使用管狀銅電極對導電性材料進行瞬間加熱，以進行孔洞加工。

歐群科技自主研發放電銑削機能，成功達三軸任意路徑放電銑削加工，為國內外少數可高速、穩定執行此加工法之細孔放電機供應商，令以往需用雕模放電加工之擴散槽可直接於細孔放電機上完成，有效降低加工時間，並抑制表面重融層至 $20\mu\text{m}$ ，放電銑削機能之加工性能達最快 $330\text{mm}^3/\text{min}$ ，基於此等特性，歐群科技亦同時推廣本應用至各潛在產業市場，以擴展細孔放電機之應用層面。

◆ 評語

- 本標的具放電銑削加工特色，主要運用自主發展之高速放電迴路之高效材料移除率為基礎，搭配多軸任意路徑放電間隙補間加工，可於高速放電加工過程中隨時保持電極與工件間之微細間距，以保持最高放電加工效率，用於加工硬質材料。
- 本標的物創新技術如放電加工電流控制裝置已獲臺灣發明專利。

◆ Introduction

The small hole drilling EDM machine is an extended processing machine based on electric discharge machining. It is a processing with a three-axis or five-axis moving bed and an electric discharge machining. It uses electrode tube and a tool center water discharge function to instantaneously conduct a conductive material by heating and cooling, in order to achieve the purpose of material removal and hole processing. OCEAN Technologies independently develops the EDM milling function and successfully achieves three-axis arbitrary path discharge milling. It is one of the few suppliers of small hole drilling EDM machine that can perform high-speed and stable implementation of this processing method. Directly on the small hole drilling EDM machine, effectively reducing the processing time and suppressing the surface re-casting layer to $20\mu\text{m}$, the processing performance speed of the EDM milling machine is up to $330\text{mm}^3/\text{min}$. Based on these characteristics, OCEAN Technologies also promotes this application to each potential industrial market is to expand the application level of the small hole drilling EDM machine.

◆ Commentary

- The candidate features electrical discharge machining which is mainly based on the high-performance material removal rate of high-speed discharge circuit developed in-house. With the multi-axis arbitrary path discharging and gap tween processing, fine spacing between electrodes and workpieces can be maintained during the high-speed discharge process to keep the efficiency of the electrical discharge machining at the highest level. It is used for machining hard materials.
- The candidate's innovative technologies such as the current control device for EDM has obtained a utility patent in Taiwan.



緯和有限公司 Welcome Co., Ltd.



DR.SAVE真空收納保鮮機
DR.SAVE Vacuum Storage and
Preservation Machine

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◆ 簡介

DR.SAVE 真空收納保鮮機為便利、高效、環保的真空神器，主要特色：

1. 體積輕巧，攜帶方便：尺寸直徑5cm*高度11cm，重量140g，不佔空間、好攜帶，是世界最小的電池款真空機。
2. 一鍵啟動，操作便利：手指輕壓開關即可啟動，更無需手扶機器操作，釋放雙手自由。
3. 多樣電源，不限環境：具有一次性電池、充電電池、行動電源、USB電源插頭等啟動電源模式，外出居家皆可操作。
4. 專利接頭，一機多用：專利抽氣頭模組可用於市面上90%的真空容器，如衣物收納袋、食品保鮮袋、真空罐/盒/蓋、紅酒瓶蓋等，並有隔油、隔水結構，方便真空食品。
5. 台灣製造，品質保證。

◆ 評語

- 本標的「真空收納保鮮機（DR.SAVE）」適用於多數食品保鮮、衣服收納、紅酒……等，日常可抽取真空之袋、盒、箱、瓶等物件。其創新特色主要在於，一機多用可更換吸頭模組設計（已獲臺灣二項發明專利）及彈性電源設計（AA電池、外接USB、充電電池與行動電源）。
- 與現有同級商品比較，具有方便實用、低噪音、高吸力、性價比等競爭優勢。

◆ Introduction

DR.SAVE vacuum pump is a convenient, efficient and environmentally friendly product. The product features are:

1. Lightweight and easy to carry: size 5cm* height 11cm, weight 140g, no space, easy carrying, is the world's smallest battery vacuum pump.
2. One-Touch start, easy to operate: It can be activated by lightly pressing the switch, and there is no need to hold the machine to operate.
3. Diverse power supply, no limit to the environment: With multiple types of power: disposable battery, rechargeable battery, mobile power, USB plug-in, and you can easily operate at home and outdoor.
4. Patented joint with multi-purpose and Oil and water-proof structure: The patented exhaust nozzle can be used for almost every vacuum container on the market, such as clothes storage bags, food storage bags, vacuum canisters, red wine bottle caps, etc...
5. Made in Taiwan, quality assurance.

◆ Commentary

- The candidate, Dr. Save, is suitable for food preservation and clothes and wine storage and other bags, boxes, containers and bottles which can be vacuum. The innovative features are mainly the multi-purpose attachment module (two utility patents in Taiwan) and flexible power supply design (AA battery, external USB, rechargeable battery and mobile power bank).
- Compared with other existing products of the same level, it has competitive advantages such as convenience, practicality, low noise, high suction and value for money.



賽米資訊股份有限公司 SignMi Inc.



卡個位排隊商品時間量化交易 平台

Cutaway Popular Products Line-up Time Exchange Platform

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◆ 簡介

Cutaway 是全台首個結合傳統代排及運送服務的O2O平台，專門提供資訊及解決各種珍貴限量商品的排隊問題。藉由各領域編輯人員每日主動整理最新排隊商品上架至自建電商平台，直接供消費者閱覽資訊、進行下單，不僅大幅縮短資訊傳遞時間，更建立了一個對於排隊商品有高度熱忱的社群，習慣性地透過Cutaway平台進行採購商品。

◆ 評語

- 本標的後臺資訊系統功能強大，對於代排隊服務流程每一環節均有紀錄資料，這些數據經過系統分析後便成為管理代排隊服務以及衍生新服務模式的利器。
- 代排隊服務市場競爭激烈，該企業因建置本標的而脫穎而出，營收呈指數型飛快成長；同時該企業對代排隊服務能有效管理，因此才能迅速擴張又不失控，已成為一個清楚的競爭門檻，擁有極佳優勢。
- 該企業為年輕、小而美、有活力的公司，獲利率相當高，生意版圖正迅速成長中，並有清楚的發展計畫，近期將拓展至海外市場。

◆ Introduction

Cutaway has established an innovative O2O platform which provides queuing services for popular products. The platform provides information and delivery-service for various products, mostly limited and hard to acquire. Customers could explore the product information and service instruction, and make orders directly online. Cutaway updates new line-up product information daily on the platform and establish a social network which are fascinated for popular line-up products and make the order via Cutaway.

◆ Commentary

- The back-end information system is rather powerful. It has the records and data for each part of the queuing service. After systematic analysis, these data become the tools for managing the queuing service and obtaining new service models.
- The competition in the queuing service market is fierce. The company stands out because of the establishment of the candidate and the revenue grows exponentially. The company is able to effectively manage the queuing service, so it can be quickly expanded without losing its control. It has become a clear barrier to entry, so the company has an excellent advantage.
- The candidate is the earliest entrant into the queuing service market and has the most complete platform. With this advantage, it is easy to expand its market reach and find growth overseas.



moci

耀欣數位科技股份有限公司

MOCI Technology Co., Ltd.



智慧物流平台AWMS+
Logistics Ecosystem Platform
AWMS+

鄭莒

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◆ 簡介

智慧物流雲平台AWMS+ 能快速建置符合供應鏈中不同層級的物流管理系統，可滿足多倉、多業態、多國語言等需求，協助物流管理集中、快速開發、不同層級與任務的設定；不只分析、還能回應，且能串接作業人員與設備等實體作業的上下游資訊，解決資訊斷鏈問題，是一套向上整合供應鏈、向下連結配銷鏈的進階倉儲管理系統。

透過虛實整合，驅動生產、服務，甚至商業模式創新。當市場發生變化，需對作業流程或系統功能變更時，可在短時間內完成系統調整，AWMS+ 整合產品開發、生產、銷售與服務，協助全生命週期管理，也是讓各種商業模式落地的最後一哩。

◆ 評語

- 本標的具有服務創新價值，結合網路應用策略與專屬APP，強化產品服務功能。
- 結合IoT技術，建構物流管理新模式，與現有產品形成差異化，建構對手之進入障礙。
- 具備與國內外大廠合作經驗，透過租賃模式，持續擴大中小企業顧客端之應用。
- 持續整合資源，進行產品市場研發，持續開發國內外市場，值得肯定。

◆ Introduction

Logistics ecosystem platform AWMS+ can be installed quickly for matching requirements of different levels of supply chain. It can meet the need of the multi-warehouses, -businesses and -languages, and be of use for centralized logistics management, rapid development and setting of various levels and tasks. It can link the upstream and downstream information of operators and equipment in real time, and solve the problem of information interruption. AWMS+ is an advanced warehouse management system that integrates the supply chain and links down the distribution channels.

AWMS+ is beneficial for promotion of production and service, and business model innovation by integrating hardware, software and data. If the market changes and it is necessary, the operation process or system function of AWMS+ can be adjusted in the short time. It is the last mile to achieve various business models.

◆ Commentary

- The product R&D offers service innovation. It incorporates the network application strategy and its proprietary App to reinforce the product service capabilities.
- Combines the IoT technology to construct a new logistics management model. It differentiates itself from the existing products and builds barriers to entry.
- Experience collaborating with other large domestic and foreign companies. Through the leasing model, it continues to expand its application on SME customers.
- Continues to integrate resources to conduct product and market research and development. Its commitment to continuing the development of markets at home and abroad is worthy of recognition.

第**26**屆

20**19**

中小企業創新研究獎

The 26th Taiwan SMEs Innovation Award

機械

自動化

材料

服務

生技

資訊

電子

綜合



申請須知

Application Guide



創新卓越
超越巔峰

申請須知

一、目的

為鼓勵中小企業從事創新研究發展、提升技術與服務水準、增強競爭力，經濟部依據「創新研究獎－中小企業發展基金獎助中小企業創新研究作業要點」針對持續以有組織、有系統之方法，自行從事創新研究而有具體成效之中小企業，甄選傑出者予以適當之獎勵，以期技術生根，進而達到產業升級與健全發展之目的。

二、申請資格

(一) 獎勵對象

合於行政院核定「中小企業認定標準」且目前仍在營運中之中小企業。

(二) 獎勵範圍

自行研發之創新性產品、技術、製程、流程、服務(包含技術服務、知識服務、商業服務)等項，於民國107年完成，並已商業化運用或量產者。

三、獎勵方式

- (一) 申請企業前一屆未曾獲本獎項獎助金，經評審通過者獲頒證書及獎助金新臺幣 15 萬元正，以 30 名為限。其中以員工數認定之中小企業得獎名額以不超過 15 名為原則，確實得獎名額視申請審查情況核定(獎助金須依稅法相關規定辦理扣繳)。
- (二) 申請企業前一屆如已獲本獎獎助金，經評審通過者僅頒證書，不提供獎助金，以不超過 10 名為原則。
- (三) 申請獎勵之標的已(曾)獲得政府機關補助，經評審通過者僅頒證書，不提供獎助金，以不超過 10 名為原則。但其獲得補助並執行完畢後，再自行創新及研發程度高者，不在此限。
- (四) 同一企業當年度同時有兩項(含)以上之標的獲獎，僅頒發獎助金新臺幣 15 萬元正，不得累加獲獎金額。

四、申請手續

(一) 申請方式

1. 檢附申請資料**紙本、電子檔各一份**。申請書請以電腦繕打，以 A4 規格裝訂整齊，另以電子檔形式儲存於光碟(含附件掃描)交寄，申請資料概不退件，送審前請自行影印留存。
2. **網路報名後通訊寄件**，請將申請資料掛號郵寄至：
「106 臺北市大安區羅斯福路二段 95 號 6 樓 創新研究獎工作小組收」
3. **網路報名及下載申請書**請至經濟部中小企業處(www.moeasmea.gov.tw)、中華民國全國中小企業總會(www.nasme.org.tw)及創新研究獎專屬網站(<http://tsia.moeasmea.gov.tw>)。
4. 洽詢電話：(02)2366-0812 分機 216 創新研究獎工作小組 韋小姐。

(二) 送審資料

1. 申請書

2. 公司登記資料影本(註1)、製造業請加附工廠登記(或臨時工廠登記)證明文件影本(註2)

註1：可逕行至全國商工行政服務入口網 <http://gcis.nat.gov.tw> 查詢列印。

註2：製造業之廠房面積及電力容量、熱能未達「工廠從事物品製造加工範圍及面積電力容量熱能規模認定標準」第3條規定之規模者免附工廠登記證明文件，惟需檢附切結書。

3. 申請獎勵標的之商業化或量產之相關證明文件影本(於107年申請標的研發完成後至108年5月31日前銷售之發票、合約書、訂單等，若為醫療或食品需檢附相關主管機關核可之證明文件)

4. 其他申請獎勵標的之相關證明文件影本。(如：專利、獲獎記錄、標準、認證、著作權、相片及型錄等〔請參選企業儘量提供〕)

5. 以員工人數認定之中小企業，請附107年1~12月勞保局核發之「勞工保險局保險費繳款單及明細表」影本。

註：以資本額或營業額認定之中小企業免附。

6. 107年度營利事業所得稅結算申報書影本。(包含資產負債表及損益表；此項資料最遲應於108年6月14日前掛號寄達)

(三) 申請期間

即日起至 **108年5月31日17:30止**(通訊寄件以掛號郵戳日期為憑)。

五、評審

(一) 評審方式

分為資格審、初審與決審3階段：

1. 資格審：由創新研究獎工作小組進行基本資料審查，缺件者應於期限內完成補件。

2. 初審：由初審委員會進行書面審查，並視實際狀況需要，派員實地查核。

3. 決審：由決審委員會進行書面審查，並決定得獎名單。

(二) 評審標準

基本評審項目及權重：

1. 申請獎勵標的之創新性	35 %
2. 申請獎勵標的之實用性	35 %
3. 申請獎勵標的之國內外競爭力	20 %
4. 申請企業之目前及中長期研發構想及營運	10 %

100 %

(三) 評選原則

當申請標的之評審積分相若時，以未曾獲本創新研究獎之企業優先考慮，惟仍由評審委員會議決之。

六、得獎企業之義務

得獎企業有配合蒐編專輯、提供相關資訊及參加頒獎典禮、成果展示會與中小企業創新研究獎聯誼會等相關活動之義務，並有建立與傳承本獎項之精神與樹立學習典範之責任，得獎企業若經查證有違反本須知規定、不實陳述或違反環保與工安衛、智慧財產權等相關法規情節重大者，或其他爭議事件致影響社會大眾及本獎項形象者，主辦單位得撤銷得獎資格，其證書及獎助金應繳回，並自負法律責任。

七、其他

得獎名單預計於 108 年 11 月底前公佈，並以專函通知所有申請企業。

附錄 1：行政院核定之中小企業認定標準相關規定

- ◆ 中小企業係指依法辦理公司或商業登記，並合於下列標準之認定：
 - 一、製造業、營造業、礦業及土石採取業實收資本額在新臺幣八千萬元以下者。
 - 二、除前款規定外之其他行業前一年營業額在新臺幣一億元以下者。
- ◆ 另就經常僱用員工數為中小企業認定標準，則不受前項規定之限制：
 - 一、製造業、營造業、礦業及土石採取業經常僱用員工數未滿二百人者。
 - 二、除前款規定外之其他行業經常僱用員工數未滿一百人者。
- ◆ 具有下列情形之一者，視同中小企業：
 - 一、中小企業經輔導擴充後，其規模超過第二條所定基準者，自擴充之日起，二年內視同中小企業。
 - 二、中小企業經輔導合併後，其規模超過第二條所定基準者，自合併之日起，三年內視同中小企業。
 - 三、輔導機關、輔導體系或相關機構辦理中小企業行業集中輔導，其中部分企業超過第二條所定基準者，輔導機關、輔導體系或相關機構認為有併同輔導之必要時，在集中輔導期間內，視同中小企業。

附錄 2：申請標的分類定義標準

類 別	定 義
資訊與電子類	含通訊設備、電腦通信、資訊軟體、資訊硬體、消費性電子、半導體製造、電子機械器材製造修配、視訊產品、視聽電子製造、電子零組件製造、光電器材、積體電路設計、其他電子資訊製造等資訊與電子相關之標的。
機械與自動化類	含機械設備製造、運輸工具製造，模組開發製造、航太製造、自動化機械、物流/倉儲設備、動力傳動/制動設備及零組件等機械與自動化相關之標的。
材料與生技類	含生物化學、纖維材料、工程塑膠材料、金屬材料合金、鑄造材料、化學品製成、生化技術、藥品製造、食品加工製造、醫療器材等材料結構製造及生化科技等材料與製程相關之標的。
服務類	含知識服務、技術服務與商業服務模式等，其成功經營模式、服務方式或行銷方法具有前瞻性、示範性及可提昇工作效率之標的（例如：環保服務類、能源服務類、檢測服務類等）。
綜合類	含一般民生用品、消費性產品、創意設計及非前述類別之申請標的物皆納入綜合類之範圍。

註：請企業先依上列分類定義填寫申請之標的所屬類別，審議過程中評審委員會得依標的內容與性質確認或更動申請類別。

決審委員名單

決審委員召集人：何晉滄委員 經濟部中小企業處處長

王錫福 ➤ 國立臺北科技大學校長

呂正華 ➤ 經濟部工業局局長

李育家 ➤ 社團法人中華民國全國中小企業總會理事長

李 鎡 ➤ 經濟部商業司司長

邱求慧 ➤ 科技部產業及園區業務司司長

林廣宏 ➤ 科技部綜合規劃司司長

洪淑敏 ➤ 經濟部智慧財產局局長

張建一 ➤ 財團法人台灣經濟研究院院長

陳振遠 ➤ 義守大學校長

黃文谷 ➤ 經濟部加工出口區管理處處長

游振偉 ➤ 經濟部能源局局長

羅達生 ➤ 經濟部技術處處長

(上述名單除召集人外，依姓氏筆畫排列)

初審委員名單

初審委員總召集人：蔡新源委員

類別	姓名	服務單位 / 職稱
資訊 與 電子類	詹文男 (分組召集人)	財團法人資訊工業策進會產業情報研究所所長
	王永和	國家實驗研究院院長、TSMC-NCKU 聯合研發中心營運長
	徐永珍	清華大學電機工程學系暨電子工程研究所教授
	陳培殷	成功大學資訊工程系暨研究所教授兼電資學院副院長
機械 與 自動化類	蔡新源 (分組召集人)	創智智權管理顧問股份有限公司董事長兼執行長
	林孟儒	逢甲大學機械與電腦輔助工程學系專任副教授
	蔡宏營	清華大學動力機械工程教授兼系主任
	賴永祥	財團法人精密機械研究發展中心總經理
材料 與 生技類	廖啓成 (總召集人)	財團法人食品工業發展研究所所長
	丁志明	成功大學材料科學及工程學系教授
	余騰耀	新鼎系統股份有限公司董事長
	賴志煌	清華大學材料工程科學學系教授兼工學院院長
服務類	方至民 (分組召集人)	中山大學企業管理學系專任教授
	吳基逞	中山大學企業管理學系教授
	張文龍	中華民國工業協進會秘書長
	陳銘崑	國立臺北科技大學服務與科技管理所副教授
綜合類	官政能 (分組召集人)	實踐大學工業產品設計學系教授
	巴白山	國立臺北教育大學數位科技設計學系教授
	林鑫保	臺灣創意設計中心副執行長
	黃啟梧	國立台北科技大學工業設計系教授

(上述名單除召集人外，依姓氏筆畫排列)

第**26**屆

2019

中小企業創新研究獎

The 26th Taiwan SMEs Innovation Award

機械

自動化

材料

服務

生技

電子

綜合

資訊



得獎專輯

發行人：沈榮津

總編輯：何晉滄

副總編輯：蘇文玲、陳國樑、戴麗芬

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編輯群：李佩諄、胡劍銘、陳博鍊、周毓玲、

茆晉維

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創新卓越
超越巔峰

第**26**屆



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中小企業創新研究獎