TASS2024

亞洲永續供應+循環經濟會展
Sustainable Taiwan Expo

November 6 - 8 | 高雄展覽館 Kaohsiung Exhibition Center

大會手冊
SHOW DIRECTORY

建構永續供應網絡

Developing Sustainable Supply Network

CONTENT

1 展覽資訊
Exhibition Information

TASS 2024 | 亞洲永續供應+循環經濟會展
Sustainable Taiwan Expo

展覽名稱 *Official Information*

亞洲永續供應+循環經濟會展
Sustainable Taiwan Expo

https://tassasiaexpo.com

展出地點 *Venue*

高雄展覽館 南館
高雄市前鎮區成功二路39號

South Hall, Kaohsiung Exhibition Center (KEC)
No. 39, Chenggong 2nd Rd., Qianzhen Dist., Kaohsiung, Taiwan

展出日期及參觀時間
Show dates and opening hours

2024年11月6-7日(星期三-星期四)
上午10時00分至下午5時00分

November 6-7, 2024 (Wednesday to Friday)
10:00am - 5:00pm daily

2024年11月8日(星期五)
上午10時00分至下午4時00分

November 8, 2024 (Friday)
10:00am - 4:00pm daily

歡迎業界專業 憑名片登記參觀，12歲以下謝絕入場參觀。

The show is open to trade visitors only. All visitors must register and wear a visitor badge during the show. Visitors under 12 will only be admitted exceptionally.

理事長歡迎詞
Welcome Remarks

社團法人台灣永續供應協會與安益集團茵康國際會議顧問共同主辦的「TASS2024第五屆亞洲永續供應＋循環經濟會展」承繼過去四屆舉辦的既有成果與所有業者的更高期望，本屆再次承蒙中央政府各部會與國營事業各單位之全員參與，因應政府「臺灣2050淨零轉型」之既定政策，以「建構永續供應網絡」為題，在各協辦單位的鼎力協助之下，建構亞洲最具影響力的永續會展與商討ESG發展議題的諮議盛會。

今年會展第四度與循環經濟推動辦公室共同舉辦：「台灣循環經濟大聯盟論壇」，並由工業技術研究院、金屬工業研究發展中心、國立高雄科技大學、傑出新創企業、國際採購與供應聯盟與主辦單位規劃10場專業論壇與活動，60位政府首長、專家學者與產業先進等講者分別針對「循環經濟、低碳建築、淨零與能源轉型、永續供應、智慧製造、資源循環、綠色供應鏈、永續金融」等八大主題研討發表；三天的會展共聚集來自十餘國，100家國內外業者，300個標準展位，165場一對一商機媒合會談，以「跨產業、多元性、國際化」方式展現，成為全台及全亞洲唯一聚焦於推展淨零轉型並能提供永續供應鏈全方位交流之最佳平台。

本協會自創會以來向以「創新、永續、踏實」為期許，持續配合政府頒布之政策與關鍵戰略，協助產業與企業面對氣候變遷、國際地緣政治因素及永續、淨零轉型之挑戰，共同再創新的契機，並以提升與持續精進台灣於全球供應網絡的獨特永續競爭優勢。

TASS (Taiwan Alliance for Sustainable Supply), in collaboration with Intercon Convention Management, is co-hosting the "TASS2024 Sustainable Taiwan Expo (The Fifth Asia's Sustainable Supply and Circular Economy Conference and Exhibition)". This event builds upon the outcomes of the previous four events and aims to meet the heightened expectations of all stakeholders. This year, it has again received full participation from various ministries of the central government and state-owned enterprises, responding to the government's established policy of "Taiwan's 2050 Net Zero Transition." The theme of this year's expo is "Developing Sustainable Supply Network," and with the strong support of various co-organizers, it aims to create the most influential sustainable expo in Asia and an unique conference for discussing ESG development issues.

This year, the expo marks the fourth collaboration with the Circular Economy Promotion Office, hosting the major session of the "Taiwan Circular Economy 100 Forum". The expo is organized in conjunction with the ITRI (Industrial Technology Research Institute), MIRDC (Metal Industries Research and Development Center), NKUST (Kaohsiung University of Science and Technology), innovative startups, and IFPSM (International Federation of Purchasing and Supply Management), featuring ten forums/seminars and activities. Sixty speakers, including government leaders, experts, scholars, and industry pioneers, will present on eight major areas: Circular Economy, Low-Carbon Buildings, Net Zero and Energy Transition, Sustainable Supply, Smart Manufacturing, Resource Circulation, Green Supply Chain, and Sustainable Finance. Within three days, the expo will gather participants from more than ten countries, with 100 domestic and international exhibitors, 300 standard exhibition booths, and 165 one-on-one BE (Business Exchange) sessions, showcasing a "cross-industry, diversity, and internationalization" approach. It will serve as the only platform in Taiwan and Asia focused on promoting net zero transition and providing the platform of comprehensive exchanges in sustainable supply chains.

Since its establishment, TASS has been committed to the principles of "Innovation, Sustainability, and Practicality," continuously aligning with government policies and key strategies to assist industries and enterprises in facing challenges related to climate change, international geopolitical challenges, and sustainable net zero transitions. Together, we aim to create new opportunities and enhance Taiwan's unique sustainable competitive advantage within the global supply network.

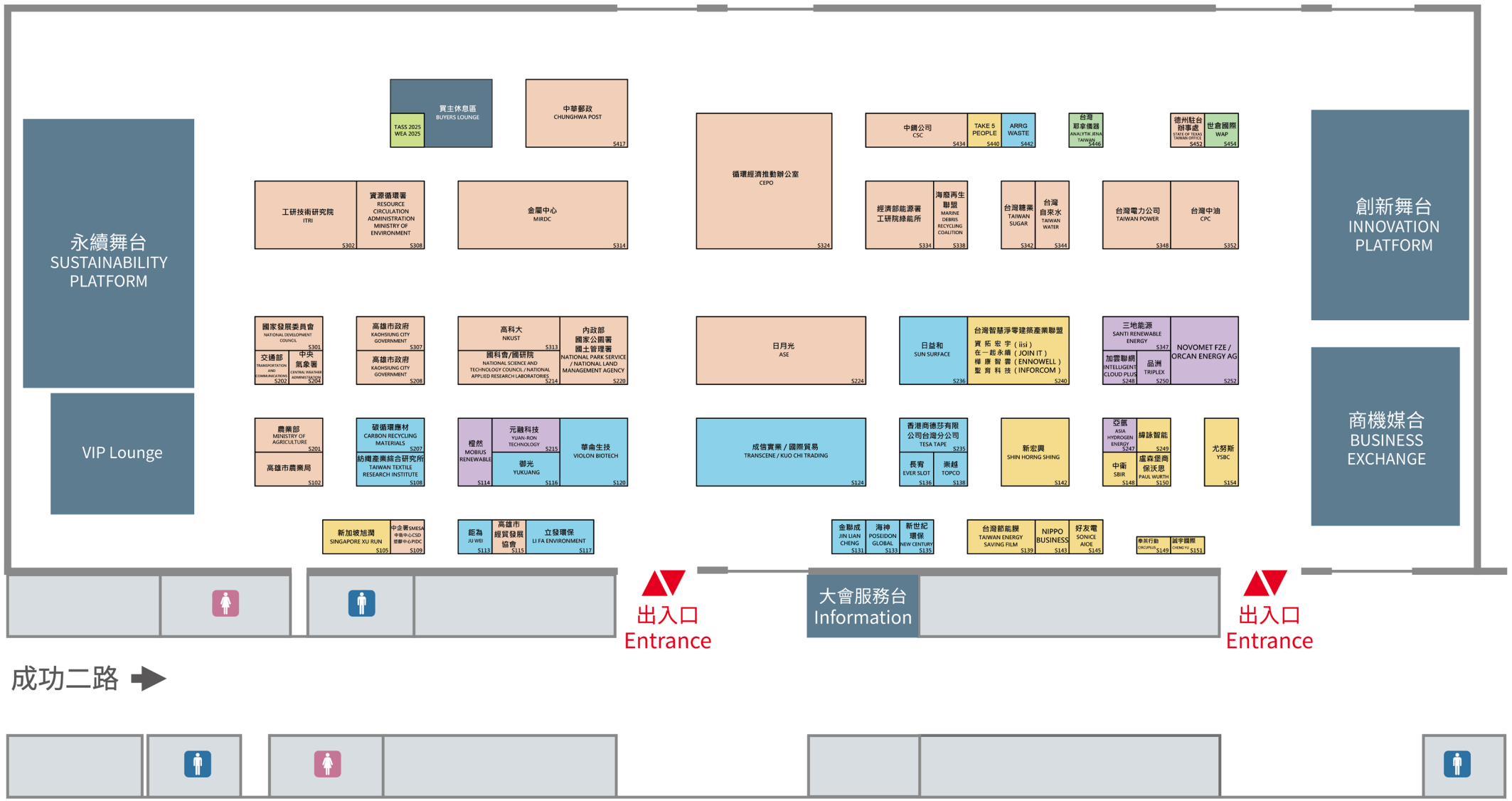
社團法人台灣永續供應協會 理事長 賴俊吉 Jiunn-Yi Lai
TASS - Taiwan Alliance for Sustainable Supply Chairman

創會理事長 賴樹鑫 Shu-Shin (Steve) Lai
Founding Chairman

聯合敬邀

FLOOR PLAN 大會平面圖

機構與組織 Institutions
資源循環 Resource Circulation
永續城市 Sustainable City
能源 Energy
智慧製造 Smart Manufacturing



展會活動總覽

日期時間	11月6日 (三)		11月7日 (四)			11月8日 (五)		
地點	永續舞台	創新舞台	永續舞台	創新舞台		永續舞台	創新舞台	
上午	**開幕典禮**		**淨零轉型解決方案(二)** 能源轉型講座	**永續供應論壇** 國際採購與供應管理聯盟 亞太地區 (全英文)	**商機媒合會**	**淨零轉型解決方案(五)** 資源循環講座	**淨零轉型解決方案(六)** 永續金融講座	**商機媒合會**
下午	**2024 台灣循環經濟大聯盟論壇**	**淨零轉型解決方案(一)** 低碳建築講座	**淨零轉型解決方案(三)** 能源轉型講座	**淨零轉型解決方案(四)** 智慧製造講座		**淨零轉型解決方案(七)** 綠色供應鏈講座		
晚上	**大會晚宴** 晶綺盛宴 台鋁館 珊瑚廳							

*主辦單位保有最終修改、變更及取消之權利。

Agenda at a Glance

TIME	Nov. 6 (Wed.)		Nov. 7 (Thu.)			Nov. 8 (Fri.)		
Location	Sustainable Platform	Innovation Platform	Sustainable Platform	Innovation Platform		Sustainable Platform	Innovation Platform	
a.m.	**Opening Ceremony**		**Net-Zero Forum (Session II)** Energy Transition Solutions	**Sustainable Supply Forum (IFPSM AP)**	**Business Exchange**	**Net-Zero Forum (Session V)** Resource Circulation Solutions	**Net-Zero Forum (Session VI)** Sustainable Finance Solutions	**Business Exchange**
p.m.	**2024 Taiwan Circular Economy Forum**	**Net-Zero Forum (Session I)** Low-carbon Building Solutions	**Net-Zero Forum (Session III)** Energy Transition Solutions	**Net-Zero Forum (Session IV)** Smart Manufacturing Solutions		**Net-Zero Forum (Session VII)** Green Supply Chain Solutions		
p.m.	**Welcome Reception** Coral Room of MLD Jubilee Hall Kaohsiung							

*The organizer reserves the right to change or cancel the programs.

2 論壇議程及講者介紹
Conference Information

11/6

2024台灣循環經濟大聯盟論壇
2024 Taiwan Circular Economy Forum

淨零轉型解決方案(一) 低碳建築講座
Net-Zero Forum (Session I) Low-carbon Building Solutions

11/7

淨零轉型解決方案(二) 能源轉型講座
Net-Zero Forum (Session II) Energy Transition Solutions

永續供應論壇(國際採購與供應管理聯盟亞太地區) 全英文
IFPSM AP Sustainable Supply Forum

淨零轉型解決方案(三) 能源轉型講座
Net-Zero Forum (Session III) Energy Transition Solutions

淨零轉型解決方案(四) 智慧製造講座
Net-Zero Forum (Session IV) Smart Manufacturing Solutions

11/8

淨零轉型解決方案(五) 資源循環講座
Net-Zero Forum (Session V) Resource Circulation Solutions

淨零轉型解決方案(六) 永續金融講座
Net-Zero Forum (Session VI) Sustainable Finance Solutions

淨零轉型解決方案(七) 綠色供應鏈講座
Net-Zero Forum (Session VII) Green Supply Chain Solutions

▶▶ 11/6 14:00-16:50 永續舞台 Sustainable Platform

時間	講題	講者
14:00-14:10	貴賓致詞暨合影	經濟部代表
14:10-14:35	雙軸驅動：邁向循環經濟的永續未來	台灣永續能源研究基金會 董事長 簡又新 大使
14:35-15:00	循環經濟與供應鏈風險管理： 構建智慧化綠色供應網絡	BSI英國標準協會
15:00-15:25	台泥的雙軸轉型：從資源再生到數位綠色製程	台泥企業集團 副總經理暨永續長 葉毓君
15:25-15:50	建立全球太陽能循環生態鏈	循旭科技(股)公司 創辦人暨董事長 彭裕民博士
15:50-16:15	《大云永續解決方案》為企業打造永續供應鏈	大云永續科技(股)公司 產品長 林俞君
16:15-16:50	綜合座談 主持人 台灣永續供應協會 創會理事長 賴樹鑫	與談人 BSI英國標準協會 台泥企業集團 副總經理暨永續長 葉毓君 循旭科技(股)公司 創辦人暨董事長 彭裕民博士 大云永續科技(股)公司 產品長 林俞君

*主辦單位保有最終修改、變更及取消之權利。

TASS 2024 Forum

淨零轉型解決方案(一)
Net-Zero Forum (Session I)

低碳建築講座
Low-carbon Building Solutions

▶▶ 11/6 14:00-15:35 創新舞台 Innovation Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
14:00-14:05	開場致詞 Opening Address	主辦單位 Organizer
14:05-14:20	淨零建築及建築能效制度 Net-Zero Building and the Building Energy Rating System	內政部建築研所 羅時麒組長 Dr. Lo Shih-Chi, Director, Architecture and Building Research Institute (ABRI)
14:20-14:35	建築隔熱膜應用及效益 Applications and Benefits of Architectural Heat Insulation Films	美商3M台灣子公司 郭心嵐 客戶經理 Linda Kuo, Account Manager, 3M Commercial Solutions Division, 3M Taiwan Ltd
14:35-14:50	淨零循環建築與光電建築 Net-zero Circular Buildings and Solar Buildings	澄毓綠建築 陳重仁 總經理 Johnny Chen, General Manager, Segreene Sustainable Design & Consulting (SSDC)
14:50-15:05	智慧能源管理：驅動低碳建築的核心引擎 Smart Energy Management: the Key Driver of Low-carbon Building Innovation	樺康智雲股份有限公司 王柏翔 技術長 Bastien Wang, Chief Technology Officer, Ennowell
15:05-15:20	邁向淨零建築 Towards Net-Zero Buildings	財團法人台灣建築中心 周光宙 副董事長 社團法人台灣綠建築發展協會 理事長 Chou, Kuang-Chou, Vice Chairman, Taiwan Architecture & Building Center
15:20-15:35	營建業的碳排放來源與低碳實踐 Sources of Carbon Emissions in the Construction Industry and Low-Carbon Practices	凱基銀行夥伴 美商傑明工程顧問台灣分公司 黃士瑞 技術經理 Ryan Huang, Technical Manager, Stantec / KGI Bank Partner

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

羅時麒 / Dr. Lo Shih-Chi

內政部建築研究所 組長
Director of environmental control division,
Architecture and Building Research Institute (ABRI)

淨零建築及建築能效制度
Net-Zero Building and the Building Energy Rating System

內容簡介 / *Speech Summary*

因應氣候變遷及地球暖化，目前全球有超過150個國家宣示淨零排放目標，我國也針對2050淨零排放目標，由國家發展委員會於111年3月30日公布「臺灣2050淨零排放路徑及策略總說明」，內政部負責「淨零建築」推動路徑規劃及推動，因此本部參考國際趨勢，於推動多年且成效良好的綠建築標章基礎上，推動綠建築之淨零轉型，建立建築能效評估制度，發展近零碳建築技術，先建築節能50%，再使用零碳再生能源，以實踐2050淨零建築目標。

淨零建築路徑3階段目標：
(一)2030年公有新建建築物達成建築能效1級或近零碳建築。
(二)2040年50%既有建築物更新為建築能效1級或近零碳建築。
(三)2050年100%新建建築物及超過85%建築物為近零碳建築。

淨零建築之推動規劃由公有建築物帶頭做起，引導民間建築跟進，針對新建建築先採取鼓勵方式，再逐步修訂法規強制實施，以邁向2050淨零建築的願景。

In response to the problems of climate change and global warming, there are presently over 150 countries around the world which have declared net-zero emissions targets. Taiwan has also put forth 2050 net zero goals. On Mar. 30, 2022, the National Development Council published “Taiwan's 2050 Net-Zero Emission Path and Strategies”. The Ministry of the Interior (MOI) is tasked with planning and implementing the path to “net zero building” (NZB). To this end, it must facilitate net zero transformation by referencing international trends and building on the foundation of its existing Green Building Label system, which is highly effective with a strong track record. The 2050 NZB vision will be achieved gradually by establishing a building energy rating system and developing nearly zero carbon building (nZCB) technologies. The first step is to cut building energy consumption by 50% and then achieve carbon-neutral via renewable energy.

The target for each stage for the building sector is as follows:
(1) Building energy-efficiency Level 1 or nearly zero carbon building in new public buildings by 2030.
(2) Upgrade to building energy-efficiency Level 1 or nearly zero carbon building in 50% of existing buildings by 2040.
(3) Nearly zero carbon building in 100% of new buildings and over 85% of existing buildings by 2050.

The plan is to start with public buildings spearheading the way for the private sector. For new buildings, incentives will be offered first before mandatory measures are legislated.

講師經歷 / *Speaker Experience*

羅時麒博士目前擔任內政部建築研究所環境控制組組長，研究領域包括綠建築、智慧建築、建築能效、減碳及智慧控制等議題。

Dr. Lo Shih-Chi is the Director of environmental control division at the Architecture and Building Research Institute (ABRI), Ministry of the Interior (MOI). His recent research areas include green building, intelligent building, building energy efficient, carbon reduction, and intelligent control.

講師姓名 / SPEAKER

郭心嵐 / Linda Kuo

美商3M台灣子公司 客戶經理

Account Manager,
3M Commercial Solutions Division, 3M Taiwan Ltd

建築隔熱膜應用及效益
Applications and Benefits of Architectural Heat Insulation Films

內容簡介 / *Speech Summary*

「綠建築」是淨零碳排建築物的重要指標，美商3M公司提供「建築隔熱節能」+「簡法裝修減廢」的解決方案，建立一個健康舒適的生活場域。3M推薦以優先的被動式建築隔熱技術，並輔以主動式智慧空調系統，如此可以達到最佳的建築能效。

3M創新多層光學膜科技的3M™極景建築隔熱膜「採光不採熱」，符合綠建築要求，維持明亮採光，但降低太陽照射的熱能進入室內，建立優異隔熱效果與熱舒適性的環境。根據國際EPD® (環境產品宣告)，3M極景建築隔熱膜每平方米可減少產生8公斤二氧化碳當量(CO2e)，每年節電28%，降低19度的冷氣能耗。首家獲得【高性能節能綠建材標章】，有助於綠色採購，幫助綠建築節能減碳並可以取得高達11項LEED「領先能源與環境設計」的加分。

"Green building" is an important indicator of net-zero carbon emission buildings, and 3M provides solutions of "building insulation and energy saving" + "simple decoration and waste reduction" to establish a healthy and comfortable living area. 3M recommends prioritizing passive building insulation technology, complemented by active smart air conditioning systems, to achieve optimal building energy efficiency.
The innovative multi-layer optical film technology of 3M™ Prestige Building Window Film "Lighting without heat", which meets the requirements of green buildings, maintains bright lighting, but reduces the heat energy of sunlight into the room, creating an environment with excellent thermal insulation effect and thermal comfort. According to the EPD® (Environmental Product Declaration), 3M™ Prestige Building Window Film can reduce the production of 8 kg of carbon dioxide equivalent (CO2e) per square meter, save 28% electricity per year, and reduce the energy consumption of air conditioning by 19 degrees. The first company to obtain the "High Performance and Energy Saving Green Building Materials Label", which is conducive to green procurement, helps green buildings save energy and reduce carbon emissions, and can obtain up to 11 LEED "Leading Energy and Environmental Design" credits.

講師經歷 / *Speaker Experience*

郭心嵐 客戶經理，任職美商3M台灣子公司的商用解決方案事業部，在20+年的工作中，專職於推動3M建築隔熱節能解決方案、簡法美學的室內裝修3M Di-Noc特耐裝飾軟片、與大樓外牆翻新拉皮減廢的解決方案，幫助建築節能減碳並可以取得LEED「領先能源與環境設計」的加分。除了協助企業及總部大樓節能減碳，重要的是協助建築業主及使用者建立一個健康舒適的生活場域。

Linda Kuo, Account Manager, 3M Commercial Solutions Division, 3M Taiwan Ltd.. In 20+ years of work, Linda Kuo has been dedicated to promoting 3M building window film and energy-saving solutions, 3M Di-Noc Architecture Films for interior decoration with simple aesthetics, and solutions for building exterior wall renovation and waste reduction, helping buildings save energy and reduce carbon emissions, and can achieve LEED "Leadership in Energy and Environmental Design" points. In addition to helping enterprises and headquarters buildings save energy and reduce carbon emissions, it is important to help building owners and users to build a healthy and comfortable living environment.

講師姓名 / SPEAKER

陳重仁 / Johnny Chen

澄毓綠建築設計顧問 總經理

General Manager,
Segreene Sustainable Design & Consulting (SSDC)

淨零循環建築與光電建築
Net-zero Circular Buildings and Solar Buildings

內容簡介 / *Speech Summary*

1. 關於建築物碳排放
2. 淨零循環建築趨勢
3. 淨零建築重要角色：光電建築
4. 循環建築對降低建築隱含碳排的重要性

1. About building carbon emissions
2. Net-zero circular building trends
3. An important role in net-zero buildings: photovoltaic buildings
4. The importance of circular buildings in reducing the embodied carbon emissions of buildings

講師經歷 / *Speaker Experience*

畢業於成大建築系與美國哈佛大學設計研究所，在累積了近十年的建築實務經驗後，毅然創業，目前為SSDC澄毓綠建築設計顧問公司總經理，以及台灣綠領協會理事長。具備20餘年LEED AP資格，參與近千件綠建築專案，專案版圖遍及台灣、大陸、歐洲，以及越南、印尼、汶萊等東南亞國家，包括台積電、友達光電、台達電、富士康等綠建築案，並於2014年成為美國海外第一位獲得LEED Fellow殊榮的華人。近年來，淨零碳排與ESG議題成為全球關注焦點，更跨足企業ESG及淨零碳排整合解決方案的研究與輔導，是多家大型企業的ESG顧問。

After graduating from the Department of Architecture at National Cheng-Kung University and the Graduate School of Design at Harvard University in the United States, he accumulated nearly ten years of practical experience in architectural affairs before deciding to start his own business. Currently, he serves as the General Manager of Segreene Sustainable Design & Consulting (SSDC) and holds the position of Chairman at the Taiwan Green Collar Association. With over 20 years of LEED AP qualifications, he has been involved in nearly a thousand green building projects spanning Taiwan, mainland China, Europe, and Southeast Asian countries such as Vietnam, Indonesia, and Brunei. These projects include notable green buildings like TSMC, AU Optronics, Delta Electronics, and Foxconn. Notably, in 2014, he became the first overseas Chinese to receive the LEED Fellow honor.

In recent years, global attention has shifted toward net-zero carbon emissions and ESG (Environmental, Social, and Governance) issues. He has dedicated his efforts to researching and providing guidance on corporate ESG and net-zero carbon emissions integrated solutions. Furthermore, he serves as an ESG consultant for numerous large companies.

講師姓名 / SPEAKER

王柏翔 / Bastien Wang

樺康智雲股份有限公司 技術長
Chief Technology Officer, Ennowell

智慧能源管理：驅動低碳建築的核心引擎
Smart Energy Management: the Key Driver of Low-carbon Building Innovation

內容簡介 / *Speech Summary*

在全球數百個國家致力於2050年實現淨零排放的背景下，要加速實現淨零排放，減少能源浪費是首要任務。
然而，僅靠電費單是無法分析用電行為，節能策略定義也毫無方向，有鑑於此，能源管理系統將成為關鍵，透過能源資訊收集，深入了解用電行為找出浪費，輔助管理者定義節能策略，並使用AI大數據分析技術，輔助管理者針對用電行為進行異常判斷，降低非機電人員系統學習曲線，解決缺工問題，提供儲能系統整合與綠電匹配，達到節費效益。
因此透過先進的能源管理系統捕捉建築物中的能源浪費，定義最佳的節能策略，從而推動低碳建築的實現。

講師經歷 / *Speaker Experience*

我是王柏翔，目前任職於樺康智雲並擔任技術長一職，擁有十年以上之軟體開發經驗，理工背景的我，對於不同領域的知識也充滿好奇，因此於在職過程中報考陽明交通大學經營管理研究所，並取得之學位，跨領域的學習與思考也讓我在職場上更具競爭力。
職涯過程中也參與了許多專案開發，專案的類型也相當多元，其中也包含了能源管理解決方案，成功案例包含了國內金融業、中小企業與辦公大樓類型之業主，除了替業主節能節費外，也可為環境與淨零議題付出一份心力！

講師姓名 / SPEAKER

周光宙

財團法人台灣建築中心 副董事長

Vice Chairman,
Taiwan Architecture & Building Center

邁向淨零建築
Towards Net-Zero Buildings

內容簡介 / *Speech Summary*

為與國際趨勢接軌，內政部參考國際能源總署「全球能源部門2050年淨零排放路徑」報告，及日本、美國、歐盟等國際發展概念，完成「淨零建築路徑藍圖」，規劃先建築節能50%，其餘用電再以再生能源碳中和至零碳排，至2050年達淨零建築之目標，同時規劃由公有建築物帶頭做起，申請建築能效評估，藉此引導民間建築跟進。另外，內政部已於112年世界地球日宣布：112年起國家住宅及都市更新中心招標的社會住宅及公辦都更建物，將率先全面導入新建住宅能效標示1級，擔任起建物節能改造的領頭羊，以落實2050淨零排放施政目標。因此，臺灣身為世界公民的一員，我們會以實際行動向國際展現我國在能源效率議題上永續經營的積極作為。

講師經歷 / *Speaker Experience*

鴻達建築師事務所主持建築師
行政院公共工程委員會前委員
國立金門大學教授
台鋼科技大學教授
高雄市建築師公會前理事長
中華民國全國建築師公會前理事長
建築師雜誌社社長

講師姓名 / SPEAKER

黃士瑞 / Ryan Huang

凱基銀行 美商傑明工程顧問台灣分公司 技術經理
Technical Manager, Stantec / KGI Bank

營建業的碳排放來源與低碳實踐
Sources of Carbon Emissions in the Construction Industry and Low-Carbon Practices

內容簡介 / *Speech Summary*

今天的簡報將探討營建產業中碳排放的來源及如何透過低碳工法來降低環境影響。Stantec Taiwan成立於1954年，是全球前十大建築與工程顧問公司，業務涵蓋都市規劃、建築設計、環境保護、水資源及綠能等領域，並獲得多項國際性榮譽。

在低碳建築方面，我們著重於在設計端，將整棟可能排放之碳排作整體盤點，調整設計需求及材料選擇。此外節能減碳技術，如考慮建物坐落方位減少西曬、採用功能性窗戶創造遮陽效果等。這些技術不僅能有效降低建築碳排放，還能提升建築的永續性。

此外Stantec Taiwan透過建築營建管理、環境技術、水資源管理及智慧資訊應用等綜合性服務，致力於推動綠色低碳淨零建築及永續發展。這場簡報將帶您深入了解如何在建設過程中實踐低碳理念，邁向更環保的未來。

Today's presentation will explore carbon emission sources in the construction industry and how low-carbon methods reduce environmental impact. Stantec Taiwan, established in 1954, is a leading global architecture and engineering firm, specializing in urban planning, design, environmental protection, and green energy.

In low-carbon building design, we conduct a comprehensive carbon assessment to adjust design needs and material choices. Energy-saving techniques, such as optimizing building orientation to reduce heat from the west and using functional windows for shading, lower emissions and enhance sustainability.

Stantec Taiwan promotes green, low-carbon, net-zero buildings through services in construction management, environmental technology, and smart applications, advancing sustainable development.

講師經歷 / *Speaker Experience*

黃士瑞，現任美商傑明工程顧問公司(Stantec Taiwan)技術經理，擁有國立臺灣大學生物環境系統工程碩士學位及國立臺北科技大學建築學士學位，並目前於國立成功大學資源工程學系攻讀博士學位。他擁有豐富的專業背景，取得了建築師執照、美國MWH　MP管理證書、建築設計ArchiCAD技術應用學士學分結業證書及建築室內裝修證照等多項專業資格。

並職涯過程服務於多個政府機構，涵蓋屏東縣城鄉發展處、高雄市政府建築管理處、新北市政府都市更新處及臺北市政府建築管理處，專注於都市更新、建築管理及工程監理工作，累積了廣泛的實務經驗。此外，他也曾在正修科技大學超微量研究中心擔任專案經理等職務，致力於環境工程及建築技術研究，並參與多項低碳建築與永續發展相關專案。

Ryan Huang is currently the Technical Manager at Stantec Taiwan, a branch of Stantec Inc. He holds a Master's degree in Bioenvironmental Systems Engineering from National Taiwan University and a Bachelor's degree in Architecture from National Taipei University of Technology. He is currently pursuing a PhD in the Department of Resources Engineering at National Cheng Kung University. Ryan is also a licensed architect and holds multiple certifications, including the MWH MP Management Certificate and ArchiCAD technical application credits.

Throughout his career, Ryan has worked in various government sectors, including Pingtung County Urban and Rural Development Office, Kaohsiung City Government Building Management Office, and the New Taipei City Urban Regeneration Office. His expertise spans urban renewal, building management, and project supervision. Additionally, he has contributed to environmental engineering and technical research during his time at Cheng Shiu University. He has been actively involved in numerous projects focused on low-carbon construction and sustainable development.

TASS 2024 Forum

淨零轉型解決方案(二) Net-Zero Forum (Session II)

能源轉型講座 Energy Transition Solutions

▶▶ 11/7 10:30-12:10 永續舞台 Sustainable Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
10:30-10:35	開場致詞 Opening Address	主辦單位 Organizer
10:35-11:35	淨零公正轉型在高雄 Just Transition to Net Zero in Kaohsiung	高雄市政府研究考核發展委員會 何宜綸 副主任委員 Ho, Yi-Lun, Deputy Director, Research, Development and Evaluation Commission of Kaohsiung City Government
	淨零加速器 - 商轉平台助力轉型 Net-zero Accelerator: Transition by Commercial Platform	高雄市政府經濟發展局 王宏榮 副局長 Wang, Hong-Ron, Deputy Director-General, Economic Development Bureau of Kaohsiung City Government
	面對淨零衝擊，企業應如何制定轉型規劃 Transition Plans of Enterprises to the Impact of Net Zero	舜倡發企業股份有限公司 朱俊德 董事長特助 Chun-Te Chu, Special Assistant to the President, Shuenn Chang Fa Enterprise Co., Ltd.
11:35-11:55	專題演講：我國能源轉型政策 Energy Transition Solutions	經濟部能源署 翁素真 主任秘書 Weng, Su-Chen, Chief Secretary, Energy Administration, Ministry of Economic Affairs
11:55-12:10	太平洋電纜助力產業轉型，邁向零碳未來 Pacific Cable Powers Industry Transformation Towards a Zero-Carbon Future	太平洋電線電纜 周志儒 業務經理 Chih-Ju Chou, Manager of the System Engineering Department , Pacific Electric Wire & Cable Co., Ltd. (PEWC)

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

何宜綸 / Ho, Yi-Lun

高雄市政府研究考核發展委員會 副主任委員
Deputy Director, Research, Development and Evaluation Commission of Kaohsiung City Government

淨零公正轉型在高雄
Just Transition to Net Zero in Kaohsiung

內容簡介 / *Speech Summary*

「高雄市淨零城市發展自治條例」於2024年5月10日經行政院核定，6月3日公布施行，是地方首部淨零自治法規，明定2030年減量30%、2050年達到淨零目標，並強調四大核心：強化政府治理、輔導產業調適、市民生活參與、落實公正轉型。
為確保本市淨零轉型過程中能廣納利害關係人意見，減少對產業、勞工及脆弱族群的影響，2023年12月7日函頒「高雄市政府淨零-公正轉型推動作業手冊」，規範各機關辦理公正轉型之規定與流程。
另外辦理公部門及民間團體的培力課程，建構淨零能力與公正轉型認知培養，以及運用政府綠債吸引民間資金投入環境永續...等等，期待以更精緻化及更深入的作法，在推動各項淨零轉型政策時能確實掌握關鍵議題，達到盡力不遺落任何人的核心價值。

講師經歷 / *Speaker Experience*

何宜綸副主委畢業於淡江大學歐洲研究所，任職高雄市研考會多年，並曾任研考會多個單位主管；期間尚借調擔任2009年世運委員會基金會（KOC）行政管理部組長，目前任職副主任委員。任職期間，與研考會同仁共同促成多項提升地方創新治理效能的措施。在應對淨零趨勢衝擊方面，研考會頒布相關推動作業手冊並期於近期建立公正轉型指引，以協助市府各局處推行符合公正轉型思維的業務，並制定相應的輔導與補償政策。

講師姓名 / SPEAKER

王宏榮 / Wang, Hong-Ron

高雄市政府經濟發展局 副局長
Deputy Director-General, Economic Development Bureau of Kaohsiung City Government

淨零加速器 - 商轉平台助力轉型
Net-zero Accelerator: Transition by Commercial Platform

內容簡介 / *Speech Summary*

王宏榮副局長現任高雄市經濟發展局副局長，擁有豐富的產業政策規劃與經濟發展經驗。他長期致力於推動城市經濟轉型，尤其在促進製造業數位化與淨零碳排目標上具有專業洞見。王副局長在高雄市政府中，負責產業輔導與發展策略，積極協助企業應對全球碳邊境調整機制（CBAM）等國際環保規範，並促成產官學合作，以推動永續經濟發展。

Wang Hong-Rong, who currently serves as the Deputy Director of the Kaohsiung City Economic Development Bureau, has extensive experience in industrial policy planning and economic development. He has been dedicated to promoting urban economic transformation, particularly in facilitating the digitalization of the manufacturing sector and achieving net-zero carbon emission goals. During his time in the Kaohsiung City Government, Deputy Director Wang is responsible for conducting industrial business consulting and establishing development strategies. He actively assists businesses in responding to international environmental regulations such as the Carbon Border Adjustment Mechanism (CBAM) and fosters collaboration between industry, government, and academia to promote sustainable economic development.

講師經歷 / *Speaker Experience*

王宏榮畢業於正修工專電機科，之後取得中山大學企管系和高階公共政策碩士學位。他曾擔任基層試用村幹事，並在通過高考後轉任市府社會局、任人事處科員和稅捐稽徵處股長。在縣市合併前，他擔任大樹鄉公所主秘，合併後被直接派任為大樹區長，並在期間展現出色的領導才華。2012年2月，歷經激烈的選戰，他成為大寮區區長，憑藉極高的親和力，獲得社區廣泛認可。2016年2月，他被派到到全市第二大區三民區任職，任內處事穩健，政務順利，表現優異，更在同年被延攬為經發局副局長。

Wang Hong-Rong graduated from Cheng Shiu University with a degree in Electrical Engineering and later obtained the Master of Business Management and Public Policy from National Sun Yat-sen University. He used to serve as a junior probationary village officer. After passing the civil service examination, he transitioned to the city's Social Affairs Bureau and then worked as a staff member in the Department of Personnel. He eventually worked his way up to become the Head of the Revenue Service Office. Wang was the chief secretary of Dashu Township before the merger of Kaohsiung city and county. After the merger, he was appointed as the supervisor of Dashu District, during which he demonstrated outstanding leadership skills. In February 2012, Wang became the supervisor of Daliao District after winning the competitive race, and he soon gained wide recognition in the community due to his friendly appeal. In February 2016, he was assigned to serve in Sanmin District, the second largest district in the city, where he proved to be a steady and effective leader and achieved outstanding performance. Later that year, he was appointed Deputy Director of the Economic Development Bureau.

講師姓名 / SPEAKER

朱俊德 / Chun-Te Chu

舜倡發企業股份有限公司 董事長特助
Special Assistant to the President,
Shuenn Chang Fa Enterprise Co., Ltd.

面對淨零衝擊，企業應如何制定轉型規劃
Transition Plans of Enterprises to the Impact of Net Zero

內容簡介 / *Speech Summary*

舜倡發的螺絲產品主要外銷歐美與亞洲，而在面對國際淨零趨勢與CBAM的挑戰下，更是首波受到影響的企業。舜倡發在108年起便著手進行節能措施和開發再生能源，於111年接受經發局的碳盤查輔導後，輔開始推動一系列碳管理規劃，而在113年更建立起廠內CBAM因應標準流程，展現了中小企業應對淨零衝擊的韌性。中小企業可借助舜倡發的案例與經驗分享，來擬定自身碳管理作業規劃，並制訂中長期的轉型策略，以符合全球淨零浪潮的需求。

講師經歷 / *Speaker Experience*

朱俊德特助是舜倡發的二代接班人，憑藉靈活思維和團隊合作精神帶領舜倡發成為台灣螺絲業的驕傲。面對近年CBAM對螺絲產業帶來的衝擊，他重回校園，學習國內外淨零趨勢與解決辦法，更利用所學，協助家族螺絲廠減碳與布局智慧工廠，並規劃了企業的中長期碳管理路徑與戰略，為螺絲產業做好淨零轉型的準備與挖掘綠色契機。

講師姓名 / SPEAKER

翁素真 / Weng, Su-Chen

經濟部能源署 主任秘書
Chief Secretary,
Energy Administration, Ministry of Economic Affairs

專題演講:能源轉型之課題與對策
Energy Transition Solutions

內容簡介 / *Speech Summary*

臺灣電力為獨立系統,化石能源發電約占83%,為邁向2050淨零轉型目標,政府積極推動二次能源轉型,以發展多元綠能為主軸,積極布建技術成熟的光電及風電、加速地熱、生質能及海洋能等前瞻能源發展,布局氫能發展,並加強科技儲能以及強韌電網等工作,以穩定供電。同時,透過節能關鍵戰略與深度節能、碳捕捉、碳封存手段,降低電力需求與碳排放。期藉由供需兩端共同努力,逐步達成2050淨零目標。

Taiwan's power system operates independently, with fossil fuels generating approximately 83% of its electricity. To achieve the 2050 net-zero target, the government is actively promoting a second energy transition, centered on diversifying green energy sources. This includes large-scale deployment of mature solar and wind power technologies, accelerated development of advanced energy sources such as geothermal, biomass, and marine energy, and planning for hydrogen energy expansion. Efforts are also being made to strengthen energy storage technologies and enhance a resilient power grid to ensure stable electricity supply. In parallel, energy-saving key strategies, deep energy conservation, and CCUS are being implemented to reduce both power demand and carbon emissions. Through collaborative efforts on both supply and demand, Taiwan aims to progressively achieve the 2050 net-zero goal.

講師經歷 / *Speaker Experience*

翁素真主任秘書長期於能源永續發展及氣候變遷因應領域深耕,精通能源發展政策及方案規劃、氣候變遷因應與調適及能源轉型等業務,並親身參與能源轉型政策規劃與推動,致力於穩定台灣的能源供應和改善能源安全。

Ms. Weng has served as the Secretary General, Energy Administration, Ministry of Economic Affairs and long been deeply involved in the field of energy sustainability and climate change mitigation. She is proficient in energy development policies, program planning, climate change mitigation and adaptation, and energy transition. Actively participating in energy transition policy planning and implementation, she is dedicated to stabilizing Taiwan's energy supply and enhancing energy security.

講師姓名 / SPEAKER

周志儒 / Chih-Ju Chou

太平洋電線電纜股份有限公司 業務經理
Manager of the System Engineering Department,
Pacific Electric Wire & Cable Co., Ltd. (PEWC)

太平洋電纜助力產業轉型，邁向零碳未來
Pacific Cable Powers Industry Transformation Towards a Zero-Carbon Future

內容簡介 / *Speech Summary*

響應政府的能源政策，太平洋電線電纜(太電)積極參與離岸風電與太陽能工程，針對綠能需求提供專業解決方案。太電也獲得沃旭能源(Ørsted)的認證，成為其風電工程的特高壓陸域電纜供應商，並持續協助沃旭進行大彰化西南 230kV 電纜系統工程。
面對綠能發電的間歇性挑戰及工業電價的持續高漲，太電推出高 效能的**釩液流電池(Vanadium Redox Flow Battery, VRFB) **儲能解決方案。該系統具備高能量轉換效率、可循環回收及不易燃爆等特點，有效消除使用者的安全疑慮。太電透過整合台灣在地供應鏈設計，提出儲能方案解決再生能源的間歇性發電挑戰及工業電價上漲的壓力，提升電力系統的穩定性，確保工業用戶享有穩定的電力供應和安全的使用環境。
除了專注於電線電纜產品的研發與製造，太電也涵蓋電力傳輸、通訊、儲能系統及電動車產業的線束產品。與台灣電力公司、台塑及台灣高鐵等知名企業的長期合作，彰顯了太電在高品質與服務上的卓越表現，使其成為能源轉型過程中的重要夥伴。

Pacific Electric Wire & Cable Co., Ltd. (PEWC), founded in 1950, is Taiwan's largest and first wire and cable manufacturer. With over 70 years of expertise, we specialize in the development, production, and installation of a wide range of cables. Our product offerings include power, telecommunications, and specialty cables, serving key sectors such as energy, telecom, transportation, and infrastructure. Through innovation and a strong commitment to quality, PEWC plays a vital role in major global projects, positioning itself as a trusted partner in the international market.

Our Solutions
1.Wire and Cable Solutions
•Power Cables: Engineered for reliable power transmission, ensuring safety in critical applications.
•Communication Cables: Fiber optic and copper cables designed for 5G and high-speed data transmission.
•Enameled Wires: Developed for electric vehicle motors and high-temperature applications.

2.Green Energy Solutions
•Solar and Energy Storage: PV cables and Vanadium Redox Flow Batteries (VRFB) supporting renewable energy projects.
•Offshore Wind Cables: Robust cables built to withstand harsh marine environments.

3.Electric Vehicle Solutions
•Enameled Wires for EVs: High-temperature resistant wires ensuring optimal motor performance.
•Hairpin Stator Technology: Advanced technology that enhances efficiency in electric vehicle motors.

講師經歷 / *Speaker Experience*

周志儒經理現任太平洋電線電纜(股)公司電纜事業群/系統工程部，為因應國內再生能源轉型與發展，太電公司成立系統工程部主要負責台電相關業務、太陽光電與離岸風電之特高壓外饋線工程與案場電纜銷售。專注於推動風電及太陽光電等再生能源技術之開發與應用。他帶領團隊取得沃旭能源 (Ørsted) 認證，成為台灣首家特高壓陸域電纜工程案之承攬商，並取得大彰化西南230kV電纜系統工程之合約，對台灣風電產業的發展做出重大貢獻。此外，他與其他光、風電業者與開發商建立了長期合作關係，進一步彰顯太電在能源轉型中的關鍵地位。

周經理在新能源及電纜工程領域擁有豐富經驗，致力於推動再生能源之多元解決方案。此次演講將介紹太電在產業轉型中的佈局策略與核心價值，並探討公司在新能源中的核心作用與應用。

Mr. Chih-Ju Chou is the Manager of the System Engineering Department within the Cable Business Group at Pacific Electric Wire & Cable Co., Ltd. (PEWC). In response to Taiwan's renewable energy transition, PEWC established the System Engineering Department to focus on projects with Taiwan Power Company, as well as high-voltage feeder lines and cable sales for solar and offshore wind power. Under Mr. Chou's leadership, PEWC became the first certified contractor in Taiwan by Ørsted for onshore high-voltage cable projects and secured the contract for the Changhua Southwest 230kV cable system, contributing significantly to Taiwan's wind energy development.

With extensive experience in renewable energy and cable engineering, Mr. Chou has built long-term partnerships with major solar and wind energy developers, further cementing PEWC's key role in the energy transition. His upcoming speech will present PEWC's strategies and core values in driving industry transformation and highlight the company's contributions to renewable energy solutions.

TASS 2024 Forum

國際採購與供應管理聯盟
亞太地區 IFPSM AP

永續供應論壇
Sustainable Supply Forum

▶▶ 11/7 10:30-12:40 創新舞台 Innovation Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
10:30-10:35	開幕致詞-建構永續供應網絡 Opening Remarks	賴樹鑫 臺灣永續供應協會 創會理事長 Shu-Shin (Steve) LAI, Founding Chairman, TASS Council Member of IFPSM
10:35-10:45	中國與亞洲的永續淨零發展趨勢 “Sustainability and Net Zero Development in China and Asia”	蔡進 國際採購與供應管理聯盟 副會長/亞太地區 主席 中國物流與採購聯合會 副會長 CAI Jin, Vice President & Regional Chair AP, IFPSM Vice President, CFLP, China
10:45-11:00	從供應鏈演進至供應網絡 Supply Chain migrates to Supply Network	吳惠群教授 香港物資採購與供銷學會 會長 Prof. Stephen W.K. NG, President, IPSHK, Hong Kong
11:00-11:15	印度永續供應鏈的發展 The Development of Indian Sustainable Supply Chain	彌納 印度物資管理協會 會長 Lalit Raj MEENA, National President, IIMM, India
11:15-11:30	印尼政府採購導入ISO 20400永續採購指南標準 ISO 20400 adopts to Indonesian Public Procurement	蘇馬索諾 印尼採購專業協會 主席 Sonny SUMARSONO, Chairman, IAPI, Indonesia
11:30-11:45	馬來西亞的2050年碳中和之路 Path towards Carbon Neutrality in Malaysia by 2050	楊佐良 馬來西亞採購與物資管理協會 會長 YANG Chor Leong, President, MIPMM, Malaysia
11:45-12:00	菲律賓的淨零排放路徑 Philippine Roadmap to Net Zero Emissions	阿奎諾 菲律賓供應管理協會 副會長 Marlon AQUINO, Vice President, PISM, Philippines
11:45-12:00	泰國邁向碳中和之願景與計畫 Thailand’ s Vision and Plan toward Carbon Neutrality	桑猜 泰國採購與供應鏈協會 副會長 Sanchai NITHEEKULAWAT, Vice President, PSCMT, Thailand
12:00-12:15	論壇討論-亞太地區永續供應鏈發展前景 Panel Discussion: The Perspectives of Sustainable Supply Chain in Asia Pacific	主持人 Moderator 何英傑 國際採購與供應管理聯盟 董事會成員 香港物資與採購供銷協會 主席 Dannies Y.K. HO, Board Member, IFPSM, Chairman, IPSHK 與談人 Panelists 印度、印尼、馬來西亞、菲律賓、泰國各國家協會副代表 Delegates from India, Indonesia, Malaysia, Philippines, Thailand

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

TASS 2024 Forum

淨零轉型解決方案(三) Net-Zero Forum (Session III)

能源轉型講座 Energy Transition Solutions

▶▶ 11/7 14:00-15:50 永續舞台 Sustainable Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
14:00-14:05	開場致詞 Opening Address	主辦單位 Organizer
14:05-14:20	運輸淨零排放之策略與作為 Strategies and Actions for Net-Zero Emissions in Transportation Sector	運輸研究所 蘇振維 副所長 Su, Zhen-Wei, Deputy Director-General, Institute of Transportation, MOTC
14:20-14:35	能源管理系統的發展與應用 Development and Application of Energy Management Systems	加雲聯網 吳沛容 產品經理 Peggy Wu, Product Manager, ICP
14:35-15:05	地熱與沼氣發電–穩定可靠且近零碳排的再生能源 Stable, Reliable, and Carbon Free Renewable Energy: Geothermal and Biogas Power Generation	日成科技 李長穎 執行長 Dr. John Lee, Managing Director, OSA
15:05-15:35	全球碳權交易戰略與減碳對策 Global Carbon Trading Strategy and Carbon Reduction Measures	台灣碳交易股份有限公司 楊明坤 董事長 Yang, Ming-Kun, President, Taiwan Emission Exchange
15:35-15:50	氫能發電系統—國內外案例分享 Hydrogen Power System Solution of Domestic & Oversea Demo Performance Sharing	亞氫動力 鍾耀賢 處長 Scott Chung, Director, Asia Hydrogen Corp.

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

蘇振維 / Su, Zhen-Wei

交通部運輸研究所 所長

Deputy Director-General,
Institute of Transportation, MOTC

運輸淨零排放之策略與作為
Strategies and Actions for Net-Zero Emissions in Transportation Sector

內容簡介 / *Speech Summary*

簡介運輸部門溫室氣體排放現況、目標與行動方案，以及我國2050淨零排放發展策略。

講師經歷 / *Speaker Experience*

交通部運輸研究所工程司、研究員、副組長、組長、主任秘書

engineer、researcher、deputy director、director、chief secretary, Institute of Transportation, MOTC

講師姓名 / SPEAKER

吳沛容 / Peggy Wu

加雲聯網股份有限公司 產品經理

Product Manager, ICP

能源管理系統的發展與應用
Development and Application of Energy Management Systems

內容簡介 / *Speech Summary*

因應能源轉型與ESG永續議題，加雲的核心任務聚焦於開發創新的解決方案，並將AI應用於提供客戶強大的管理工具。本次演講將圍繞三大主題展開：首先是系統開發核心，介紹如何利用堅實的技術基礎加上客製的升級與優化；其次是探討智慧變電站為出發，推進到如何以能管系統幫助企業提升效能並邁向自動化管理；最後，將談到能源管理的表前與表後解決方案的演進，從電網端到用電端，如何有效整合，實現靈活且高效的能源管理。

In response to energy transition and ESG sustainability issues, ICP's core mission focuses on developing innovative solutions and applying AI to provide customers with powerful management tools. This presentation will cover three key topics: First, core system development, highlighting the integration of solid technical foundations with customized upgrades and optimizations. Second, the advancement from smart substations to energy management systems, showing how they help businesses improve efficiency and move toward automated management. Lastly, the evolution of front-of-the-meter to behind-the-meter energy management solutions, demonstrating how seamless integration from the grid to end-users enables flexible and efficient energy management.

講師經歷 / *Speaker Experience*

在台電電力輔助服務的產品及市場開發方面，帶領團隊推動了符合台電標準的電力調頻與負載管理技術，促進電網的穩定與能源使用效率提升。此外，於綠電媒合管理平台的產品開發中，也設計出一套可提供給售電業與用戶的平台，透過大數據分析與人工智慧，實現高效的綠電供需平衡，助力企業達成碳中和目標。最後，在表後儲能與能源管理系統的方面，協助客戶規劃及建置表後儲能並導入能管系統，為企業與工業用戶提供靈活的能源管理解決方案，降低電力成本，並提高能源利用率。

In the product and market development for Taiwan Power Company's ancillary services, I led the team in advancing frequency regulation and load management technologies that meet Taipower's standards, enhancing grid stability and energy efficiency. Additionally, I designed a green energy matching platform that connects renewable electricity retailing enterprise and users, using big data and AI to optimize the balance of renewable energy supply and demand, helping businesses achieve carbon neutrality. Lastly, I assisted clients in planning and implementing behind-the-meter energy storage systems and integrating energy management solutions, providing flexible energy management strategies for enterprises and industrial users, reducing electricity costs, and improving energy utilization.

講師姓名 / SPEAKER

鍾耀賢 / Scott Chung

亞氫動力股份有限公司 處長
Director, Asia Hydrogen Corp.

氫能發電系統—國內外案例分享
Hydrogen Power System Solution of Domestic & Oversea Demo Performance Sharing

內容簡介 / *Speech Summary*

介紹氫氣發電系統，高效率能源利用解決方案。熱電總轉換效率>90% 以上，最高到達97%。

Hydrogen power system and solution (PEM &SOFC) , Combined heat and power (CHP) total energy efficiency >90%, maximum is up to 97%.

講師經歷 / *Speaker Experience*

A.經歷：
1.友達光電 產品經理、2.茂迪光電 行銷經理、3.亞氫動力 處長
B.專長：
1產品管理、2.能源管理、3.案場評估4.低碳智慧應用。

A.Experience:
1.Product manager of AU optronics, 2. Marketing Manager of Motech company, 3. Director of Asia Hydrogen Corp.
B.Expertise:
1. Product Management , 2 .Energy Management

講師姓名 / SPEAKER

李長穎 / John Lee

日成科技股份有限公司 執行長

Managing Director, OSA

地熱與沼氣發電–穩定可靠且近零碳排的再生能源
Stable, Reliable, and Carbon Free Renewable Energy: Geothermal and Biogas Power Generation

內容簡介 / *Speech Summary*

減碳、零碳排的再生能源是永續發展的重要課題，然而太陽能、風力發電卻有間歇性無法發電的問題，因此尋找並且開發非間歇性的永續零碳排再生能源是永續發展的重要方向。台灣擁有豐富的地熱資源，同時農業、畜牧業、工業與民生廢棄物中的有機廢棄物的再利用，也是沼氣發電的寶貴資源，因此如何有效利用地熱與沼氣能源將是台灣永續發展能夠成功的重要拼圖。

Reducing carbon emissions and achieving zero carbon emissions with renewable energy are critical topics for sustainable development. However, solar and wind power generation face the issue of intermittency, which results in periods when power cannot be generated. Therefore, seeking and developing continuous, renewable, sustainable, zero-carbon energy is a key direction for sustainable development. Taiwan possesses abundant geothermal resources, and the reuse of organic waste from agriculture, livestock farming, industry, and municipal waste provides a valuable resource for biogas power generation. As such, the effective utilization of geothermal and biogas energy will be an essential piece of the puzzle for Taiwan's success in sustainable development.

講師經歷 / *Speaker Experience*

工作
- 執行長，日成科技，2021 – ，基載再生綠能系統
- 銷售經理，卡特彼勒公司，2009-2021，天然氣產品銷售，整個亞太地區
- 項目經理，卡特彼勒公司，2006-2009，煤礦瓦斯發電
- 高級首席工程師，Solar Turbines Inc，2001-2006，燃燒系統設計
- 首席工程師，Solo Energy Corp，2000-2001，燃燒系統設計

教育
- 博士，華盛頓大學，1995-2000，燃燒，NOX，內燃機
- 博士（未完成），康奈爾大學，1991-1992，燃燒 – 微重力液滴
- 碩士，紐約州立大學水牛城分校，1989-1991，燃燒 – 危險廢物焚燒

學士
- 普渡大學, 1986-1989, 航空航太 – 推進系統

Work
- Managing Director, OSA, 2021 to current, base load renewable systems
- Sales Manager, Caterpillar Inc, 2009-2020, gas product sales, all of Asia Pacific
- Project Manager, Caterpillar Inc, 2006-2009, coal mine methane power generation
- Sr. Principal Engineer, Solar Turbines Inc, 2001-2006, gas turbine combustion systems design
- Principal Engineer, Solo Energy Corp, 2000-2001, micro gas turbine combustion systems design

Education
- Ph.d., University of Washington, 1995-2000, combustion, NOX mechanisms, internal combustion engines (gas turbines)
- Ph.D. (uncompleted), Cornell University, 1992-1993, microgravity combustion
- MS, SUNY Buffalo, 1989-1991, combustion, hazardous waste incineration

BS, Purdue University, 1986-1989, propulsion, aeronautics and astronautics

講師姓名 / SPEAKER

楊明坤 / Yang, Ming-Kun

台灣碳交易股份有限公司 董事長
President, Taiwan Emission Exchange

全球碳權交易戰略與減碳對策
Global Carbon Trading Strategy and Carbon Reduction Measures

內容簡介 / *Speech Summary*

全球碳中和及淨零排放在2024年更加蓬勃展，已經是一個無法逆轉的潮流趨勢，台灣碳費議題也正如火如荼的推動徵收標準制定，綠電，再生能源，碳交易，碳中和等規範再加上ESG，SDGs各種報告及指標，推動企業需要快速及正確的轉型，來符合永續發展的終極目標。
面對這個堪稱工業5.0的淨零新挑戰，面對日益劇烈的氣候變遷議題，全人類都有積極保護地球的迫切危機感，無論淨零的自然解方，科技的綠電解方，台灣都不能置外於這個席捲全球的淨零轉型，碳法自然，善的循環，全人類都必須更加努力。

講師經歷 / *Speaker Experience*

楊明坤理事長八年前成立台灣碳交易股份有限公司，並陸續在新加坡，美國及日本成立相同名稱的台灣碳交易公司，透過全球布局，貼近市場，可以強化台灣的碳權議題競爭力。
近年陸續成立全國性的台灣碳權交易推廣協會，高雄市碳交易從業人員職業工會，並輔導台灣各縣市一起成立職業工會，籌備中華民國碳交易工會全國聯合會，全部規劃都朝向整合台灣優秀碳交易菁英，前進全球碳交易市場。
楊理事長是聯合國ESG高級策略顧問，聯合國數據資產管理高級管理顧問，全國碳交易管理師，CCER開發管理師，並結合一群商業夥伴共同成立「台灣碳交易中心」，是台灣最有碳權交易經驗的團體。

TASS 2024 Forum

淨零轉型解決方案(四)
Net-Zero Forum (Session IV)

智慧製造講座
Smart Manufacturing Solutions

▶▶ 11/7 14:00-16:10 創新舞台 Innovation Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
14:00-14:05	開場致詞 Opening Address	主辦單位 Organizer
14:05-14:20	以先進的量測技術提升AI燃燒控制的靈活度	品洲科技 張一岑 技術顧問 James Chang, Technical Consultant, Triplex Engineering Technology Co., Ltd.
14:20-14:35	數位永續並行 啟動中華郵政全鏈升級 Digital and Sustainability in Tandem: Initiating Full-Chain Upgrade for Chunghwa Post	中華郵政 蔡文慶 副主委 Tsai Wen-Ching, Vice Chairperson, Chunghwa Post Co., Ltd
14:35-14:50	數位科技 開創智慧港灣新未來 Smart future: Harboring innovation with digital technology	臺灣港務公司 蔡淑慧 資深處長 Shu-Hui Tsai, Senior Director, Taiwan Int' l Ports Corporation, Ltd.
14:50-15:10	低碳工業廢水回收技術 Low carbon Recycling Technology for Industrial Wastewater by Solar Interfacial Evaporation	國立中央大學 環境工程研究所 林進榮 教授 Dr. Chin-Jung Lin, Professor, Graduate Institute of Environmental Engineering, National Central University
15:10-15:30	中水放流水產氫技術開發 Development of Hydrogen Production Technology Using Concentrated Discharges from a Reclaimed Water Plant	國立中山大學 環境工程系 陳威翔 教授 Dr. Wei-Hsiang Chen, Professor, Institute of Environmental Engineering, National Sun Yat-sen University
15:30-15:50	廢棄物之循環再生產品低碳潛力建立(第二階段) Establishment of Low-Carbon Potential for Recycled Waste Products (Phase II)	國立成功大學 環境工程系 陳必晟 副教授 B.S. Chen, Associate Professor, Department of Environmental Engineering, National Cheng Kung University
15:50-16:10	建立場域空污異味即時監控系統及數據判定模式 Development of a real-time monitoring system and evaluation model for air pollution and odor in the field	國立高雄科技大學 環境與安全衛生工程系 賴怡潔 副教授 Yi-Chieh Lai, Associate Professor, Department of Safety, Health and Environmental Engineering, National Kaohsiung University of Science and Technology

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

張一岑 / James Chang

品洲科技有限公司 技術顧問

Technical Consultant,
Triplex Engineering Technology Co., Ltd.

鍋爐爐膛出口煙溫二維分佈的量測應用
Measure Application of Boiler Furnace

內容簡介 / *Speech Summary*

一、 爐膛二維煙溫量測技術原理

1) 簡介德國優泰克二維煙溫測量儀(EUflame 2D)系統，運用熱紅外線與層析式演算法(Tomographic Algorithm)之技術。

二、增設鍋爐爐膛出口煙溫偵測系統應用目的 :

1) 執行鍋爐燃燒最佳化調整 (Combustion Optimization)

・Hot Spot :爐膛局部溫度過高　・Upset :爐膛燃燒之燃氣火焰分佈不均

2) 提升鍋爐效率(降低未燃炭損失UBC)及降低排碳量

3) 爐膛燃氣出口溫度(FEGT)之預測

4) NOx排放及OFA風量控制

5) 降低鍋爐爐膛結渣及爐管破管停機

6) 提高鍋爐吹灰管理機制(配合煤炭混燒調度、飛灰熔點溫度管理、調節爐膛/過熱區(輻射及對流段)熱吸收比例

▒ 煤履歷數據建立　▒ 飛灰結渣指數及灰熔點溫度管理(DT、ST、HST & FT)　▒ 智慧吹灰管理

三、鍋爐爐膛二維煙溫偵測系統除可提供上述運轉績效外，並可運用模擬情境，AI演算方法，進行各段燃氣溫度數據預測，及與原始設計資料比對及數據分析，設定各段運維及預警管制點，減少停機損失。

In general , Boiler Furnace Design criteria FEGT is predicted through CFD or rule base data analysis. We can not read data directly before. It causes lots of operation data and combustion scenarios malfunctions.
Now, Euflame can provide the real time reading data of FEGT for operators who can monitor or correct some parameters or burner damper reset to avoid any accidents happened and unit forced outage.

In addition , Utilizing Euflame+ AI algorithm can help to apply to the following process.
1) Smart Soot blowers operation pattern and sequence
2) Slagging or fouling in boiler
3) Fire Ball setting through damper adjustment

Essentially, it will be useful or helpful for combustion tuning, and avoid unnecessary mis-operation and unexpected boiler trip occurred, if installed.

講師經歷 / *Speaker Experience*

技術顧問｜品洲科技公司(2023-目前)
技術顧問｜中華產業機械設備協會(2011-目前)
獨立董事｜唐榮鐵工廠(2015-2018)
兼任教授｜國立高雄第一科技大學 環境與安全衛生工程系(2012-2019)
專任教授｜國立高雄第一科技大學環境與安全衛生工程系 (1997-2012)
工程督導｜美國貝泰工程公司(Bechtel Corporation. Houston, Texas, USA)
副所長｜工業技術研究院能源與資源研究所(綠能與環境研究所前身)
研究工程師｜美國Exxon研究及工程公司(Houston, Texas, USA)

Technical Consultant
Triplex Engineering Technology Co., Ltd. (2023 - Present)
Technical Consultant
Taiwan Industrial Machinery and Equipment Association (2011 - Present)
Independent Director
Tang Eng Iron Works Co., Ltd. (2015 - 2018)
Adjunct Professor
Department of Environmental and Safety Health Engineering, National Kaohsiung First University of Science and Technology (2012 - 2019)
Full-time Professor
Department of Environmental and Safety Health Engineering, National Kaohsiung First University of Science and Technology (1997 - 2012)
Project Supervisor
Bechtel Corporation (Houston, Texas, USA)
Deputy Director
Energy and Resource Research Institute (Predecessor of Green Energy and Environmental Research Institute),Industrial Technology Research Institute (ITRI)
Research Engineer
Exxon Research and Engineering Company (Houston, Texas, USA)

講師姓名 / SPEAKER

蔡文慶 / Tsai Wen-Ching

中華郵政股份有限公司 經營策略設計委員會 副主任委員
Vice Chairperson, Chunghwa Post Co., Ltd

數位永續並行 啟動中華郵政全鏈升級
Digital and Sustainability in Tandem: Initiating Full-Chain Upgrade for Chunghwa Post

內容簡介 / *Speech Summary*

隨著全球淨零與永續議題日益受到關注，如何有效應對挑戰並提前部署，已成為各界組織與企業的當務之急。其中，物流產業在溫室氣體排放和供應鏈中皆扮演著關鍵角色，也因此成為全球實踐永續目標的焦點。
中華郵政作為深耕台灣之百年老店與國內產業發展推手，長期以來積極回應國際趨勢與政府政策，除拓展郵政公司各項業務之智慧轉型、優化顧客服務與體驗，亦透過創新科技工具力求落實淨零減碳，在推動2050淨零上持續貢獻心力。
此次講題將從全球物流產業發展趨勢進行剖析，進一步分享中華郵政總體願景與近年相關實際行動方案，希望藉此與各產業領袖相互交流，共同探索並推動「全鏈升級」，一齊創造更智慧、更永續的產業生態圈。

As global attention on net-zero and sustainability continues to rise, effectively addressing challenges and taking early action have become urgent priorities for organizations and enterprises across all sectors. Among all the industries, the logistics plays a crucial role in both greenhouse gas emissions and supply chains, making it a key focus for achieving global sustainability goals.

Chunghwa Post, a century-old company in Taiwan, has been a driving force in domestic industry development. The company has actively responded to international trends and government policies, not only advancing the smart transformation of postal services and continuously enhancing customer experience but also leveraging innovative technologies to achieve carbon reduction. Chunghwa Post is fully committed to the goal of net-zero emissions by 2050.

This talk will cover global trends in the logistics industry and share Chunghwa Post's overarching vision and recent action plans. The aim is to foster an exchange of ideas with industry leaders and explore how to collaboratively drive "end-to-end upgrades" and create a smarter, more sustainable industrial ecosystem.

講師經歷 / *Speaker Experience*

蔡文慶先生目前現職中華郵政股份有限公司經營策略設計委員會副主任委員，以及財團法人台灣郵政協會董事長。蔡文慶於民國72年開始於中華郵政服務，歷任北區管理局副工程司、總公司資產營運處處長、臺中郵局局長、桃園郵局局長等職務，熟稔各項業務，並深具管理長才，於民國108年接任經營策略設計委員會副主任委員。

Mr. Wen-Ching Tsai is currently serving as the Vice Chairperson of the Strategy Planning Committee at Chunghwa Post Co., Ltd., as well as the Chairman of the Taiwan Postal Association. Mr. Tsai began his service at Chunghwa Post in 1983 and has held various positions, including Deputy Engineer of the Northern District Management Office, Director of the "Property Operations Department" at the Headquarters, Director of Taichung Post Office, and Director of Taoyuan Post Office. He is well-versed in various operations and possesses significant management talent. In 2019, he was promoted to the position of full-time Vice Chairperson of the Strategy Planning Committee.

講師姓名 / SPEAKER

蔡淑慧 / Shu-Hui Tsai

臺灣港務股份有限公司 資深處長
Senior Director,
Taiwan Int'l Ports Corporation, Ltd.

數位科技 開創智慧港灣新未來
Smart future: Harboring innovation with digital technology

內容簡介 / *Speech Summary*

近年數位轉型為國際航港產業發展趨勢，因應人工智慧、物聯網及資通訊科技蓬勃發展，港務公司推動「Trans-SMART 2.0+升級計畫」，帶動港口智慧化發展，本次演講分享臺灣港群應用數位科技推動智慧港口發展，包含強化船舶航行安全、提升車輛通行效率、強化貨物運輸安全，以及透過5G AIoT技術打造高度自動化高雄港第七貨櫃中心建置成果。
港務公司引進民間創意思維，開放港口創新科技試驗場域，打造港口創新生態圈，透過數位科技應用實現港口永續發展願景。

In response to the trend of digital transformation in international port industries, TIPC has initiated the "Trans-SMART 2.0+ Plan" to promote smart port development. This presentation will share the application of digital technologies in enhancing maritime safety, improving vehicle traffic efficiency, strengthening cargo transportation security, and achieving sustainable operations. It will also showcase the implementation of 5G AIoT technology in the highly automated Container Terminal No. 7 of Kaohsiung Port.
TIPC is fostering innovation by incorporating private sector creativity and utilizing digital technology to build an ecosystem for a sustainable future.

講師經歷 / *Speaker Experience*

臺灣港務公司 企劃處 資深處長
臺灣港務公司 職安處 資深處長
臺灣港務公司高雄分公司 秘書處 處長

Senior Director, Planning & Development Dept., TIPC
Senior Director, Occupational Safety and Health Dept., TIPC
Director, Secretariat Dept., Kaohsiung Branch of TIPC

講師姓名 / SPEAKER

林進榮 / Dr. Chin-Jung Lin

國立中央大學 環境工程研究所 教授

Professor, Graduate Institute of Environmental Engineering, National Central University

低碳工業廢水回收技術
Low carbon Recycling Technology for Industrial Wastewater by Solar Interfacial Evaporation

內容簡介 / *Speech Summary*

太陽能驅動水蒸發的海水淡化以及廢水處理，是轉化太陽光來為水蒸發供能，提供低污染、低耗能、低成本的清潔水源生產技術。本講題主要針對該技術目前面臨的挑戰(1) 簡化光熱材料的製程以及原料易取得，同時具有效的寬頻光吸收；(2) 水中揮發性物質透過太陽能界面水蒸發轉移到蒸餾水的水安全問題；(3)如何有效分離和回收水中金屬離子以及提出可能的解決策略。這些新開發的技術可以建構特定工業廢料完整的循環利用技術，也可各別用於精進光熱材料合成技術，建構高效太陽能水蒸發新型材料、水淨化技術及資源循環化。

Solar-driven seawater desalination and wastewater treatment through evaporation is a technology that converts sunlight into energy for water evaporation, providing a clean water source with low pollution, low energy consumption, and low cost. This topic mainly addresses the challenges currently faced by this technology: (1) simplifying the manufacturing process of photothermal materials and ensuring the availability of raw materials while achieving effective broadband light absorption; (2) the water safety issue of volatile substances in water being transferred to distilled water through solar interface water evaporation; (3) how to effectively separate and recover metal ions from water and propose possible solutions. These newly developed technologies can construct a complete recycling technology for specific industrial waste, and can also be used individually to improve photothermal material synthesis technology, construct efficient new materials for solar water evaporation, water purification technology, and resource recycling.

講師經歷 / *Speaker Experience*

現任國立中央大學環境工程研究所教授，主持環境應用催化實驗室，專注於太陽光驅動的環境催化反應；溫室氣體捕集、轉化與感測；揮發性廢氣處理技術；源自廢棄物的特用化學品；水及廢水高級氧化處理等。曾任國立宜蘭大學學生事務處學務長、國立宜蘭大學環工系教授、國立宜蘭大學能資研發中心主任、國立宜蘭大學創新育成中心主任。

Currently, Dr. Chin-Jung Lin is a professor at the Graduate Institute of Environmental Engineering, National Central University, and chairs the Environmental Application Catalysis Laboratory, focusing on environmental catalytic reactions driven by sunlight; greenhouse gas capture, conversion and sensing; volatile exhaust gas treatment technology; special applications derived from waste chemicals; advanced oxidation treatment of water and wastewater, etc. He once served as the dean of the Office of Student Affairs at National Ilan University, a professor in the Department of Environmental Engineering at National Ilan University, the director of the Energy Resources Research and Development Center of National Ilan University, and the director of the Innovation Incubation Center of National Ilan University.

講師姓名 / SPEAKER

陳威翔 / Dr. Wei-Hsiang Chen

國立中山大學 環境工程研究所 教授

Professor, Institute of Environmental Engineering,
National Sun Yat-sen University

中水放流水產氫技術開發 Development of Hydrogen Production Technology Using Concentrated Discharges from a Reclaimed Water Plant

內容簡介 / *Speech Summary*

面對全球氣候變遷的挑戰，各國積極推動再生能源，氫能成為重要的綠色能源選擇。本計畫旨在透過廢水電解技術生產低碳綠氫，結合資源再利用與污染減少，助力達成減碳目標。我們使用中水回收系統產出的濃排水取代純水，並結合電化學處理技術，測試其在不同操作情境下廢水電解產氫的可行性，進一步評估廢水水質是否滿足產氫需求。由於廢水中水質如電解質濃度會根據來源而有所不同，本團隊亦測試不同電解催化條件，找出最佳操作條件以提高產氫效率。本計畫預期不僅能減少中水處理濃排水的排放，還能有效生產綠氫，實現循環經濟與環境保護的雙重目標，協助日月光公司成為領先的綠色半導體企業，展現廢水資源再利用及氫能生產的廣大潛力。

In response to the global challenge of climate change, countries are actively advancing renewable energy solutions, with hydrogen emerging as a key green energy option. This project aims to produce low-carbon green hydrogen through wastewater electrolysis, integrating resource reuse with pollution reduction to support carbon reduction efforts. Brine wastewater from a water reclamation system is used in place of pure water, combined with electrochemical treatment to assess the feasibility of hydrogen production under various operational conditions. The project also evaluates whether the quality of the wastewater meets hydrogen production requirements. Given that wastewater quality, such as electrolyte concentration, varies depending on the source, different electrolysis conditions are tested to optimize hydrogen production efficiency. This initiative not only reduces the discharge of concentrated wastewater but also efficiently produces green hydrogen, aligning with circular economy principles while promoting environmental protection. By reducing wastewater discharge and pollutant concentrations, the project helps ASE Technology move toward its goal of becoming a leader in the green semiconductor industry, demonstrating the potential of wastewater resource reuse for sustainable hydrogen energy production.

講師經歷 / *Speaker Experience*

陳威翔教授任職國立中山大學環境工程學研究所，目前同時擔任國立中山大學環境工程研究所所長、工學院副院長、中華民國環境工程學會理事、高雄醫學大學公共衛生學系與毒理學碩博士學位學程合聘教授。過去曾擔任國立中山大學副總務長與環安中心副主任。研究專長為飲用水與廢污水處理技術、新興污染物與消毒副產物、多介質環境宿命與傳輸流佈、健康風險評估、以及多變量分析環境管理策略。過去獲獎紀錄包含國立中山大學特聘年輕學者、中華民國環境工程學會優秀青年工程師獎、中華民國環境工程學會優秀論文獎、慶恩教育基金會綠色科技論文獎、環境保護與奈米科技研討會優秀論文獎、日月光環保學術優秀論文獎、國際儀器展環境工程組優等研究論文等。

Dr. Wei-Hsiang Chen is a full professor at the Institute of Environmental Engineering, National Sun Yat-sen University. He also holds several other positions, including Chair of the Institute of Environmental Engineering, Associated Dean of the College of Engineering at National Sun Yat-sen University, Director of the Environmental Engineering Society of Taiwan, and Joint Professor in the Department of Public Health and the Master's and Doctoral Programs in Toxicology at Kaohsiung Medical University. He previously served as Deputy General Affairs Officer and Deputy Director of the Environmental Safety Center at National Sun Yat-sen University. His research expertise includes drinking water and wastewater treatment technologies, emerging contaminants and disinfection byproducts, multi-media environmental fate and transport, health risk assessment, and multivariate analysis for environmental management strategies. Dr. Chen's past honors include the National Sun Yat-sen University Distinguished Young Scholar Award, the Taiwan Environmental Engineering Society Outstanding Young Engineer Award, the Taiwan Environmental Engineering Society Excellent Paper Award, the Ching-En Education Foundation Green Technology Paper Award, the Environmental Protection and Nanotechnology Symposium Excellent Paper Award, the ASE Environmental Scholarship Excellent Paper Award, and the International Instrumentation Exhibition Environmental Engineering Division Outstanding Research Paper Award.

講師姓名 / SPEAKER

陳必晟 / B.S. Chen

成功大學環境工程學系 副教授
Associate Professor, Department of Environmental Engineering, National Cheng Kung University

廢棄物之循環再生產品低碳潛力建立(第二階段)
Establishment of Low-Carbon Potential for Recycled Waste Products (Phase II)

內容簡介 / *Speech Summary*

資源循環已視為企業邁向淨零碳排重要的策略，特別是在廢棄物處理，以及發展原產品材料的低碳替代選項。
成大環工系陳必晟團隊與日月光高雄廠合作，對於多項從廢棄物轉為再生產品之製程，進行系統性的碳盤查，並且從三個面向，來評估減碳潛力，包含半導體業的調整廢棄物管理、改用再生產品、對於社會的減碳效果。
本計畫亦試著從再生處理程序鑑定出來的碳排放熱點，探索可以調整的技術、替代物料或營運方式，以期未來可達更深的循環減碳。
團隊統整物料循環模式的盤查計算數據，將完成一份循環減碳資訊手冊，提供給相關供應鏈、有相同廢棄物之同業參考與應用。

Resource circulation is considered an important strategy for businesses to achieve net-zero carbon emissions, especially in waste management and developing low-carbon alternative raw materials for production.
Our Project, led by Professor Pi-Cheng Chen from the Environmental Engineering Department at National Cheng Kung University, collaborated with ASE Kaohsiung to conduct a systematic GHG inventory for multiple processes that transform waste into recovered materials or products. Their teamwork evaluated the potential for carbon reduction from three aspects: new waste management in the semiconductor industry, using alternative products made from recovered materials, and the effect of carbon reduction on society.
This project also further explores adjustable technologies, alternative materials, or operational methods by identifying carbon emission hotspots in the processes, aiming to achieve more profound circular carbon reduction in the future.
The team will compile a leaflet showing the carbon reduction potential for the recovery of several semiconductor byproducts. This information will be provided as a reference and application guide for companies in related supply chains and industrial partners having similar wastes.

講師經歷 / *Speaker Experience*

現職:
國立成功大學環境工程學系 副教授
國立成功大學智慧半導體永續製造學院 副教授
台灣循環經濟與創新轉型協會 理事

學經歷:
香港理工大學土木環工系 博士後研究員
國立台灣大學環境工程學 博士
臺北市環境保護局 技士

Current
2023~ Associate Professor, Department of Environmental Engineering, National Cheng Kung University
2018~ Director of Circular Economy and Innovative Transformation Association, Taiwan

Experience and Education
2017~2022 Assistant Professor, Department of Environmental Engineering, National Cheng Kung University
2016 Postdoctoral Research Fellow, Department of Civil and Environmental Engineering, Hong Kong Polytechnic University
2015 PhD, Institute of Environmental Engineering, National Taiwan University

講師姓名 / SPEAKER

賴怡潔 / Yi-Chieh Lai

國立高雄科技大學 環境與安全衛生工程系 副教授

Associate Professor, Department of Safety, Health and Environmental Engineering, National Kaohsiung University of Science and Technology

建立場域空污異味即時監控系統及數據判定模式
Development of a real-time monitoring system and evaluation model for air pollution and odor in the field

內容簡介 / *Speech Summary*

異味污染是一種環境公害，為民眾關切的環保問題之一。楠梓科技產業園區因緊鄰住宅區，易有異味陳情發生。本次報告將以一產學合作成果為例，應用移動式異味即時監控系統於研究場域進行連續監測，以掌握場域陳情點之異味即時熱點時區分布，了解異味源與陳情點之相關性。此外，亦結合微型感測裝置監測資料庫，建立一套異味預警機制，強化空品監控技術，提升場域異味管理效率，進一步展現公司於環境守護核心策略之實踐。

Odor pollution as an environmental nuisance has attracted a lot of public attention. The Nanzih Technology Industrial Park is close to residential areas and has many odor complaints. This presentation will share the findings of an industrial-academic cooperation project that aimed to improve the efficiency of odor pollution management. The real-time odor monitoring system applies to the research area for continuous monitoring to locate the odor hot spots and to further understand the correlation between the sources and the odor hot spots. In addition, an early warning mechanism for odor pollution has been established based on integrating real-time odor monitoring data with the micro-sensor monitoring database to strengthen air quality monitoring technology and further enhance the company's focus on environmental protection.

講師經歷 / *Speaker Experience*

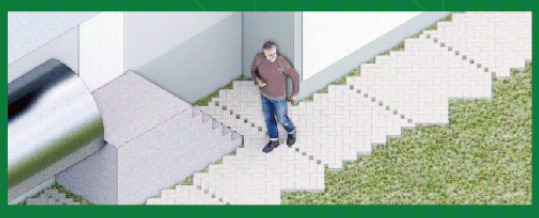
賴怡潔博士畢業於國立成功大學環境工程系，目前為國立高雄科技大學環境與安全衛生工程系副教授，同時擔任高雄市政府環境影響評估委員會委員及嘉義縣政府環境污染防制基金管理會委員。賴博士過去曾任職國立科學工藝博物館科技教育組副研究員、正修科技大學土木與空間資訊系副教授、中原大學生物環境工程系助理教授及美國伊利諾大學伊利諾州地理研究中心訪問學者。

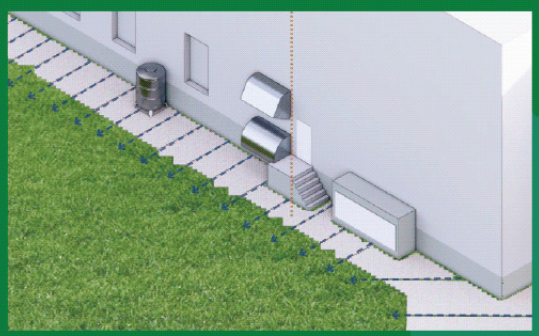
Dr. Yi-Chieh Lai graduated from the Department of Environmental Engineering at National Cheng Kung University and is currently an associate professor in the Department of Safety, Health and Environmental Engineering at National Kaohsiung University of Science and Technology. Dr. Lai also serves as a member of the Environmental Impact Assessment Committee of the Kaohsiung City Government and the Environmental Pollution Prevention Fund Management Committee of the Chiayi County Government. Dr. Lai was previously an associate researcher at the National Science and Technology Museum, an associate professor in the Department of Civil Engineering and Geomatics at Cheng Shiu University, an assistant professor in the Department of Bioenvironmental Engineering at Chung Yuan Christian University, and a visiting scholar at the Illinois State Geological Survey at the University of Illinois Urbana-Champaign.

TAIPEI TECH X 桃園永續資源館 TAOYUAN SUSTAINABLE RESOURCE CENTER

TASS循環經濟論壇

「環保透水步道示範案場」暨「再造循環城特展」案例分享





據聯合國環境署（UNEP）統計，建築產業使用了全球 40%的能源、20%的水資源、30%的原物料，並衍生出 38%的營建廢棄物與碳排放。當氣候變遷、資源枯竭等困境不斷浮現，建築產業也需進行根本性的轉變，人們才有機會走向永續未來。

為回應此重大議題，臺北科大循環經濟檢測分析實驗室與桃園市政府環境保護局攜手合作，於永續資源館打造「環保透水步道示範案場」、「再造循環城特展」，希望透過「環保建材開發」與「永續議題展陳」，為建築產業的永續轉型創造契機。

「環保透水步道示範案場」連結中台資源科技股份有限公司、協裕環保股份有限公司、十十設計顧問有限公司，以玻纖樹脂粉、污泥再生無機粒料開發透水砂漿層與透水磚。開發完成之環保建材，除了以申請「資源再生綠色產品認證」為目標持續改良外，亦搭配低碳、環保工法，於永續資源館外側打造透水步道示範案場。並於示範案場埋設環境監測儀器，收集數據佐證該產品對環境的友善性。

「再造循環城特展」與日月光中壢廠合作，展陳「環保透水步道示範案例」的同時，亦以綠建築、綠建材作為切入點，探索人們如何建立一套更為永續的營建系統，減少建築產業對環境、生態的衝擊，為人類與自然的共生鋪路。

本專題演講將分享相關經驗，衷心期盼您的參與，與我們一同思考建築產業的永續未來。

協裕環保股份有限公司 Shie Yu Environmental protection co., Ltd

中台資源科技 CHUNG TAI RESOURCE TECHNOLOGY

studio 十十 工作室

TASS 2024 Forum

淨零轉型解決方案(五)
Net-Zero Forum (Session V)

資源循環講座
Resource Circulation Solutions

▶▶ 11/8 10:30-12:10 永續舞台 Sustainable Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
10:30-10:35	開場致詞 Opening Address	主辦單位 Organizer
10:35-10:55	專題演講：資源循環現況與未來發展 Current Status and Future Development of Resource Circulation	資源循環署 賴瑩瑩 署長 Lai Ying-Ying, Director General, Ministry of Environment
10:55-11:10	我國廢太陽光電模組回收處理現況及未來展望 Current Status and Future Outlook of Solar Panel Waste Recycling in Taiwan	資源循環署循環處理組 陳俊融 組長 J.R. Chen, Division Director, Circular Processing Division of Resource Circulation Administration, Ministry of Environment
11:10-11:25	太陽能板之資源回收與技術概況 Overview of Resource Recycling Technology for Waste Solar Panels	成信實業 謝雅敏 總經理 Dr. Yasmin Hsieh, General Manager, Transcene Corp.
11:25-11:40	工業化碳捕捉結合生物固碳加速碳移除利用 Industrial Carbon Capture Combined with Biological Carbon Sequestration to Accelerate Carbon Removal and Utilization	華侖生技 張正邦 經理 Johnny Chang, Manager, VIOLON Biotech
11:40-11:55	以長效設計提升工業黏貼，致力商業向善 For Better Future, tesa Innovation with Sustainable Adhesive Solutions	德莎膠帶 趙洵 可持續發展經理 Mavis Zhao, Stainability Manager, Tesa
11:55-12:10	台灣農畜電循環經濟模式—台以八翁公司案例分享 Taiwan’s Agricultural and Livestock Electricity Circular Economy Model—TXI BAWENG Company Case Sharing	台以八翁 周宗毅 總經理 Z.Y. Chou, General Manager, TXI BAWENG Company

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

賴瑩瑩 / Lai Ying-Ying

環境部資源循環署 署長
Director General, Ministry of Environment

專題演講:資源循環現況與未來發展
Current Status and Future Development of Resource Circulation

內容簡介 / *Speech Summary*

將說明台灣在資源循環方面的現況與挑戰,從目前的物質使用及廢棄物產出情況,強調推動資源循環的重要性,並介紹資源物質流布狀況、廢棄物回收及再利用情形,提出資源循環三大策略,包括綠色設計源頭管理、能資源循環利用、廢棄物量能平衡及管理,並透過暢通循環網絡、創新技術與制度,提升資源使用效率,減少碳排放。另外,為加強推動綠色設計、增加再生資源使用等措施,提出了「資源循環促進法」草案,從廢棄物管理邁向資源循環的轉型,以資源循環零廢棄與其他淨零關鍵戰略,共同達成2050淨零目標。

The presentation will outline the current status and challenges of resource circulation in Taiwan, focusing on Taiwan's material usage and waste generation, while emphasizing the importance of promoting resource circulation. It will introduce the flow of resources in Taiwan, as well as the situation of waste recycling and reuse. Three major strategies for resource circulation will be proposed: green design and source management, energy and resource circulation, and balancing waste capacity and management. By facilitating circular networks, innovative technologies, and systems, the goal is to enhance resource efficiency and reduce carbon emissions. Additionally, to strengthen efforts in promoting green design and increasing the use of recycled resources, a draft of the Resource Circulation Promotion Act has been proposed, aiming to transform waste management into resource circulation. This transition aligns with the zero-waste resource circulation strategy and other key net-zero strategies to achieve the 2050 net-zero goal.

講師經歷 / *Speaker Experience*

國立臺北大學自然資源與環境管理研究所 博士
經歷:
行政院環境保護署技監兼土壤及地下水污染整治基金管理會
執行秘書
行政院環境保護署技監兼方案整合辦公室執行秘書
行政院環境保護署廢棄物管理處 副處長
行政院環境保護署廢棄物管理處 處長
行政院環境保護署資源循環辦公室 主任

Ph.D., Institute of Natural Resource Management, National Taipei University Bachelor of Science, Department of Environmental Engineering, National Cheng Kung University
Work Experience
- Executive Director, Soil and Groundwater Remediation Fund Management Board,EPA
- Deputy Director General, Department of Waste Management, EPA
- Deputy Director General, Department of Supervision Evaluation& Dispute Resolution, EPA
- Director General, Department of Waste Management, EPA
- Director, Office of Resource Circulation, EPA

講師姓名 / SPEAKER

陳俊融 / J.R. Chen

資源循環署循環處理組 陳俊融 組長

Division Director, Circular Processing Division of Resource Circulation Administration, Ministry of Environment

我國廢太陽光電模組回收處理現況及未來展望
Current Status and Future Outlook of Solar Panel Waste Recycling in Taiwan

內容簡介 / *Speech Summary*

為因應我國近年推動綠電能源政策，未來可能隨之大量排出廢太陽光電模組等新興廢棄物，自2018年起，行政院召開數次中央部會會議，研商太陽能光電模組回收機制之推動及分工，由經濟部能源署建立回收費用徵收機制，由環境部建立模組回收、清除、處理機制，並於2019年起開始，持續運作至今。未來，環境部將持續研議精進回收制度，以達到廢棄物減量與資源再利用之目標。

In response to our country's promotion of green energy policies in recent years, which may result in the discharge of great amounts of emerging waste such as used solar photovoltaic modules in the future. The Executive Yuan has held several central ministry meetings since 2018 to develop a recycling system for solar photovoltaic modules, including the collaboration of promotion and division of labor. The Energy Administration of the Ministry of Economic Affairs established a recycling fund collection system. While the Ministry of Environment established a recycling, removal, and processing system for the solar photovoltaic module. It was launched in 2019 and implemented continuously. In the future, the Ministry of Environment will improve the recycling system to achieve the goals of waste reduction and resource reuse.

講師經歷 / *Speaker Experience*

- 環境部資源循環署-循環處理組組長(現職)
- 行政院環境保護署-廢棄物管理處簡任技正(2022-2023年)
- 行政院環境保護署-水質保護處技正、科長(2011-2021年)
- 行政院環境保護署-環境衛生及毒物管理處技士(2005-2010年)

- Division Director, Circular Processing Division of Resource Circulation Administration, Ministry of Environment (2024-present)
- Senior Technical Specialist, Department of Waste Management/ Office of Resource Circulation, EPA (2022-2023)
- Technical Specialist & Section Chief, Department of Water Quality Protection, EPA (2011-2021)
- Assoiciate Technical Specialist, Department of Toxic Substance Management, Environmental Protection Administration Executive Yuan (EPA, 2005-2010)

講師姓名 / SPEAKER

謝雅敏 / Dr. Yasmin Hsieh

成信實業 總經理
General Manager, Transcene Corp.

太陽能板之資源回收與技術概況
Overview of Resource Recycling Technology for Waste Solar Panels

內容簡介 / *Speech Summary*

太陽能板由鋁框、玻璃、電池片、金屬導線、接線盒、背板等組成，這些組成物的成分大部分是具有回收的價值，在廢棄之後進行資源回收，可以物盡其用之外，同時對太陽能電廠而言，也是使太陽光電在退役之後，能實現環保的最後一步。本次演說內容，透過介紹太陽能板之資源回收技術概況，跟與會先進交流綠電環保的相關議題。

The solar panels are composed of aluminum frames, glass, solar cells, metal wires, junction boxes, back sheets, and other components. Most of these materials have recycling value. After they are discarded, resource recovery can not only maximize their utilization but also represent the final step for solar power plants to achieve environmental sustainability after decommissioning. In this presentation, I will introduce the overview of resource recycling technology for solar panels and engage with the attendees on relevant topics related to green electricity and environmental protection.

講師經歷 / *Speaker Experience*

- 2019成信實業 總經理
- 2015成亞資源 副總
- 2008日本東京大學環境科學系 研究員
- 2005台灣首府大學 助理教授
- 2005國立成功大學資源工程系 博士

- 2019 to present：General Manager, Transcene Corp.
- 2015：Deputy General Manager, Chenya Resources Technology
- 2008：Visiting Researcher, Department of Environmental Science, University of Tokyo, Japan
- 2005：Assistant Professor, Taiwan Shoufu University, Taiwan
- 2005：Ph.D., Department of Resources Engineering, National Cheng Kung University, Taiwan

講師姓名 / SPEAKER

張正邦 / Johnny Chang

華侖生技 經理
Manager, VIOLON Biotech

工業化碳捕捉結合生物固碳加速碳移除利用
Industrial Carbon Capture Combined with Biological Carbon Sequestration to Accelerate Carbon Removal and Utilization

內容簡介 / *Speech Summary*

利用華侖專利技術，將二氧化碳轉化為碳酸氫根，形成重要碳源。再藉由微藻快速行光合作用固碳，並將其轉化為藻粉，製作出含優異蛋白質及Omega-3的藻粉飼料，供應給水產及畜產使用，達到永續發展與循環經濟。

Using VIOLON patented technology, carbon dioxide is converted into bicarbonate to form an important carbon source. Then the carbon was sequestered by microalgae through rapid photosynthesis. and convert it into algae powder. Produce algae meal feed with excellent protein and Omega-3. It is supplied for use in aquatic and livestock products to achieve sustainable development and circular economy.

講師經歷 / *Speaker Experience*

張正邦出生於高雄市，於2015年取得國立臺北科技大學電子工程碩士學位，曾服務於啟碁科技以及中磊電子。專長為嵌入式系統、硬體電路設計、天線設計、電磁模擬。於2023年加入華侖生技，協助氣候科技的研究與開發CCU+CDR之工業應用，設計碳捕捉量計算軟體並通過第三方驗證。張正邦在工程領域擁有中華民國、大陸、美國等多項專利，並具備BSI英國標準協會ISO14064與 ISO14067溫室氣體專業人員資格證明。

Johnny Chang was born in Kaohsiung City. He obtained a master's degree from the department of Electronic Engineering at the National Taipei University of Technology in 2015. He has served at WNC and Sercomm. His expertise is embedded systems, hardware design, antenna design and electromagnetic simulation. He joined VIOLON Biotech in 2023 to assist in the research and development of climate technology for industrial applications of CCU+CDR, he designed carbon capture calculation software and pass third-party verification. Johnny Chang holds many patents in the field of engineering, including the Republic of China(Taiwan), Chinese mainland and the United States. He also has BSI ISO14064 and ISO14067 greenhouse gas professional qualification certificate.

講師姓名 / SPEAKER

趙洵 / Mavis Zhao

德莎膠帶 可持續發展經理

Stainability Manager, Tesa

以長效設計提升工業黏貼，致力商業向善
For Better Future, tesa Innovation with Sustainable Adhesive Solutions

內容簡介 / *Speech Summary*

德莎tesa是一家擁有超過125年歷史、總部在德國漢堡的全球化公司，隸屬於拜爾斯道夫(Beiersdorf) 集團，始終專注於爲各行業創造有助於改善工作、產品和生活的膠帶解決方案。作爲行業領域的技術專家與創新驅動者，德莎tesa堅定承諾可持續發展，是公司發展重要戰略之一。本次演講主要分享了公司從戰略落實，產品設計，供應鏈協作等可持續發展案例，旨在推動循環經濟，共建永續未來。

tesa is an international company with a history of over 125 years, headquartered in Hamburg, Germany, and is part of the Beiersdorf Group. It has always been committed to provide sustainable adhesive solutions that help improve work, products, and life across various industries.
As a technical expert and innovation driver in its industry, tesa is firmly committed to sustainability, which is one of the company's key strategic targets.
This presentation mainly shares the company's sustainability implementation, product design, supply chain collaboration, etc., aiming to promote a circular economy and build a sustainable future together.

講師經歷 / *Speaker Experience*

德莎大中華區可持續發展經理，負責公司級別可持續發展相關業務，深耕化工行業多年，在公司運營各個環節的環境管理和能源管控領域有15多年豐富經驗。同時，熟悉國內外ESG相關法規、政策，負責國際、國內氣候變化，雙碳政策法規解讀，獲得GRI培訓證書。德商會ESG聯盟培訓講師，對可持續發展，ESG，CSR等有着深刻理解。

Mavis Zhao is regional sustainability manager of tesa for corporate sustainability in Greater China. More than 15 years of experience in environmental management and energy control in chemical industry. Be familiar with domestic and international ESG related regulations and policies, and interpret policies of climate change, dual-carbon and so on. Owed GRI training certificate, trainer of German Chamber ESG Alliance. She is professional in Sustainability/ESG/CSR strategy, training, program implementation and communications.

講師姓名 / SPEAKER

周宗毅 / Z.Y. Chou

台以八翁股份有限公司 總經理

General Manager, TXI BAWENG Company

台灣農畜電循環經濟模式—台以八翁公司案例分享
Taiwan’s Agricultural and Livestock Electricity Circular Economy Model — TXI BAWENG Company Case Sharing

內容簡介 / *Speech Summary*

台南市柳營區八翁里是全國前三大酪農集中區，共有52家酪農戶總養殖乳牛數約1萬頭。為了改善酪農畜牧廢水污染週邊急水溪水質，環境部及台南市環保局媒合，台以環能公司和當地21家酪農戶，共同出資成立台以八翁公司，投資金額約2億元，其中環境部及台南市環保局補助7100萬，建置台南市第一座，同時也是全國第一座乳牛為主的「畜牧糞尿共同處理中心」，收集3600頭乳牛糞尿廢水，生產沼氣發電，預計每年可產出210萬度綠電。發電剩餘沼液，全部用於澆灌週邊狼尾草田、飼料玉米田和水稻田，發電剩餘沼渣部份做為週邊狼尾草田和飼料玉米田基肥使用，另一部份則利用蚯蚓堆肥技術，生產高品質蚯蚓糞有機肥。達成廢水零排放，水清田肥的農畜電循環經濟模式。

Baweng village, Liuying District, Tainan City, is one of the top three dairy farming areas in the country. There are 52 dairy farmers feeding a total of about 10,000 dairy cows. In order to improve the water quality of Jishui streams surrounding dairy farmers' livestock wastewater pollution, the Ministry of Environment and the Tainan City Environmental Protection Bureau matchmaking Wizecycle Company and 21 local dairy farmers jointly funded the establishment of the TXI BAWENG Company, with an investment amount of approximately NT$ 200 million. , including a subsidy of NT$ 71 million from the Ministry of Environment and the Tainan City Environmental Protection Bureau, to build Tainan City's first and the country's first based on dairy cows, 「livestock excrement and urine wastewater Joint Processing Center」 collecting 3,600 cows' excrement and urine wastewater to produce biogas It is expected to produce 2.1 million kilowatt-hours of green electricity per year. All the remaining biogas slurry from power generation is used to irrigate the surrounding Pennisetum fields, feed corn fields and rice fields. The remaining biogas solid residue from power generation is used as base fertilizer for the surrounding Pennisetum fields and feed corn fields. The other part is used for vermicomposting technology. Produce high quality vermicompost organic fertilizer. Achieve zero wastewater discharge, clean water and fertilize the fields, an agricultural, livestock and electricity circular economic model.

講師經歷 / *Speaker Experience*

A.經歷：1.台以環能公司副總經理、2.台以八翁公司總經理、3.台灣牧草產業發展協會理事

B.專長：1農牧業循環經濟、2.生質沼氣電廠、3.狼尾草栽種及青芻飼4.蚯蚓養殖及蚯蚓堆肥、5.營農型光電。

A.Experience: 1. Deputy General Manager of Wizecycle Company, 2. General Manager of TXI BAWENG Company, 3. Director of Taiwan Grassland Industry Development Association

B.Expertise: 1. Agricultural and animal husbandry circular economy, 2. Biomass biogas power plant, 3. Pennisetum cultivation and silage feed, 4. Earthworm breeding and earthworm composting, 5. Agri-photovoltaic.

TASS 2024 Forum

淨零轉型解決方案(六)
Net-Zero Forum (Session VI)

永續金融講座
Sustainable Finance Solutions

▶▶ 11/8 10:30-11:50 創新舞台 Innovation Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
10:30-10:35	開場致詞 Opening Address	主辦單位 Organizer
10:35-11:05	綠色金融助力永續發展 Sustainable Development by Green Finance	金管會 綜合規劃處 林義聖 副處長 H.S. Lin, Deputy Director, Department of Planning, Financial Supervisory Commission Republic of China
11:05-11:20	三零世界的新經濟解方(零淨碳排、零失業、零貧窮) New Economic Solutions for a Triple Zero World (Zero Net Carbon Emissions / Zero Poverty / Zero Unemployment)	財團法人台灣尤努斯基金會 蔡慧玲 董事長 Philippa Tsai, President, Foundation for Yunus Social Business 財團法人台灣尤努斯基金會 王絹閔 執行長 Juno Wan, CEO, Foundation for Yunus Social Business Taiwan
11:20-11:50	碳權經濟。是買空賣空，還是實際買賣? The Carbon Economy, a Real Economy in the Phantom World	興能能源 陳開憲 博士 Dr. K.H. Chen, President, H.N. Energy

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

林義聖 / H.S. Lin

金融監督管理委員會 綜合規劃處 副處長

Deputy Director, Department of Planning,
Financial Supervisory Commission Republic of China

綠色金融助力永續發展
Sustainable Development by Green Finance

內容簡介 / *Speech Summary*

金管會推動了綠色金融行動方案，目標為凝聚金融業共識，提出及發展金融業共通需要的指引、資料，推動金融業瞭解自身及投融資部位的溫室氣體排放情形，促進金融業主動因應及掌握氣候相關風險與商機，持續推動金融業支持永續發展並導引企業減碳。

講師經歷 / *Speaker Experience*

歷任銀行科長、金融監督管理委員會專門委員、副處長。

講師姓名 / SPEAKER

蔡慧玲 / Philippa Tsai

財團法人台灣尤努斯基金會 董事長
President, Foundation for Yunus Social Business

講師姓名 / SPEAKER

王絹閔 / Juno Wan

財團法人台灣尤努斯基金會 執行長
CEO, Foundation for Yunus Social Business Taiwan

三零世界的新經濟解方(零淨碳排、零失業、零貧窮)
New Economic Solutions for a Triple Zero World (Zero Net Carbon Emissions / Zero Poverty / Zero Unemployment)

內容簡介 / *Speech Summary*

隨著全球對環境與社會挑戰的重視,零淨碳排、零失業、零貧窮這三大目標,成為新經濟體系的核心追求。首先,零淨碳排代表著企業和政府必須採取積極的氣候行動,透過技術創新、綠色能源轉型及可持續生產,達成碳中和,減少對環境的損害。

As global attention increasingly focuses on environmental and social challenges, the goals of zero carbon emissions, zero unemployment, and zero poverty have become core pursuits of the new economic system. First, zero carbon emissions signify that businesses and governments must take proactive climate actions, achieving carbon neutrality through technological innovation, green energy transitions, and sustainable production, thereby reducing environmental impact.

講師姓名 / SPEAKER

陳開憲 / Dr. K.H. Chen

興能能源股份有限公司 董事長
President, H.N. Energy

碳權經濟。是買空賣空，還是實際買賣
Smart future: Harboring innovation with digital technology

講師經歷 / *Speaker Experience*

第28屆聯合國氣候峰會(COP 28)藍區，台灣NGO 代表
鑫聯網國際認證公司董事長
眾量科技有限公司 董事長
興能能源股份有限公司 董事長
世界環境教科文基金會 秘書長

農業專業
2011 至今 全球反季節春節荔枝生產計畫主持人
2016 台灣經濟樹木育種者協會創會理事長
2017 台灣經濟部SIIR「台灣沉香智平台與慧行銷計畫」計畫主持人
2018 台灣經濟部SBIR「奇楠沉香之指紋圖譜庫建立以開發真偽辨識技術」計畫主持人

專業生涯Academic Careers
2019 至今 三本三生創新農業科技股份有限公司董事長，春節荔枝品種及栽培技術領航者、8公頃果樹種植
2009 至今 靚水堂生物科技股份有限公司董事長，蘭花皂及蘭花保養品創始者
2007-2009 美國馬里蘭TOP Orchids蘭花科技總經理，國際蘭花貿易
2002 至今 貞觀生醫科技股份有限公司董事長，食品安全檢驗實驗室查驗，邊境進口食品安全檢驗實驗室查驗
2006 至今 國立臺灣大學園藝系及園藝研究所副教授
研究講授科目：
- 茶研究、香藥草研究、植物快速繁殖
- 果樹反季節開花結果
- LED人工光照植物生長裝置
- 蘭花栽培及組織培養、楊樹快速繁殖

1988-1989 國立臺灣大學園藝系及園藝研究所副教授
研究講授科目：植物生理及植物生化，植物成分分析

1987-1988 美國約翰霍普金斯大學藥學系博士後研究員
研究科目：化學分析儀器

1984-1987 美國馬里蘭大學植物學研究所博士班
研究科目：植物荷爾蒙，植物生理，植物生化

專利
仿日照之全光譜生物生長發光裝置，美國專利字號8453376

TASS 2024 Forum

淨零轉型解決方案(七)
Net-Zero Forum (Session VII)

綠色供應鏈講座
Green Supply Chain Solutions

▶▶ 11/8 13:30-15:05 永續舞台 Sustainable Platform

時間 TIME	講題 TOPIC	講者 SPEAKER
13:30-13:35	開場致詞 Opening Address	主辦單位 Organizer
13:35-14:35	以低碳環保呼吸步道串聯城市循環物料與呼吸的距離 Construction of Sponge Pavement by Recycled Materials	國立臺北科技大學 陳映竹教授 Dr. Ying-Chu Chen, Professor, Department of Civil Engineering, NTUT
14:35-14:50	【創新永續】冷鏈智慧與低碳的創新應用 Innovated application in Smart Logistics and carbon reduction	台灣冷鏈協會 陳世璿 資深顧問 Gordon Chen, Senior Consultant, Taiwan Cold Chain Association
14:50-15:05	【創新加值】運用CCU技術 提供永續低探知解決方案 Providing Sustainable Low-carbon Solutions Through CCU Technology	冷研科技有限公司 張靖彗 行銷組長 C.H. Chang, Marketing Director, Dry Ice Technology

*主辦單位保有最終修改、變更及取消之權利。
The Organizer reserves the right to change or cancel the program.

講師姓名 / SPEAKER

陳映竹 / Dr. Ying-Chu Chen

國立臺北科技大學 教授

Professor, Department of Civil Engineering, NTUT

以低碳環保呼吸步道串聯城市循環物料與呼吸的距離
Construction of Sponge Pavement by Recycled Materials

內容簡介 / *Speech Summary*

臺北科大循環經濟檢測分析實驗室於2023~2024年間，以玻纖樹脂粉、污泥再生無機粒料室研發「低碳環保透水磚」與「透水砂漿」，並連結中台資源科技股份有限公司、協裕環保股份有限公司、十十設計顧問有限公司等各方好手，共同開發以循環經濟為宗旨之環保建材，除了以申請「資源再生綠色產品認證」為目標持續改良外，亦搭配低碳、環保工法，於桃園永續資源館外側打造透水步道示範案場，埋設環境監測儀器，收集數據佐證該產品對環境的友善性。

Professor Chen's Lab at Taipei University of Technology has developed recycled permeable bricks and mortar using waste glass fiber powders and inorganic sludge generated from industries with the goal of circular economy. In addition to apply for genernmental "Green Product Certification", we also incorporate low-carbon and environmentally friendly methods in demonstration site of the Taoyuan Sustainable Resources Center. Environmental monitoring of surface temperature, water quality, and growth of vegetations will be also conducted after operations for a long period to prove environmental compatibility of the product.

講師經歷 / *Speaker Experience*

陳映竹博士於2021年畢業於台大環工所後，旋即服務於行政院環境保護署從事環境監測與廢棄物再利用管理業務，萌發循環經濟研究之興趣。歸校教書近十年時間，除兼職經濟部再生能源躉購費率審定委員、環評委員、研發處二級主管等職位，更專注投入循環經濟之研究，遵循「廢棄資源循環」及「低成本高值化」之雙軌發展宗旨，發表近45篇期刊論文於國際視野。實驗室近10位成員，曾與中油、台積電、科學園區、私人企業、政府從事產學合作，2024年進一步提升實驗室等級通過TAF認證，提供顧客專業檢測服務，為國內廢棄資源循環產品可信賴之檢驗報告。

After Dr. Chen graduated from the National Taiwan University in 2021, she immediately served in the Environmental Protection Agency of the Executive Yuan, engaged in environmental monitoring and waste management, and then started an interest in circular economy. Dr. Chen has been teaching at universities nearly ten years, and being a member of the renewable energy committee, EIA committee, and chief of the R&D Department at NTUT. Dr. Chen devoted herself to the research of circular economy, following the principles of " recycling waste" and "low cost" to be "High Value" products. Nearly 45 journal articles have been published in an international perspective by the laboratory engaged in industry-university cooperations with China Petroleum Corporation, TSMC, science parks, private companies, and governments. In 2024, the laboratory level has been further upgraded to pass TAF certification, providing customers/industries with professional testing services, and providing reliable reports for recycling products.

高雄市政府經濟發展局

高雄市【淨零商轉服務平台】

參展攤位 S307

快速瞭解

平台首頁

減碳案例

減碳指引

聯絡方式

單一窗口 焦小姐

07-331-3152

淨零商轉服務

高雄市政府經濟發展局為協助轄內企業加速淨零轉型，成立淨零商轉服務平台，提供商轉媒合、淨零資源、企業輔導與減碳指引，透過整合政府單位碳管理資源，並提供相關諮詢服務，攜手產業因應淨零趨勢。

4大功能

商轉媒合

- 呈現多樣減碳成功案例，加速企業媒合
- 提供技術廠商刊登最新減碳案例
- 減碳技術涵蓋碳盤查、碳減量、碳中和等完整體系

淨零資源

- 彙整中央及地方各項政府資源
- 包含補助、輔導、貸款、基地進駐
- 降低企業碳管理成本

企業輔導

- 建立企業碳管理能力
- CBAM計算申報輔導、教育訓練與人才培育

減碳指引

CBAM作業手冊

產業碳管理作業手冊

❶提供產業碳管理風險評估

❷彙整國內外最新淨零趨勢

❸從0到1的碳盤查步驟教學

❹建立系統性的CBAM背景知識

❺最完整的CBAM計算指引

- 指導單位：高雄市政府
- 主辦單位：高雄市政府經濟發展局
- 合作單位：國家發展委員會
- 執行單位：鉅舵顧問有限公司

3 展商名單及介紹
Exhibitors Information

參展商名單 Exhibitors List

展商介紹 Exhibitor Information

機構與組織 Institutions	攤位編號 Booth No.
工研技術研究院 南分院 INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE	S302
中央氣象署 CENTRAL WEATHER ADMINISTRATION	S204
中鋼公司 CSC	S434
中華郵政股份有限公司 CHUNGHWA POST CO., LTD.	S417
內政部國土管理署 NATIONAL LAND MANAGEMENT AGENCY, MINISTRY OF THE INTERIOR	S220
內政部國家公園署 NATIONAL PARK SERVICE, MINISTRY OF THE INTERIOR	S220
日月光半導體製造股份有限公司 ADVANCED SEMICONDUCTOR ENGINEERING, LNC.	S224
台灣中油股份有限公司 CPC CORPORATION, TAIWAN	S352
台灣自來水公司 TAIWAN WATER CORPORATION	S344
台灣電力股份有限公司 TAIWAN POWER COMPANY	S348
台灣糖業股份有限公司 TAIWAN SUGAR CORPORATION	S342
交通部 MINISTRY OF TRANSPORTATION AND COMMUNICATIONS	S202
海廢再生聯盟 MARINE DEBRIS RECYCLING COALITION	S338
財團法人工業技術研究院 INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE	S334
財團法人中衛發展中心 CORPORATE SYNERGY DEVELOPMENT CENTER	S109
財團法人金屬工業研究發展中心 METAL INDUSTRIES RESEARCH & DEVELOPMENT CENTRE	S314
財團法人國家實驗研究院 NATIONAL APPLIED RESEARCH LABORATORIES, NARLABS	S214

機構與組織 Institutions	攤位編號 Booth No.
財團法人塑膠工業技術發展中心 PLASTICS INDUSTRY DEVELOPMENT CENTER	S109
高雄市政府 KAOHSIUNG CITY GOVERNMENT	S307
高雄市政府 KAOHSIUNG CITY GOVERNMENT	S208
高雄市政府農業局 AGRICULTURE BUREAU OF KAOHSIUNG CITY GOVERNMENT	S102
高雄市經貿發展協會 KAOHSIUNG COMMERCE & TRADE DEVELOPMENT ASSOCIATION	S115
國立高雄科技大學 NATIONAL KAOHSIUNG UNIVERSITY OF SCIENCE AND TECHNOLOGY	S313
國家科學及技術委員會 NATIONAL SCIENCE AND TECHNOLOGY COUNCIL	S214
國家發展委員會 NATIONAL DEVELOPMENT COUNCIL	S301
循環經濟推動辦公室 CIRCULAR ECONOMY PROMOTION OFFICE	S324
經濟部中小及新創企業署 THE SMALL AND MEDIUM ENTERPRISE AND STARTUP ADMINISTRATION, MINISTRY OF ECONOMIC AFFAIRS	S109
農業部 MINISTRY OF AGRICULTURE	S201
德州駐台辦事處 STATE OF TEXAS TAIWAN OFFICE	S452
環境部資源循環署 RESOURCE CIRCULATION ADMINISTRATION MINISTRY OF ENVIRONMENT	S308

資源循環 Resource Circulation	攤位編號 Booth No.
ARRG WASTE	S442
日益和股份有限公司 SUN SURFACE TECHNOLOGY CO., LTD.	S236
立發環保科技股份有限公司 LI FA ENVIRONMENT TECHNOLOGY CO., LTD.	S117
成信實業股份有限公司 TRANSCENE CORPORATION	S124
金聯成資源科技股份有限公司 JIN LIAN CHENG RESIORCES AND TECHNOLOGY CO., LTD.	S131
長宥工業股份有限公司 EVER SLOT INDUSTRY CO., LTD.	S136
財團法人紡織產業綜合研究所 TAIWAN TEXTILE RESEARCH INSTITUTE	S108
國際貿易股份有限公司 KUO CHI TRADING CO., LTD.	S124
崇越科技股份有限公司 TOPCO SCIENTIFIC CO., LTD.	S138
御光能源興業股份有限公司 YUKUANG ENERGY CO., LTD.	S116
華侖生技股份有限公司 VIOLON BIOTECH CO., LTD.	S120
新世紀環保服務股份有限公司 NEW CENTURY ENVIRONMENTAL PROTECTION SERVICE CO., LTD.	S135
鉅為有限公司 JU WEI TECHNOLOGY LTD.	S113
碳循環應材股份有限公司 CARBON RECYCLING MATERIALS CO., LTD. (CRAM)	S207
德莎膠帶 TESA TAPE	S235

永續城市 Sustainable City	攤位編號 Booth No.
TAKE 5 PEOPLE LIMITED	S440
NIPPO BUSINESS CO., LTD.	S143
台灣智慧淨零建築產業聯盟 TAIWAN INTELLIGENT ZERO CARBON BUILDING ALLIANCE	S240
台灣節能膜科技股份有限公司 TAIWAN ENERGY SAVING FILM COMPANY	S139
在一起永續科技股份有限公司 JOIN IT SUSTAINABLE TECH. CO., LTD.	S240
好友電智慧科技股份有限公司 SONICE AIOE CORPORATION	S145
原點社會企業(奉茶行動) CIRCUPLUS LTD.	S149
財團法人中衛發展中心 SBIR	S148
財團法人台灣尤努斯基金會 FOUNDATION FOR YUNUS SOCIAL BUSINESS TAIWAN	S154
新加坡商旭潤有限公司 SINGAPORE XU RUN HOLDINGS PTE LTD	S105
新宏興營造股份有限公司 SIN HONG SING CONSTRUCTION CO., LTD.	S142
聖育科技股份有限公司 INFORCOM TECHNOLOGY INC.	S240
誠宇國際股份有限公司 CHENG YU INTERNATIONAL CO., LTD.	S151
資拓宏宇國際股份有限公司 INTERNATIONAL INTEGRATED SYSTEMS, INC. (iisi)	S240
緯詠智能股份有限公司	S249
樺康智雲股份有限公司 ENNOWELL CO., LTD.	S240
盧森堡商保沃思國際股份有限公司 PAUL WURTH INTERNATIONAL S.A.	S150

能源 Energy	攤位編號 Booth No.
NOVOMET FZE	S252
ORCAN ENERGY AG	S252
三地能源 SANTI RENEWABLE ENERGY CO., LTD.	S347
元融科技有限公司 YUAN-RONG TECHNOLOGY CO., LTD.	S215
加雲聯網股份有限公司 INTELLIGENT CLOUD PLUS CO., LTD.	S248
亞氫動力股份有限公司 ASIA HYDROGEN ENERGY CORP.	S247
品洲科技有限公司 TRIPLEX ENGINEERING TECHNOLOGY CO., LTD.	S250
橙然能源股份有限公司 MOBIUS RENEWABLE ENERGY CO., LTD.	S114

智慧製造 Smart Manufacturing	攤位編號 Booth No.
世倉國際股份有限公司 WAP INTERNATIONAL CO., LTD.	S454
台灣耶拿儀器有限公司 ANALYTIK JENA TAIWAN CO., LTD.	S446

工業技術研究院
Industrial Technology Research Institute

工業技術研究院
Industrial Technology Research Institute (ITRI)

機構與組織
Institutions

攤位編號 Booth No. | S302

感測系統中心
氫能健康安全監測解決方案


氫能健康安全監測平台


氫氣洩漏感知


低濃度氫氣感測


設備預知保養

以三階段複合智慧感測技術，對製程管線到設備進行監控與運維提醒。首先透過馬達/泵浦效能狀態監控模組進行健康監測，在其異常前即時發出示警，維持動力系統健康運作效能；此外，透過超音波洩漏感測模組實時監測管路關鍵接點，避免因洩漏造成異常與危險；最後透過高靈敏氣體感測器，在危險濃度發生前提前發出警示。整合複合智慧感測技術，可即時偵測設備與管路異常，避免多餘能耗、製程損失以及提升安全性。

綠能所/C100
碳酸化固碳暨鈣資源循環

間接碳酸化結合超重力加速碳酸化設計，使操控系統具備高離子選擇性、高純度產物、可控式晶相調整、低成本及適用性廣。人機介面調控系統參數與自動化程序，商業化量產高品質球霰石輕質碳酸鈣微粒、晶相控制與產物品質監測。

量測中心
影像式氣體洩漏偵測解決方案

通常始於微小洩漏點，如能即時防堵，可避免逐漸擴大造成災情，本技術解決傳統洩漏偵測方法不適用於微小洩漏與無法精準定位洩漏點之問題，除了可減少原物料洩漏的額外成本與碳排，亦提升危險性氣體（如氫氣、石化氣體）應用場域安全。

連結網址｜https://www.itri.org.tw/

中央氣象署
Central Weather Administration

機構與組織
Institutions

攤位編號 Booth No. | S204

#中央氣象署 #氣候變遷 #長期氣候統計
#Central Weather Administration #Climate Change #Long-term Climate Statistics

中央氣象署以布建更完整氣象觀測、發展更準確氣象預報、開創更全面氣象服務為願景，並透由提升包括海氣象觀測覆蔽率、災害性預警客製服務普及率、定量降雨預報準確率，及氣象測報能力與整體服務效能等具體關鍵行動方案，達到強化氣象觀測與預報技術發展、建置預報作業輔助系統、加速地震測報效能、拓展氣象服務面向、推廣氣象防災教育宣導，以及支援防災減災業務並促進經濟發展的目標，為健康智慧臺灣提供優質氣象資訊。
因應氣候變遷提出調適政策，是全球政府努力的目標。本署運用先進的氣候模式和大數據著重在短期氣候預報，期能透過增進對極端天氣事件發生頻率與強度的預測，減少公眾損失。本署亦積極與國內外相關及跨領域之機構合作，強化氣候變遷研究，並推動公眾氣候教育，提高民眾對氣候變遷風險的認識，從而促進全社會的應對能力。

The Central Weather Administration's (CWA's) mission is to make thorough meteorological observations, refine meteorological forecasts, and create diversified meteorological services, by increasing both land and sea observation coverage, making customized disaster warning services more widespread, and improving QPF ability, forecast capability and service efficiency, so as to provide quality meteorological services and better fulfill its role in disaster prevention and mitigation and economic development promotion.
The implementation of adaptation policies in response to climate change is a key goal for governments worldwide. CWA utilizes advanced climate models and big data to analyze long-term trends in climate change, aiming to predict the frequency and intensity of extreme weather events, thereby reducing public losses. We also actively collaborate with domestic and international institutions in various fields to enhance climate change research, and promote popular science education to raise awareness of climate change risks and improve the adaptive capacity of society as a whole.

連結網址｜https://www.cwa.gov.tw/V8/C/

中鋼公司

中鋼公司
CSC

機構與組織
Institutions

攤位編號 Booth No. | S434

#中鋼公司 #電磁鋼捲 #鋼板

中鋼公司之鋼板產品主要用途為建築結構、造船、橋樑、油氣管路、機械構造、壓力容器及耐候耐蝕用鋼板。

CSC's plates are used in manufacturing construction structures, shipbuilding, bridges, line pipes, machine structures, pressure vessels, and plate products with atmospheric-resistance.

中鋼公司之電磁鋼捲產品主要用途為電動載具、解碼器、壓縮機、小家電、電動工具機、發電機、變壓器、日光燈安定器及工業馬達。

CSC's electrical steel coils are used in electric vehicles, decoders, compressors, household appliances, electric machine tools, transformers, fluorescent ballasts, industrial motors.

連結網址｜https://www.csc.com.tw/

內政部國土管理署
NATIONAL LAND MANAGEMENT AGENCY, MINISTRY OF THE INTERIOR

機構與組織
Institutions

攤位編號 Booth No. | S220

內政部國土管理署因應極端氣候衝擊積極推動16件再生水案，以增加國內水資源調度彈性，生活污水經處理後，產生再生水可供應工業區及高科技產業使用，同時也推動多元再利用，包含放流水農業灌溉、公共景觀澆灌、抑制路面揚塵等，以利供水穩定。

In response to the impacts of extreme climate change, the National Land Management Agency, Ministry of the Interior has been actively promoting 16 reclaimed water projects to increase flexibility in the allocation of domestic water resources. After being treated, domestic wastewater is transformed into reclaimed water, which can be supplied to industrial park,high-tech company. Additionally,NLMA is advancing the diverse reuse of reclaimed water, including for agricultural irrigation, public landscape watering, and suppressing road dust, all contributing to stable water supply.

下水道因應我國「臺灣2050淨零排放路徑藍圖」及國家永續發展目標，推動生命周期減碳與能資源循環，其中下水污泥再利用朝向材料化、肥料化及能源化的方向執行，厭氧消化槽研擬沼氣回收發電，提高再生能源比例，促進永續發展。

In response to Taiwan's "2050 Net-Zero Emissions Roadmap" and national sustainable development goals, the sewer system is promoting lifecycle carbon reduction and energy-resource recycling. Sewage sludge reuse is being carried out with a focus on materialization, fertilization, and energy generation. Anaerobic digesters are being planned for biogas recovery and power generation, aiming to increase the proportion of renewable energy and promote sustainable development.

連結網址｜https://www.nlma.gov.tw

內政部國家公園署
National Park Service, Ministry of the Interior

機構與組織
Institutions

攤位編號 Booth No. S220

展示國家公園淨零碳匯及生物多樣性相關成果

內政部國家公園署成立後，整合治理國家(自然)公園、重要濕地與海岸地區，串聯自高山、淺山至濕地、海岸、海洋的保育軸線，保育面積超過221萬公頃，陸海域保育面積占全國陸海域國土比例達25.4%，為國家生物多樣性保育核心及國家自然碳匯重要儲存及吸存的關鍵場域。

Following the establishment of the National Park Service, Ministry of the Interior manages national parks, wetlands and coastal areas, linking high mountains, low hills, wetlands, coasts, and oceans. The conservation area exceeded 2.21 million hectares, integrating protected land and sea areas accounting for 25.4% of the nation's total land and marine territory. Taiwan plays a crucial role in the core of national biodiversity conservation and serves as an essential reservoir and absorber of natural carbon sinks.

攝影者-廖東坤

▲ 玉山主東峰

▲ 墾丁鵝鑾鼻岬角

▲ 台江國家公園

連結網址｜https://www.nps.gov.tw/ch

Gtr GREEN TECHNOLOGY RESEARCH INSTITUTE 台灣中油 綠能科技研究所

機構與組織 Institutions

攤位編號 Booth No. | S352

台灣中油股份有限公司綠能科技研究所

Green Technology Research Institute, CPC Corporation, Taiwan

#台灣中油 #產品碳足跡查驗服務 #海牡丹Seony

因應政府2050年淨零碳排政策，企業戮力進行碳盤查引發國內查證量能供不應求問題，本公司以成立TAF認證溫室氣體及產品碳足跡查驗機構為目標，依據環境部法規及TAF之相關規範建構自有技術，藉此服務國內企業及公司內部單位，提供優質的第三方查驗服務。

In order to meet the net-zero target, CPC Corporation offers verification services for company level-Greenhouse Gas Emissions (ISO 14064-1) and product level- Product Carbon Footprint (ISO 14067) based on related ISO standards, Taiwan Accreditation Foundation (TAF)'s guidance and the regulations announced by Ministry of Environment. We have always been committed to providing high-quality and first-in-class services for our customers.

台灣中油公司綠能科技研究所利用LNG冷海水培育的紅藻「海木耳」，利用綠色萃取技術，成功提取專利成分「海木耳精粹」，獲得中華民國(I796204)和日本專利 (JP2023-158612)，並在2023台灣創新技術博覽會上獲得金牌殊榮。本技術完全無廢棄物，資源利用最大化，符合循環經濟的理念，為美妝產業提供高品質的海洋永續原料。成立本公司亦建立「海牡丹」品牌，並開發系列產品，其中的海牡丹洗沐產品更獲得國家環保標章認證。這些產品以永續、綻放、活力為品牌訴求，不僅符合環境保護政策，更融入了循環經濟的理念，展現了對環境永續性的承諾和責任。

CPC Corporation,Taiwan Green Technology Research Institute, cultivates red algae "Sarcodia Suiae" using LNG cold seawater. Through green extraction technology, successful extracted patented "Sarcodia Extrct," obtaining patents in Taiwan (I796204) and Japan (JP2023-158612). We also won the gold medal at the 2023 Taiwan Innovative Technology Expo. This technology produces zero waste, maximizing resource utilization, aligning with circular economy principles, providing high-quality sustainable marine ingredients for the cosmetics industry. We've established the "海牡丹Seony" brand, developing a range of products including Seony bath products certified with the national Eco-label. With a focus on sustainability, vibrancy, and vitality, these products adhere to environmental policies, embodying commitment to sustainable practices.

連結網址｜https://www.cpc.com.tw/

台灣中油 煉製研究所 Refining & Manufacturing Research Institute

機構與組織 Institutions

攤位編號 Booth No. S352

台灣中油公司煉製研究所

Refining & Manufacturing Research Institute(RMRI), CPC Corporation, Taiwan

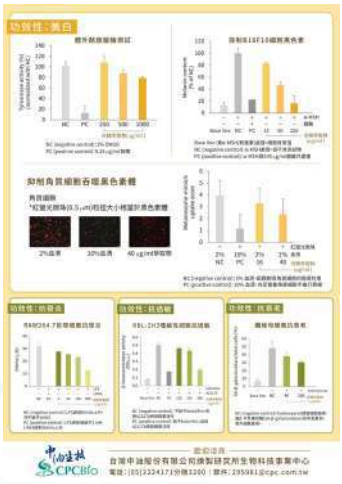
#水性環氧樹脂乳化劑 #米糠萃取物 #N-乙醯葡萄糖胺

回收PET進行化學反應得到具親水性的分子鏈，設計出高品質的水性環氧樹脂，強化國內環氧樹脂的技術能量。此外，因回收係以PET作為原料，屬於塑料永續利用的綠色製程，所產出之產品會具有碳足跡之優勢，未來如面臨到碳關稅課徵的局面，此產品相對具有協助企業達成減碳績效的吸引力。

Recycle PET for chemical reactions to obtain hydrophilic molecular chains, and design high-quality water-based epoxy resins. In addition, because it uses PET as raw material, it is a green process of sustainable plastic utilization. The products produced will have the advantage of carbon footprint. If carbon tariffs are levied in the future, this product is relatively attractive in helping companies achieve carbon reduction performance.

萃取自有機米糠開發出米白素(MïBlancSol)原料。經人體試驗證實，可淡化細紋、使肌膚飽滿豐潤。
N-乙醯葡萄糖胺(NAG)是合成玻尿酸的前驅物，中油開發以微生物轉化法將蝦蟹殼廢棄物轉化為NAG原料，是肌膚保濕的最佳聖品。

The raw material of MïBlancSol is developed from organic rice bran. It has been proven by human experiments that it can reduce the appearance of fine lines and make skin plump.N-acetylglucosamine (NAG) is the precursor for the synthesis of hyaluronic acid. We developed a microbial conversion method to convert shrimp and crab shell waste into NAG raw materials, which is the best product for skin moisturizing.



連結網址｜https://www.cpc.com.tw/

台灣糖業股份有限公司
Taiwan Sugar Corporation

台灣糖業股份有限公司
Taiwan Sugar Corporation

機構與組織
Institutions

攤位編號 Booth No. | S342

#台糖 #詩夢絲蘭花純粹超導精華液 #詩丹雅蘭精萃胎盤素

全蔗利用
Full Utilization of Sugarcane

台糖製糖所產生之甘蔗纖維具中空纖維孔洞，吸油能力為天然多孔性粉體的7倍，與人造多孔性粉體相當，具有親油、易聚集且不易黏附特性，於吸附油脂後不會黏附在物品上。此材料具備吸油、粉末低殘留與去味效果，可應用於人體、寵物和環境的洗沐清潔用品。

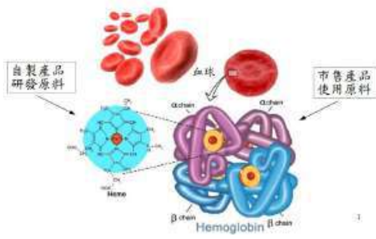
材料 Materials	材料特性 Material property	油脂吸附力（吸附油脂重量倍數） Sebum adsorption ability (oil absorption ratio)
TSC 植物粉末 TSC powder	天然多孔性粉末 Natural porous powder	>3 fold
甲基丙烯酸烯丙酯交聯聚合物 Allyl methacrylates crosspolymer	人造多孔性粉末 Artificial porous powder	2-3 fold[1]
高嶺土 Kaolin	天然多孔性粉末 Natural porous powder	0.4 fold

[1] [illegible]

項目 Item	TSC 粉末 TSC powder	高嶺土 Kolin	活性碳 Charcoal powder	澱粉 Starch
吸油速度(5秒)				
	快速吸附	仍見油滴（紅色箭頭為油滴處）		
粉末殘留率(%)	9%	76.4%	87.5%	>100%
	易被去除	部分去除	部分去除	全黏附

Taiwan Sugar Corporation utilizes sugarcane fibers, a byproduct of sugar production, for their unique properties. These fibers, with their hollow structure, exhibit seven times the oil absorption capacity of natural porous powders, rivaling that of synthetic alternatives. Their lipophilic nature, ease of aggregation, and non-stick properties prevent adherence to surfaces after oil absorption. These characteristics make them ideal for use in personal care, pet care, and household cleaning products, offering effective oil absorption, minimal residue, and odor removal.

全豬利用
Whole Pig Utilization



豬血血紅素鐵補鐵膠囊：利用酵素水解豬血提取血紅素鐵，其鐵含量比市售產品使用血紅蛋白(hemo-globin)為原料者高出8~16倍。綠色、天然、高含鐵量為本產品主要特色。

胎盤素：源自台糖安心豚之「胎盤素萃取液」，已取得INCI NAME原料登錄證明與通過安全性試驗。經學研單位實驗證實具有美白、淡化皺紋、防止肌膚老化等功效。

膠原蛋白：源自台糖安心豚之「膠原蛋白萃取液」，已取得INCI NAME原料登錄證明與通過安全性試驗。經學研單位實驗證實具有舒緩、美白、抗老、防護等功效，有助皮膚健康維持。

Pig Blood Hemoglobin Iron Supplement Capsules: Utilizing enzyme hydrolysis of pig blood to extract hemoglobin iron, this product contains 8 to 16 times more iron than commercially available products using hemoglobin as a raw material. This product is characterized by its green, natural sourcing and high iron content.
Placenta Extract: Sourced from Taiwan Sugar Corporation's "Safety Pork" placenta, this extract has obtained INCI NAME registration and passed safety tests. Research has confirmed its efficacy in whitening, reducing wrinkles, and preventing skin aging.
Collagen Extract: Derived from Taiwan Sugar Corporation's "Safety Pork" collagen, this extract has obtained INCI NAME registration and passed safety tests. Research has confirmed its soothing, whitening, anti-aging, and protective properties, contributing to maintaining healthy skin.

連結網址｜https://www.taisugar.com.tw/

交通部
Ministry of Transportation and Communications, R.O.C.

機構與組織
Institutions

交通部
Ministry of Transportation and Communications, R.O.C.

攤位編號 Booth No. | S202

#交通部 #關鍵戰略七「運具電動化及無碳化」 #運具電動化

「運具電動化及無碳化」是由交通部主政，經濟部、環境部、內政部等9部會共同規劃與推動，以「提高電動運具數量」、「完善使用環境配套」與「產業技術升級轉型」等3大策略目標，開展10項推動路徑，向下推動57項行動措施計畫，打造國內友善電動運具使用環境，促進電動運具普及與無碳化車輛的發展。優先聚焦技術成熟的市區公車、電動小客車及電動機車發展推廣，並以公共運輸先行及政府帶頭示範，推動2030年市區公車及公務車全面電動化；針對私人運具的小客車及機車，透過補貼獎勵讓電動運具價格合理化，同時建構完善且方便使用環境，並落實公正轉型，提出2040年電動小客車及電動機車新車市售比100%目標。

Electric and carbon-free vehicles are overseen by the Ministry of Transportation and Communications, with planning and promotion conducted jointly by the Ministry of Economic Affairs, the Ministry of Environment, the Ministry of the Interior, and five other ministries. The initiative aims to achieve three major strategic objectives: Increase Adoption of EVs, Complete EV Environment, and Industrial Technology Upgrading and Transition, carrying out 10 pathways of 57 action plans to create a domestic environment that is friendly to electric vehicles and to promote the widespread adoption and development of decarbonized vehicles. The focus is primarily on advancing and promoting electric city buses, electric passenger cars, and electric motorcycles with public transportation leading the way and the government setting an example. The objective is to achieve full electrification of city buses and government cars by 2030. For private vehicles, subsidies and incentives will be provided to make electric vehicles more affordable, while also building a comprehensive and user-friendly infrastructure. Aiming for a just transition, the target is set for both new electric passenger vehicles and new electric motorcycles to achieve a 100% market share by 2040.

交通部主政關鍵戰略七「運具電動化及無碳化」，以透過提高電動運具、充電設施數量及相關法規、稅費配套之優化調適，另推動運具相關產業技術及技術人員的知識學能升級轉型，強化汰換為電動車之誘因及降低轉換門檻。
迄今電動大客車普及率已達36.8%、電動小客車市售比達8.8%、公共充電樁累計設置達9,764槍，皆可達成2024年度目標，將持續推動電動機車、公務車電動化，並視國內外電動運具發展情形，滾動精進政策及配套機制。

The Ministry of Transportation and Communications oversees the 7th key strategic plan: Electric and Carbon-Free Vehicles. This strategy aims to increase the adoption of EVs and charging facilities and stations, optimize related regulations, tax incentives, and advance the technological skills and knowledge of the industry and its professionals. The objective is to enhance incentives for replacing vehicles with electric ones and to reduce barriers to transition. To date, the adoption rate of electric city buses has reached 36.8%, and 8.8% for electric passenger cars; the total number of public charging stations has reached 9,764 piles. All these indicators are expected to meet the 2024 targets. The Ministry of Transportation and Communications will continue to promote the electric motorcycles and government vehicles to be fully electrified. Additionally, based on the development of electric vehicles both domestically and internationally, policies and supporting mechanisms will be improved.

連結網址｜https://www.motc.gov.tw

海洋委員會海洋保育署
OCEAN CONSERVATION ADMINISTRATION,
OCEAN AFFAIRS COUNCIL

機構與組織
Institutions

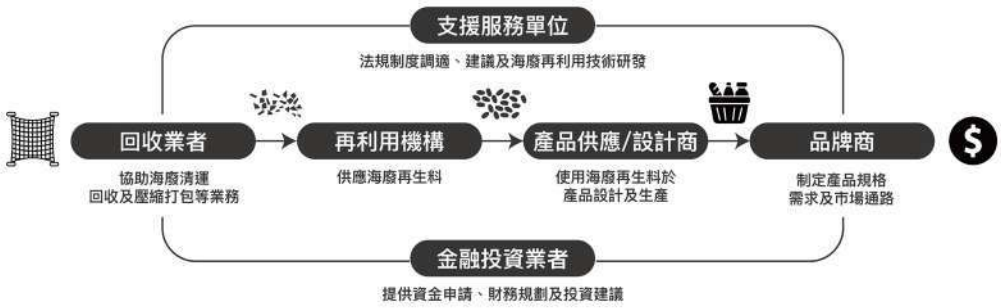
攤位編號 Booth No. | S338

海洋委員會海洋保育署
OCEAN CONSERVATION ADMINISTRATION, OCEAN AFFAIRS COUNCIL

#海洋委員會海洋保育署 #海廢再生聯盟 #永續海洋資源
#OCA #Marine Debris Recycling Coalition #Sustainable Marine Resources

海洋委員會海洋保育署秉持「客觀且持續性的科學基礎」、「資訊公開」、「與公私部門合作」三項基本原則，檢視臺灣海洋環境與生物的變化，利用科技與群眾參與，建立海洋保育與國人的連結。
以CHS「潔淨海水(Clean Water)」、「健康棲地(Healthy Habitat)」、「永續資源(Sustainable Resource)」為目標，進行海洋污染防治、海洋廢棄物清除與回收再利用、保護海洋生物重要棲地、推動白海豚等海洋生物保育計畫、增加海洋保護區面積、保護珊瑚礁等生態系、以及復育海草床等藍碳場域。希望為臺灣的下一代留下潔淨海水及永續資源，以達人與自然和諧共生的願景。

The Ocean Conservation Administration (OCA) of Taiwan is dedicated to safeguarding the marine environment through science-based monitoring, transparency, and public-private collaboration. Focusing on the CHS goals—Clean Water, Healthy Habitat, and Sustainable Resources—the OCA implements key initiatives like marine pollution prevention, waste recycling, and the protection of critical habitats, including coral reefs and seagrass beds. Conservation efforts also extend to species like the white dolphin and the expansion of marine protected areas. By leveraging technology and public engagement, the OCA aims to ensure clean waters and sustainable resources for future generations, promoting a vision of harmonious coexistence between humans and nature.



海保署透過「海洋廢棄物回收再利用資訊交流平台」，展示臺灣各地在海洋廢棄物回收再利用方面的卓越成效。平台運用多媒體技術，詳實呈現了各縣市海廢回收的分布情況、數據圖表，以及不同地區的政策與實踐。讓民眾可以更直觀了解全國各地如何有效管理和處理海洋廢棄物，見證地方政府與民間積極參與廢棄物回收行動的意願，共同實現永續海洋資源。

The Ocean Conservation Administration (OCA) presents Taiwan's achievements in marine waste recycling through the "Marine Waste Recycling and Reuse Information Exchange Platform." This platform leverages multimedia technology to illustrate the distribution, data, and practices of marine waste recycling across various regions. It provides a clear overview of local policies and implementations, enabling the public to understand how different areas manage marine waste effectively. The platform also highlights the proactive efforts of local governments and communities in recycling initiatives, demonstrating a collective commitment to achieving sustainable marine resources.

連結網址｜https://www.oca.gov.tw

工業技術研究院
Industrial Technology Research Institute

財團法人工業技術研究院
Industrial Technology Research Institute

機構與組織
Institutions

攤位編號 Booth No. | S334

#電池分選

電池回收產業正在轉型，因能源議題、電池法強化再生料的使用、碳排計算及礦源的風險等因素，從使用者行為、產品型態到複雜共構的生態系統，逐步推動我國鋰電池循環產業資源化技術之提升以及再生料使用率，持續整合國內相關資訊與資源，有利於提升我國鋰電池循環產業鏈完整性。

The battery recycling industry is undergoing transformation. Due to factors such as energy issues, the use of recycled materials strengthened by the Battery Law, carbon emission calculations and risks of mining sources, from user behavior, product types to complex co-constructed ecosystems, China's lithium battery recycling is gradually promoted The improvement of industrial resource technology and the utilization rate of recycled materials, as well as the continuous integration of relevant domestic information and resources, will help improve the integrity of China's lithium battery recycling industry chain.

結合AOI的分類設備進行廢電池分選技術開發，透過擷取辨認廢電池外觀特徵，並建立資料庫獲知其電池材料基因資訊，以AOI判斷該電池之回收分類屬性，再透過氣流操縱方式控制電池進入分類蒐集箱，降低人力成本與提高分選效率。

Combined with AOI's classification equipment to develop waste battery sorting technology, capture and identify the appearance characteristics of waste batteries, and establish a database to obtain the genetic information of battery materials, use AOI to determine the recycling classification attributes of the battery, and then use air flow control methods Control batteries to enter the classification collection box to reduce labor costs and improve sorting efficiency.

連結網址｜https://www.itri.org.tw/

金屬工業研究發展中心
METAL INDUSTRIES RESEARCH & DEVELOPMENT CENTRE

機構與組織
Institutions

財團法人金屬工業研究發展中心
Metal Industries Research & Development Centre

攤位編號 Booth No. | S314

#金屬中心 #MIRDC #循環金屬

高適應性3D曲面摩擦攪拌銲接技術
Highly Applicable 3D Curved Surface Friction Stir Welding Technology

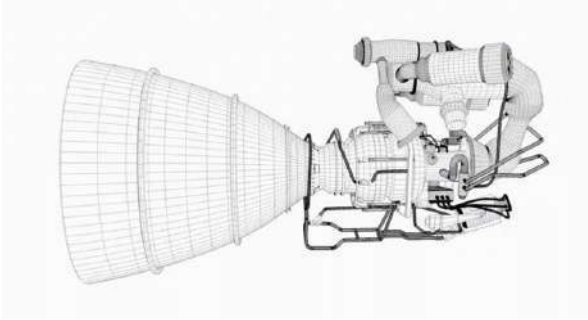
3D曲面摩擦攪拌銲接技術是世界首發結合再生鋁材應用，能快速對應5G訊號及低軌衛星訊號量測裝置結構之接合製造，並大幅提升3D金屬製品之機械性質以及工件的精度，實現高效、高強度且降低成本之接合優勢。

3D curved surface friction stir welding integrates recycled aluminum applications and is well suitable to the production of joining for signal measurement devices for 5G networks and low-orbit satellites. It enhances the mechanical properties and precision of work pieces, and has the advantages of high efficiency and strength and low cost.

▶ 影片介紹：https://www.youtube.com/watch?v=pE4cSZPPe8E

微型複雜管內鍍膜系統技術
Micro Complex Internal Pipe Coating System Technology

首創唯一針對內徑細僅4毫米之微細長特徵、彎曲管路等3D複雜幾何形狀的管件內壁，形成高均勻性、完整而緻密的奈米鍍膜，突破在鋒利的邊角以及高深寬比的流路，也能做到精準且均勻的厚度控制，並提升金屬管路內壁元件抗腐蝕之特性，例如可應用在與高反應性燃料有高相容性及高耐蝕同時需求的衛星推進系統燃料管路內壁。



The world's first coating system for long, thin, and curved pipes with inner diameters of 4mm, providing highly uniform and precise nano-coatings, even on sharp edges and high depth-to-width ratios. This enhances the corrosion resistance of the inner walls of pipes and can be used in high-reactivity applications such as satellite fuel systems.

▶ 影片介紹：https://www.youtube.com/watch?v=RU0VRNK8-d8

連結網址｜www.mirdc.org.tw

經濟部中小及新創企業署
SMALL AND MEDIUM ENTERPRISE AND STARTUP ADMINISTRATION
MINISTRY OF ECONOMIC AFFAIRS

中小企業減碳服務站
Carbon as a Service

機構與組織
Institutions

攤位編號 Booth No. | S109

#中小企業 #低碳 #智慧

經濟部中小及新創企業署透過「淨零排放觀念推廣」、「諮詢診斷服務」、「碳盤查深度輔導」及「升級轉型補助」，從知能建立、碳排估算、盤查與減碳輔導、設備補助等面向，協助中小企業即早因應國際淨零趨勢。

連結網址｜https://www.sme.gov.tw/caas/masterpage-caas ｜ https://www.uat.org.tw/

高雄市政府
Kaohsiung City Government

高雄市政府
Kaohsiung City Government

機構與組織
Institutions

攤位編號 Booth No. | S307

#高雄市政府 #產業淨零 #CBAM

面對淨零相關法令及限制措施將衝擊高碳排產業之營運，高雄市政府經發局透過實際進入企業內部了解需求，為企業提供碳盤查及CBAM輔導與交流。至今已成功輔導超過30家以上的企業。此外更編制全國第一本碳管理手冊與CBAM手冊：

(1) 碳管理作業手冊：闡明碳盤查基本流程以及彙整我國相關協處資源，以協助企業進行自身定位與風險評估，及早因應全球淨零轉型浪潮。

(2) CBAM手冊：完整解析CBAM制度，同時輔以範例說明原料商、製造商和貿易商所適用的計算與申報方式，並彙整相關輔助資源。

為協助企業因應國內外淨零碳排趨勢，降低資訊不對稱對產業淨零轉型推動之影響，同時推動產業淨零公正轉型，高雄市經發局建置「淨零商轉服務平台」，邀請精誠資訊、研華科技等優良技術廠商提供碳盤查、碳減量、碳中和服務案例，期望藉由案例的呈現，提高本市產業對淨零減碳作業的認知，協助產業因應淨零衝擊。網站進一步也整合碳管理概念，提供經發局編纂碳管理、CBAM手冊，並彙整政府單位各項補助、輔導、貸款與基地等淨零相關資源。

連結網址｜https://www.kcg.gov.tw/Default.aspx

高雄市政府
Kaohsiung City Government

高雄市政府
Kaohsiung City Government

機構與組織
Institutions

攤位編號 Booth No. | S208

#淨零學院 #淨零產業大聯盟 #資源循環零廢棄

「高雄循環DNA：探索城市永續基因」：高雄市政府環境保護局積極推動資源循環，透過完善的回收機制、創新的循環經濟模式，以及多元的教育宣導與鼓勵市民積極參與，共同打造一個綠色、永續的高雄，逐步邁向永續發展的目標。

「淨零排放關鍵調查局」互動體感遊戲：高雄市是臺灣第一大工業城，究竟是透過哪些「關鍵政策」來達到淨零碳排的目標呢？
邀請民眾一起化身高雄熊調查員辨識並搜集高雄市的「淨零關鍵政策」，看高雄如何實現淨零城市！闖關成功並完成活動步驟，就有機會獲得限量好禮喔～

連結網址｜https://www.kcg.gov.tw/

石安牧場 SHIH AN FARM

高雄市政府農業局

機構與組織
Institutions

攤位編號 Booth No. S102

上品王食品股份有限公司－石安牧場
SHIH AN FARM CO., LTD.

#石安牧場 #永續牧場 #淨零排放

響應COP 28 石安牧場推動甲烷淨零排放

石安牧場積極響應COP 28，致力於實現甲烷近零排放，展現出其對環境保護的承諾。
石安牧場遵循歐盟保護蛋雞法規，實施福利籠養產，每日處理大量雞糞與洗選場廢水，雞糞不僅散發阿摩尼亞臭味，吸引病媒，不利環境衛，且會污染土壤及水源，更重要的是，雞糞釋放的甲烷是溫室效應的主要元兇之一。聯合國政府氣候變遷專門委員會(IPCC) 2021年的報告指出，甲烷含量現已達到80萬年來最高，遠超過安全限值。農業、石油和天然氣等作業釋放的甲烷在20年間對全球暖化的影響是二氧化碳的84倍，貢獻近1/4的全球暖化。因此，甲烷排放的控制至關重要。

台灣第一張由鮮蛋牧場售出的再生能源憑證與RE60達成

石安牧場不僅於動物福利是熟為人知的先驅，為使產業與環境兼能永續，投入3.5億的再生綠能廠，在2014年開始運轉，每年將牧場最大的污染排放源百分之百回收，透過引進自歐洲的沼氣厭氧發酵技術轉化為電力與有機肥料，2023年所生產的綠電達311萬度，2023年石安牧場再生能源的使用率為62.8%，達成RE60，為台灣鮮蛋產業的永續之路又跨出一大步·
石安牧場透過零污染、零排放、零棄置的循環經濟落實，減碳只是第一步，石安牧場更期許成為RE100牧場，為企業發展的環境永續找到最佳方程式。

連結網址｜https://www.shihanfarm.com.tw/

翰品酒店 高雄
CHATEAU DE CHINE KAOHSIUNG

翰品酒店高雄
CHATEAU DE CHINE HOTEL KAOHSIUNG

高雄市政府農業局

機構與組織
Institutions

攤位編號 Booth No. | S102

#翰品酒店高雄 #旅宿餐飲 #永續

翰品酒店高雄積極推動環境保護工作，秉持「友善環境、永續經營」之政策，規劃各項環境友善措施，且致力於落實集團「Go Green」之目標，善盡企業社會責任，攜手同仁及客人共同落實環境保護，以行動支持環保愛地球，為地球盡一份心力。

近幾年，環保、友善環境的潮流襲捲全球，翰品酒店高雄也跟上這股永續潮流，推出「永續春酒尾牙菜單」，從食材來源、環境足跡等面向標舉永續議題，讓消費者享用佳餚的同時，也能為地球盡一份心力。像是選擇「當季」食材，選取台灣「本土」產製的食物等。

連結網址｜https://kaohsiung.chateaudechine.com/

高雄亞洲新灣區
碳中和暨永續發展平台

機構與組織
Institutions

攤位編號 Booth No. | S115

高雄市經貿發展協會--
高雄亞洲新灣區碳中和暨永續發展平台

Kaohsiung Commerce &Trade Development Associatuon

#高雄亞洲新灣區碳中和暨永續發展平台 #高雄市經貿發展協會 #威廉網科技有限公司

高雄亞洲新灣區碳中和暨永續發展平台是高雄市經貿發展協會許立經副會長捐贈經費開發設立，委由威廉網科技公司設計，動機是為推動聯合國COP所推動的SDGs18項永續發展目標，於2022年啟動的項目。該項目目前的首要工作是以種樹減碳為第一階段工作，已達成7處土地的種樹工作，完成種樹768棵，8年生之樹木。2024年底前將再完成160棵3年生之樹木種植工作。以上種植樹木的投資者為本協會的成員，包括中石化公司、國泰化工廠公司、台塑公司、台肥公司、年代科技公司、台糖公司、台灣中油公司及高科大天使投資基金股份有限公司。種樹減碳項目將於2025年至2027年三年為第二階段，將再投入種樹5,000棵, 以增加減碳的目標達成。

高雄亞洲新灣區碳中和暨永續發展平台的第二項工作目標是ESG的推廣工作，透過對企業的ESG輔導與認證，以及教育執行，以達到全國的企業能夠落實ESG的理念，為經濟發展、社會進步奠定基礎。本會許立經副會長捐贈經費支持高雄市警察局鼓山分局辦理ESG認證與輔導工作，由薪傳公司協助相關ESG輔導認證，獲得中華民國第一間警察分局完成ESG認證單位，並獲得內政補頒發獎狀以資嘉獎。希望除了私人企業進行ESG的認證與改善工作，也希望政府與民間企業一起來參予這項工程，為台灣經營與生活環境由職的提升，達到永續發展的目標。

連結網址｜http://nzce.seotw.top

國立高雄科技大學
National Kaohsiung University of Science and Technology

國立高雄科技大學
National Kaohsiung University of Science and Technology

機構與組織
Institutions

攤位編號 Booth No. | S313

#以人為本 #感知系統 #鳳山智慧家庭展示屋

國立高雄科技大學「以人為本的研究中心日常」特展聚焦永續發展教育，展出內容涵蓋教育推廣、環境保護與保育科技，融合海洋、人文與工程科技，帶領觀眾了解本校研究中心如何在日常運作中實踐永續理念。觀眾將看到最新的環境保育科技，體驗其在機械與建築中的應用，並透過人文視角深入了解海洋生態與SDGs議題。這場展覽不僅是一場永續教育，更邀請大家共同關注地球未來，為環境保護貢獻力量。

連結網址｜https://www.nkust.edu.tw/

國家發展委員會
NATIONAL DEVELOPMENT COUNCIL

國家發展委員會
National Development Council

機構與組織
Institutions

攤位編號 Booth No. | S301

為呼應國際倡議，接軌淨零趨勢所帶來的挑戰與商機，行政院國家永續發展委員會督導協調國家發展委員會、經濟部、環境部、國科會、交通部及內政部等相關部會，共同發布「臺灣2050淨零排放路徑」，以四大轉型策略及兩大基礎為架構，提出「十二項關鍵戰略」行動方案，以推動我國淨零轉型。

In response to international initiatives on “2050 Net-Zero Emissions” , as well as the challenges and business opportunities that related to net-zero transition, The Executive Yuan’s National Council for Sustainable Development, led National Development Council, Ministry of Economic Affairs, Ministry of Environment, National Science and Technology Council, Ministry of Transportation and Communications, Ministry of the Interior and other central government agencies, announced the “Taiwan’s Pathway to Net-Zero Emissions in 2050”. On the basis of “four transition strategies’” and “two governance foundations”, Taiwan kicked off the “12 Key Strategies” action plan to implement Taiwan's net-zero transitions.

連結網址｜https://www.ndc.gov.tw/

農業部
MINISTRY OF AGRICULTURE

農業部
Ministry Of Agriculture

機構與組織
Institutions

攤位編號 Booth No. | S201

#2040農業淨零 #全循環零廢棄 #臺灣鳳梨纖維紡織產品 #牡蠣殼生態復育
#廢菇包介質產品開發 #養豬污泥優化工業廢水
#農業ESG #永續農業 #碳匯及保育 #農業文化及生活

農業部以「減碳」、「增匯」、「循環」及「綠趨勢」四大主軸，對接全球淨零減碳目標，期待提早於2040年達到農業淨零，其中在循環主軸，更設定以「全循環、零廢棄」作為目標，透過循環技術研發、循環場域建置、強化社會溝通及建立商業運營模式等策略，展現推動農業剩資源再利用的企圖心。本次參展亮點如鳳梨葉取纖紡紗製成服飾產品、廢棄牡蠣殼應用於文創及海洋珊瑚生態復育、剩餘菇包介質開發防震包材及園藝花盆、養豬場污泥微生物應於於工業廢水優化等成果，將農業剩餘資源循環加值利用，並創造跨域永續價值。

農業部推出農業永續ESG，緣於農業立基於自然環境，多項農業活動已具備永續價值，包含循環農業、永續生產、減碳及增加碳匯、自然保育、支持農村發展到維繫農業文化，企業可選擇參與不同類型的農業活動，作為企業實踐ESG永續發展的場域，帶動環境和社會的正面效益。本次展覽呈現農業永續ESG的合作方式及精彩案例，歡迎企業透過專長及技術參與農業，共創雙贏互利。

連結網址｜https://www.moa.gov.tw/

惠嘉電實業股份有限公司
FGD Recycling Industrial Co., Ltd.

機構與組織
Institutions

攤位編號 Booth No. | S308

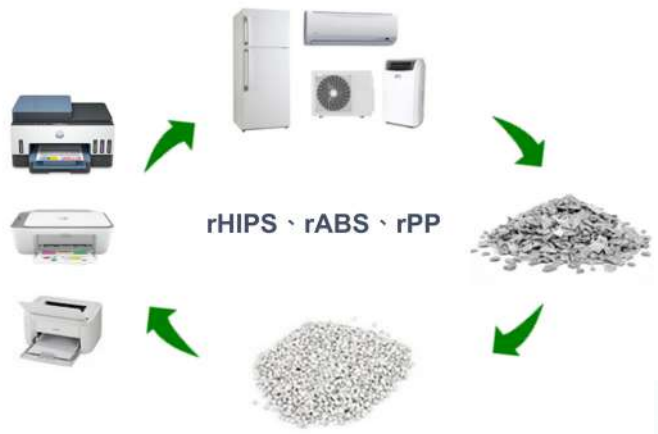
#惠嘉電 #再生塑料 #循環經濟供應鏈

本公司提供全面性的廢電子電器物品回收及再利用解決方案，專注於推動循環經濟，確保全程溯源與廢棄物去向透明。我們的服務不僅涵蓋廢電子電器及廢資訊物品回收處理，還包括事業廢棄物處理、廢電子零件及工廠下腳料回收精煉，並可將廢塑料回收再生，實現資源最大化利用，同時更能做到環保設備輸出，提供客製化的廢棄物處理解決方案。期待與業界分享我們的成功經驗，展示循環經濟的綠色創造力。

Our company offers comprehensive solutions for the recycling and reuse of electronic and electrical waste, with a focus on promoting the circular economy and ensuring full traceability and transparency in waste disposal. Our services cover not only the recycling and processing of electronic and computer applicances waste but also the management of industrial waste, the refining of electronic components and factory scraps, and the recycling and regeneration of plastic waste to maximize resource utilization. Additionally, we provide the export of environmental equipment and offer customized waste treatment solutions. We look forward to sharing our success stories with the industry and showcasing the green innovation of the circular economy.

我們透過先進的再利用製程，將廢電子電器中的廢塑料轉化為可再生塑膠材料，主要包括HIPS、ABS及PP，這些材料不僅符合GRS、RCS、UL、TUV等國際標準與認證，還可依照客戶需求進行改質，提供多樣化的顏色與性能選擇。我們的再生塑膠產品具備完整的物性規格，並已銷售至國際市場，助力全球循環經濟發展，有效降低產品碳足跡。此次展會，我們將分享這些環保解決方案，展示完整的循環經濟供應鏈發展，並與業界合作共創綠色未來。

Through advanced recycling processes, we transform waste plastics from electronic and electrical waste into renewable plastic materials, primarily including HIPS, ABS, and PP. These materials not only comply with international standards and certifications such as GRS, RCS, UL, and TUV but can also be modified according to customer requirements, offering a wide range of color and performance options. Our recycled plastic products come with complete technical data sheets and are sold in international markets, contributing to the development of the global circular economy while effectively reducing the carbon footprint of products. At this exhibition, we will share these eco-friendly solutions, showcasing the development of a complete circular economy supply chain, and collaborate with the industry to create a greener future.



連結網址｜https://www.fgd.com.tw/

CHIEH AN
ENVIRONMENTAL ENGINEERING

潔安環保工程有限公司
CHIEH AN ENVIRONMENTAL ENGINEERING CO.,LTD

機構與組織
Institutions

攤位編號 Booth No. | S308

#潔安環保 #複合型包裝材 #鋁塑袋處理

潔安公司於塑膠粒造粒耕耘數十年，並取得數個廢棄物清除再利用、回收之身份。尤其對於廢塑膠處理方面，具有專業的廢塑膠再生之知識、經驗、技術、及實績，專門處理各種難以處理之複合型廢塑膠，包含彩藝包裝材、電子產業之各種包材、量販店包裝材等，經過潔安團隊的專業技術，將其製成再生塑膠粒，並配合後端廠商製成各類環保塑膠製品，例如工業用塑膠棧板、塑膠袋等用品，也可回歸給事業端使用，形成封閉式循環。

鋁塑膜包裝袋因為其優越的保護功能而受到許多產業的愛用，舉凡如科技業的靜電鋁箔袋、彩藝包裝業的食品印刷包裝袋、製藥業的膠囊包裝鋁塑包裝外殼，甚至是電動車的電池鋁塑外包裝等等。但這些使用過後的鋁塑袋、鋁塑膜，卻因貼合鋁及塑膠，成為難以處理之廢棄物，多數業者會選擇焚化方式處理。潔安研發的鋁塑分離設備有效的將上述包裝材料分離塑膠和鋁，設備產出的再生塑膠的部份可以100%回收再利用，萃取出來的再生鋁純度也達到85%以上。近年來減廢議題不斷，潔安致力於將廢棄物轉廢為寶，於是投入開發鋁塑分離設備，近年來開發成功試產，並在2022年初和環境部及其他塑膠再利用業者一起舉辦了記者會，發表了此一鋁塑分離設備的新式技術。

連結網址｜https://www.laisei.com/

南亞塑膠工業股份有限公司
NAN YA PLASTICS CORPORATION

南亞塑膠工業股份有限公司
Nan Ya Plastics Corporation

機構與組織
Institutions

攤位編號 Booth No. | S308

#織物回收 #回收聚酯纖維 #循環紡織
#textile to textile recycling #recycled polyester #circular textile

南亞塑膠於2020年成立環保品牌SAYA，專注於聚酯材料的再生，致力成為紡織業循環經濟的領航者。隨著全球對服裝廢料問題的關注日益增加，紡織業逐步從「傳統的線性經濟」轉型為「循環經濟」的模式，從而減少石油依賴、降低能源消耗及碳足跡，同時減少對環境有害的原材料與製程。SAYA致力於串聯整個紡織供應鏈，為環境帶來變革。

SAYA自聚酯原材料端出發，將南亞塑膠纖維事業部生產的粒子、長纖、短纖、布料與其獨有的再生技術相結合，實現對產品生命周期的全程掌控。將產品設計及環保理念深植於創新技術，並持續推動紡織品生產邁向閉鎖循環的目標，實現資源的再生與全面利用，降低對環境的負擔。

In 2020, Nan Ya Plastics launched SAYA, a responsibly sourced brand dedicated to polyester recycling and leading the textile industry's shift towards a circular economy. As global awareness of apparel waste increases, the textile industry is transforming from a "linear economy" to a "circular economy" model, reducing reliance on petroleum, energy consumption, and carbon footprint while minimizing harmful raw materials and processes. SAYA is committed to uniting the entire textile supply chain to drive positive environmental change.

SAYA starts from the raw polyester stage, combining Nan Ya Plastics' fiber production capabilities, including chips, filament, staple fiber, and fabrics, with proprietary recycling technology to ensure comprehensive control over the product life cycle. By embedding environmental principles into innovative design, SAYA continuously advances closed-loop production in textiles, aiming for total resource regeneration and minimized environmental impact.

SAYA的織物回收技術聚焦於前處理（材質分選、材質分離再利用、脫色）和多種回收技術（機械法、半化學法、全化學法），目標是實現全循環和低碳排。自2021年啟用首台AI織物分揀機，截至2024年，已獲得48項多國專利，涵蓋材質分離、脫色和解聚技術。SAYA串聯紡織供應鏈，接收織布廠廢布、成衣廠邊角料，並規劃品牌商的舊衣回收計劃，以減少生產與消費後的廢棄物，幫助品牌商降低範疇三碳排放。

推動紡織循環經濟轉型充滿挑戰，不僅是技術革新，更涉及全球廢織品回收體系的建立。南亞運用50多年的紡絲經驗與創新技術，致力於為全球紡織產業創造更永續的未來。

SAYA's textile recycling technology focuses on advanced pretreatment (material sorting, separation, and decolorization) and diverse recycling methods (mechanical, semi-chemical, and full chemical), aiming for a low-carbon, closed-loop system. Since launching its first AI fabric sorting machine in 2021, SAYA has achieved 48 international patents in material separation, decolorization, and depolymerization by 2024. Through collaborations with textile suppliers, SAYA collects waste from fabric and garment manufacturers and plans brand take-back programs to reduce pre- and post-consumer waste, assisting brands in lowering Scope 3 emissions. Transforming the textile industry into a circular economy is a major challenge, requiring technological innovations and global recycling infrastructure. With 50 years of fiber expertise, Nan Ya is committed to creating a sustainable future for textiles.

連結網址｜https://www.itri.org.tw/

ARRG Waste

機構與組織
Institutions

攤位編號
Booth No. | S442

#ARRGWASTE #Resourcerecvoery #Sustainability

ARRG Waste 是一澳洲家族企業，總部位於澳洲昆士蘭州西南部蘇拉特盆地。ARRG Waste 視廢棄物為珍貴資源，並致力於減少垃圾掩埋量，推廣資源回收再利用。ARRG Waste 為住宅和商業客戶提供一系列廢棄物管理解決方案，服務包含：商業廢棄物及住宅垃圾收集、建築垃圾處理、金屬回收、高密度聚乙烯回收，環境運輸解決方案、工業廢物管理運輸、垃圾箱供應、液體和固體廢物收集、堆肥、危險和特殊廢物處置、污染場址修復、水和廢水處理廠營運以及先進廢棄物處理設施之建設和營運。ARRG Waste 擁有 70 多年經驗的管理團隊，在昆士蘭州提供全球最佳實踐創新。

Recycling, Sustainability & Circular Economy are the words that form the daily vernacular of an ARRG Waste employee. ARRG Waste is a family owned business based in the Surat Basin, South West Queensland, Australia. Here at ARRG Waste, waste is truly seen as a resource and it has been our mission to ensure the minimisation of waste to landfill and the maximisation of reuse and recycling. Using innovative technologies and having a dedicated and passionate Management team with over 70+ years experience collectively, ARRG Waste is a niche company in resource recovery delivering global best practice innovation in Queensland. Would you like to join us on our journey? Please feel free to reach out to us!

澳洲每年生產 58 萬個氣霧罐，透過進口產品間接產生的氣霧罐也已達相同數量－ARRG Waste 看準此商機！ARRG Waste 正積極轉移垃圾掩埋場中的氣溶膠，並將回收氣溶膠 100%再利用。ARRG Waste 在安全和環境標準規範已達到最佳實踐技術，能夠進行空氣溶膠和滿氣溶膠回收，實現 100% 資源循環。ARRG Waste 正在尋求與志同道合的夥伴，打造資源循環網絡（HDPE、聚丙烯、ABS 塑膠），或成為 ARRG Waste 的股權或技術合作夥伴，以共同實現經濟與環境永續發展。歡迎您參與這場回收革命的機會！

With 580,000,000 aesosol cans manufactuered in Australia annually, and a similar quantity received through imported products, empty aerosols just seem to be too good to waste! ARRG Waste is on a mission to divert aerosols from landfill and aim to recovery 100% of the aerosols received for recycling. Utilizing word class technology, that has demonstrated best practice in safety and environmental standards, ARRG Waste are able to receive empty and full aerosols for recycling with 100% resource recovery. ARRG Waste are looking to partner with likeminded companies whom may be interested in receiving the off take of recovered product (HDPE, Polypropylene, ABS plastics). Or companies that are looking to be an equity or technology partner in the ARRG Waste business to continue to strive for economical sustainability.

連結網址｜www.arrgwaste.com.au

日益和股份有限公司
SUN SURFACE TECHNOLOGY CO.,LTD.

日益和股份有限公司
SUN SURFACE TECHNOLOGY CO., LTD.

資源循環
Resource Circulation

攤位編號 Booth No. | S236

#日益和 #除膠液 #顯影液

半導體封裝製程中的化學除膠(CD)製程，主要是將導線架以化學藥水來作浸泡，藉此可將膜壓後溢出的樹脂殘膠予以去除。日益和產品特性

1.可於較低溫下操作即可有效去除溢脂溢膠
2.使用CD藥水後不傷導線架底材
3.廣泛適用於各種材質之導線架
4.操作性佳

Chemical Deflashing (CD) chemicals

1. Excellent ability to remove molding flash/resin bleed at lower temperatures
2. Not damage to the substrate of lead frame
3. Suitable for lead frames with PPF, Cu alloy or Fe/Ni alloy substrate

IC 導線架封裝

導線架電鍍前處理
- 化學 / 電解除膠
- 活化

導線架電鍍後處理
- Belt Stripper
- ReWork

導線架電鍍鍍液

Before　　After

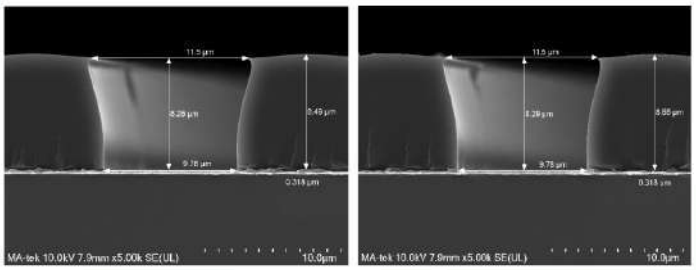
日益和無機顯影液主要是以鉀鹽系統所調配的鹼性顯影液，因其中具有一定的緩衝力，可使顯影過程中的pH值變化幅度小且較為穩定，一般通稱為MIB (metal ion bearing) 顯影液。產品特性

1.SBD-700系列顯影液穩定性高，且品質管控良好(金屬不純物及微粒子數)
2.濃度值R1/R2穩定不飄移
3.可提供客戶特殊需求之濃度(如顯影後對比或解析度要求較高)
4.無刺激性臭味(無味)

1.Good performance stability and quality control particularly on metal impurities and particles
2.Less variation on R1 & R2
3.Concentration adjustable to meet special requirements
4.No pungent odor

IC 先進封裝黃光蝕刻製程

顯影 & 清洗 / 稀釋
- PI/PBO / Dry film developer
- PR Stripper
- Etchant
- EBR



連結網址｜http://www.sunstech.com.tw/

Transcene 成信實業 Transcene Corp.

成信實業股份有限公司
Transcene Corporation

資源循環
Resource Circulation

攤位編號 Booth No. | S124

#成信實業 #球形二氧化矽 #矽碇

成信實業擁有循環經濟技術能力，亮點一為成信自創的「循環經濟123」廢棄物資源化系統。1.體檢，進行廢棄物診斷及體檢；2.找產品市場，評估二次資源市場與需求；3.Re-design，找出創新加工技術及製程。以此系統規劃設計產出可替代現有材料之再生產品，滿足工業永續對再生原物料之需求。同時更是建立廢棄物循環再利用，而且是在確實可行的商業經濟模式下建立，因而串接了新的供應鏈，達成經濟效益。

Transcene Corp. has circular economy technology capabilities. One of the highlights is the company's self-created "Circular Economy 123" waste resource recycling system. 1. Physical examination, conduct waste diagnosis and physical examination; 2. Find the product market, evaluate the secondary resource market and demand; 3. Re-design, find out innovative processing technologies and processes. This system is planned and designed to produce recycled products that can replace existing materials to meet the sustainable needs of industry for recycled raw materials. At the same time, waste recycling and reuse is established, and it is established under a feasible business economic model, thus connecting new supply chains and achieving economic benefits.

成信亮點二為球形二氧化矽產品。球形二氧化矽是半導體封裝產業廢壓模膠的回收再利用產品。廢壓膜膠成分單純，主要成分裡面有近九成的二氧化矽成分，其餘一成是樹脂膠成份。球形二氧化矽可以做為陶瓷釉藥原料、橡膠填充料、耐火材料、塗料填充料，用途廣泛，透過成信實業的巧思，成功解決半導體封裝產業廢壓模膠的處理問題，並同時協助產業增加不破壞自然的替代料源，建立球形二氧化矽的本土靜脈供應鏈，就近供應高性價比之材料給國內產業。

The second highlight of Transcene Corp. is its spherical silicon products. Spherical silicon is a recycling product of semiconductor packaging edge materials. The composition of waste epoxy molding compound is simple, with nearly 90% of the main component being silicon dioxide and the remaining 10% being resin glue. Spherical silica can be used as a raw material for ceramic glazes, rubber fillers, refractory materials, and paint fillers. Transcene Corp. has successfully solved the problem of waste disposal in the semiconductor packaging industry, and at the same time assisted the industry in increasing alternative sources of materials that do not destroy nature, established a local intravenous supply chain of spherical silicon dioxide, and supplied cost-effective materials to domestic industries nearby.

連結網址｜https://www.transcene.com.tw

金聯成 資源科技 JIN LIAN CHENG RESOURCES

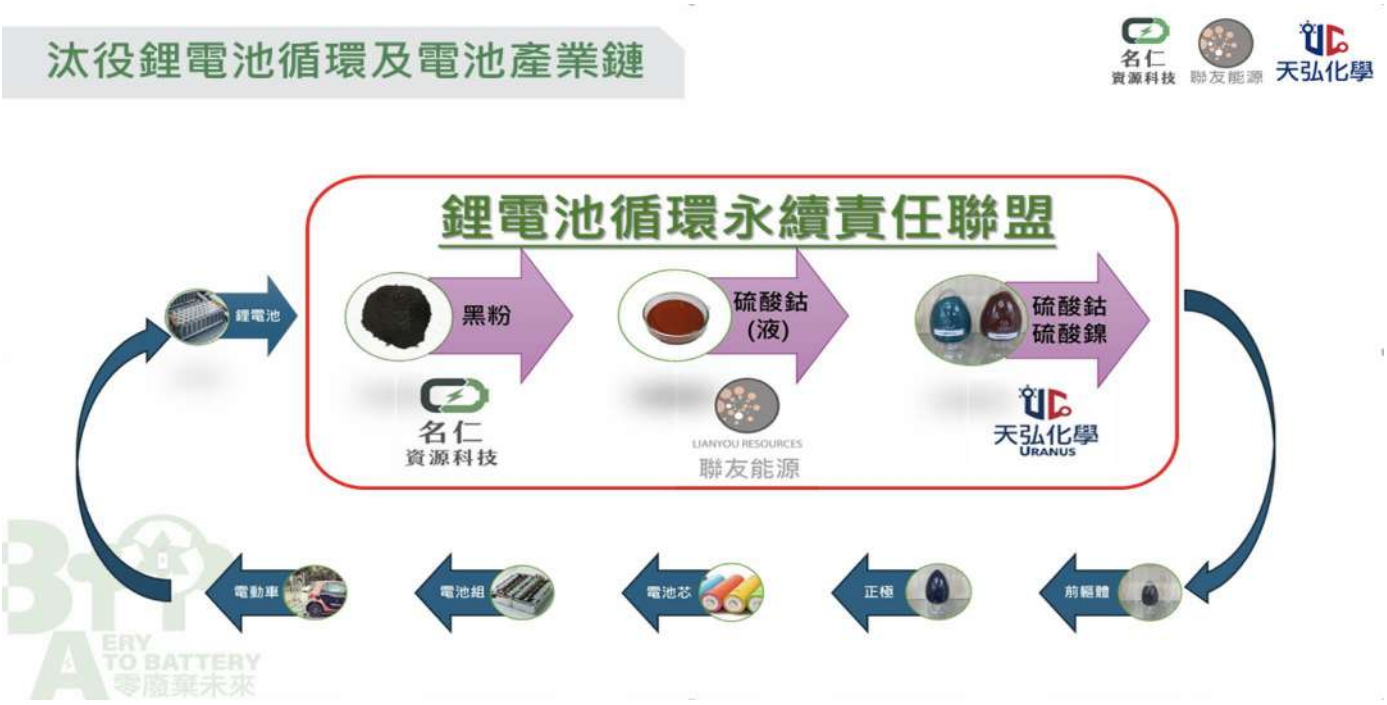
金聯成資源科技股份有限公司
JIN LIAN CHENG RESOURCES AND TECHNOLOGY CO.,LTD.

資源循環 Resource Circulation

攤位編號 Booth No. | S131

#名仁資源科技股份有限公司 #鋰電池回收處理專業廠 #金聯成資源科技股份有限公司

台灣第一個汰役鋰電池B2B(Battery To Battery)的循環經濟生態系，將汰役鋰電池進行回收、破碎、純化、精煉、以及再生產，建構出完整的循環生命週期技術解決方案，提供台灣境內一個符合國際規範的回收處理管道，有效達成在地化稀貴資源循環利用，零碳足跡與資源永續發展目標。



連結網址｜https://www.jlc-ycle.com/

長宥工業股份有限公司
EVER SLOT INDUSTRY CO., LTD.

資源循環
Resource Circulation

攤位編號 Booth No. | S136

#客製化楔型網 #內流式楔型網 #外流式楔型網
#Customised Wedge Wire Screen #FOTI type Wedge Wire Screen #FITO type Wedge Wire Screen

客製化楔型網/可依照客戶需求, 生產各式尺寸與樣式的楔形網
We can manufacture various sizes and types of wedge wire screens

▸ 產品應用
· 去除雜質
· 去除纖維
· 固液分離
· 汙水回收

▸ 產品優勢
· 可逆沖洗,清洗效果最佳
· 不鏽鋼材質,結構堅固,適用高壓環境
· 減少機械運行成本
· 減少清水使用
· 降低汙水處理成本

▸ Application:
• Remove Impurities / Dirt
• Fiber Removal
• Solid-liquid Separation
• Sewage Recycling

▸ Product Character:
• Back washable, Best cleaning outcome
• Stainless Steel with Structure Suitable for High-Pressure Environment
• Reduce Machine Operating Cost
• Reduce Water Consumption
• Reduce Sewage Treatment Cost

內流式楔型網/液體由外向內流
flow outside to inside

外流式楔型網/液體由內向外流
flow inside to outside

連結網址｜https://www.slithole.com.tw/cht/

財團法人
紡織產業綜合研究所
Taiwan Textile Research Institute

財團法人紡織產業綜合研究所
TAIWAN TEXTILE RESEARCH INSTITUTE

資源循環
Resource Circulation

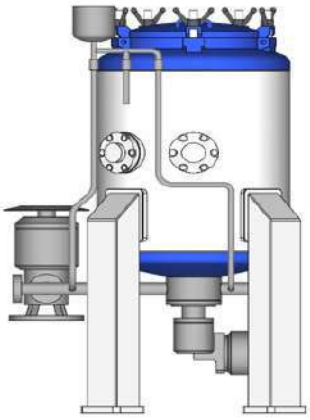
攤位編號 Booth No. | S108

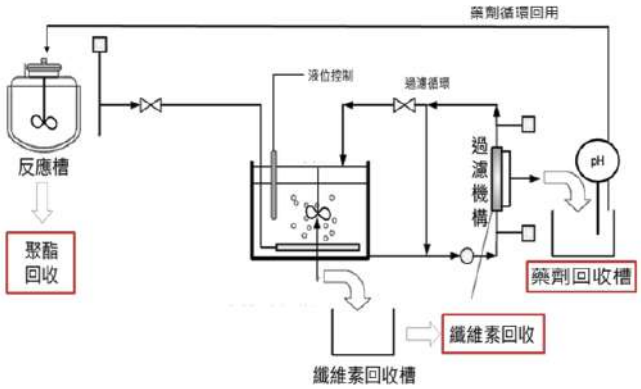
#紡織產業綜合研究所 #紡織品回收循環 #再生聚酯資源開發

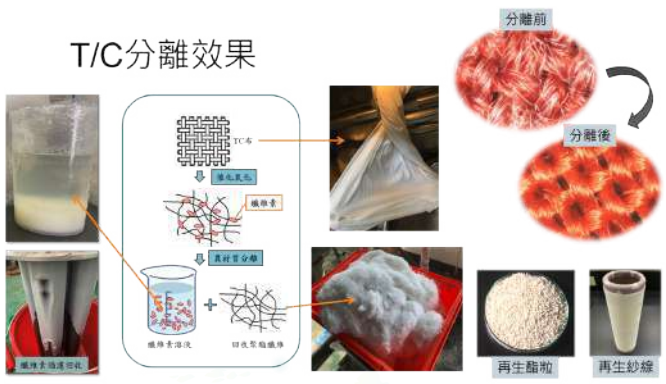
本技術開發之分離設備，以模組化機構進行設計，可根據使用設備現況安裝新模組進行改良來有效降低設備成本。待分離織物於同一反應槽中，同時分離出回收聚酯、纖維素及藥劑，藥劑經過濾循環可重複使用，利用設備機構獲得最大限度的回收聚酯資源。

本技術針對混紡紡織品的回用再生進行開發，透過一步法將混紡織物中的聚酯纖維分離並回收，回收聚酯不需經過解聚即可重新融紡成長纖再次回到市場。以往再生聚酯僅能從寶特瓶或純聚酯織物中取得，如今從混紡織物中提取，不僅解決環境問題，也新創了一條再生聚酯資源。

- 製程常溫/壓，安全又低碳
- 藥劑可循環，環保無負擔
- 單一聚酯回收率>98%







連結網址｜https://www.ttri.org.tw

國際貿易股份有限公司
Kuo Chi Trading Co., Ltd.

國際貿易股份有限公司
KUO CHI TRADING CO., LTD.

資源循環
Resource Circulation

攤位編號 Booth No. | S124

#Masterbatch #rCB #recycle

環保碳黑
ECO Carbon Black

環保碳黑是從廢輪胎經過熱裂解提取，是橡膠製品中重要的補強劑。
多環芳香烴(PAHs)含量小於10ppm，符合歐盟RoHS 2.0規範，與一般碳黑相比，可減少50%二氧化碳排放量。

Eco Carbon Black, a vital ingredient of rubber products, can be pyrolysised from scrap tires. With low PAHs(<10ppm) and is qualified by RoHS2.0. It reduces CO2 emission up 50% than origianl one.






功能性母粒
MasterBatches

我們將通過GRS認證的石粉製成功能性母粒，應用在紡織及塑膠產業。產品的核心概念為達成循環再利用，並與客戶攜手走在減塑的趨勢上。

Use GRS certify recycle Semics Silica to conduct MasterBatch and apply by GRS, which is used in the textile and plastic industries. Our main core is to achieve recycle and reuse, an d to cooperate with our clients to keep up with the trend reducing plastic.

連結網址｜https://www.group-kcg.com

TSC 崇越集團

崇越科技集團
TOPCO SCIENTIFIC Co., Ltd.

資源循環
Resource Circulation

攤位編號 Booth No. | S138

#建越科技-廠務及水處理環保工程 #ESG永續方案提供者 #崇越集團-綠電減碳

廠務及水處理環保工程

「建越科技」在純水工程、廢水工程、機電工程(包括機械、電氣、管線,簡稱MEP)建立專業團隊,持續研發創新,提高工程效率。如今,建越在無塵室與廠房工程、空調與機電工程,以及公共工程各方面,已累積許多成功實績。

2023年,建越榮獲「國家卓越建設優質獎」,乃支持台糖虎尾畜殖場成為台灣養豬產業升級的典範,每年可減少2,000公噸的碳排放量,相當於13萬顆樹一年的吸碳量。

高科技廠務工程及水處理工程方面,建越的客戶包括聯電、華邦、南亞、群創等大廠,並多次獲得美光等客戶頒發傑出貢獻獎。此外,建越也將台灣的成功經驗複製到中國、新加坡、越南、馬來西亞等地。

ESG全方位永續方案

崇越集團整合旗下「曜越綠電」、「嘉益能源」、「建越工程」、「光宇工程」,擁有完整太陽能供應鏈產出綠電、EPC統包工程(設計、採購、施工)、營運維護團隊、雲端監控系統,不但累積近50MW、逾百座國內外太陽能電站建造實績,並提供綠電售電服務,逐步實現永續發展的布局。

光宇工程加入崇越集團後,在既有的環境影響評估領域外,又新增了碳事業,幫助企業解燃眉之急;從碳盤查、碳減量、到碳中和等一系列碳輔導之外,也協助企業規劃綠電永續、專業人員培訓,直到取得第三方認證,並協助企業執行「氣候相關財務揭露」(TCFD)、「自然相關財務揭露」(TNFD),以及「科學基礎減量目標倡議」(SBTi)等工作,提升永續資訊品質。

連結網址 | https://www.topco-global.com/

御光能源興業股份有限公司
YuKuang Energy Co.,Ltd

資源循環
Resource Circulation

攤位編號 Booth No. | S116

#御光能源 #興能能源 #台江生技

減碳與再生能源解決方案
Carbon Reduction and Renewable Energy Solutions

御光能源致力於解決企業在減碳方面的挑戰，在節能、創能到儲能的整個能源循環提供支持。御光的服務涵蓋節能方案諮詢、再生能源場域開發、土地資源整合、法規諮詢及工程設計，打造全面的解決方案。透過將太陽能與傳統農漁業結合，實現能源轉型與本地產業的共生發展，協助企業加速再生能源的採用，顯著減少碳排放。同時，這些方案不僅推動企業實現環境保護，更促進農漁業社區的產業升級，落實 ESG 理念，實現經濟效益與環境永續的多方共贏。

YuKuang Energy is committed to addressing the challenges businesses face in carbon reduction by providing comprehensive support throughout the energy cycle, from energy conservation to energy generation and storage. Our services encompass energy-saving consultations, renewable energy site development, land resource integration, regulatory consultations, and engineering design, creating a holistic solution. By integrating solar energy with traditional agricultural and fishery practices, we drive energy transition and foster the symbiotic development of local industries, helping businesses accelerate the adoption of renewable energy and significantly reduce carbon emissions. These solutions not only support environmental protection but also promote industrial upgrades in agricultural and fishery communities, embodying ESG principles and achieving multi-stakeholder benefits through economic and environmental sustainability.

碳中和與企業永續策略
Carbon Neutrality and Corporate Sustainability Strategies

面對全球邁向碳中和與淨零排放的趨勢，御光能源攜手興能能源為企業提供專業的碳盤查與永續策略規劃。我們的服務涵蓋碳盤查、跨國工廠驗證、機構核證、商品碳足跡管理及碳數據平台建設，針對範疇一至範疇三的全方位碳排放健檢，並制定再生能源、碳權或碳費的採用方案，助力企業實現碳中和的長期目標。這不僅加速企業融入全球綠色供應鏈，也提升品牌形象，創造可持續發展的市場機會，為企業的永續轉型奠定長期的經濟價值。

In response to the global shift towards carbon neutrality and net-zero emissions, YuKuang Energy collaborates with Sinon Energy to provide professional carbon inventory and sustainability strategy planning services for businesses. Our offerings include carbon audits, multinational factory verification, third-party certification, product carbon footprint management, and carbon data platform development. We provide comprehensive carbon assessments across Scope 1 to Scope 3 and formulate strategies for the adoption of renewable energy, carbon credits, or carbon taxes, helping businesses achieve their long-term carbon neutrality goals. These services not only accelerate integration into global green supply chains but also enhance brand reputation, creating sustainable market opportunities and laying a strong foundation for the long-term economic value of corporate sustainability transformation.

連結網址｜https://www.yke.com.tw/

華侖生技股份有限公司
VIOLON BIOTECH CO,. LTD

資源循環
Resource Circulation

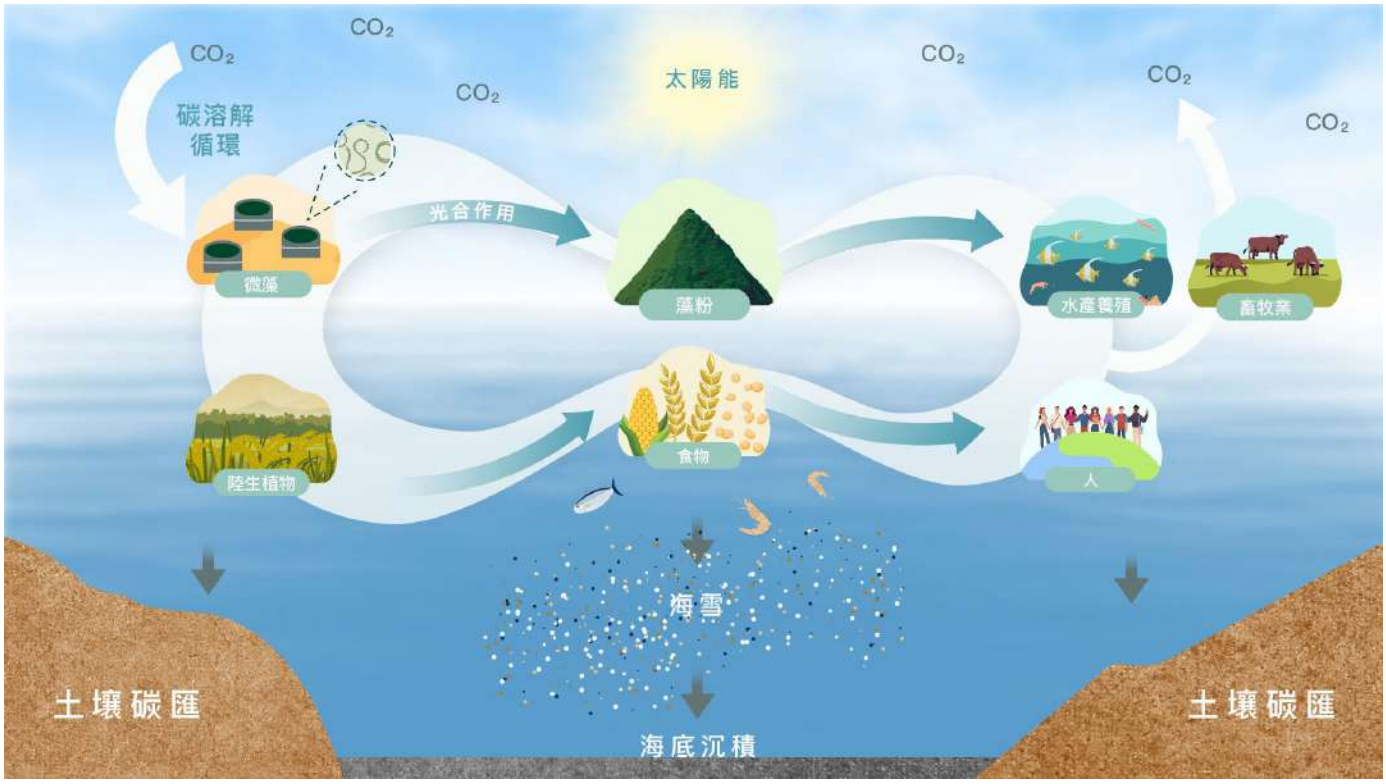
攤位編號 Booth No. | S120

#華侖生技 #淨零碳排關鍵技術 #CCU+CDR

▌工業化碳捕捉結合生物固碳:

利用華侖專利技術，將二氧化碳轉化為碳酸氫根，形成重要碳源。再藉由微藻快速行光合作用固碳，並將其轉化為藻粉，製作出含優異蛋白質及Omega-3的藻粉飼料，供應給水產及畜產使用，達到永續發展與循環經濟。

Using VIOLON patented technology, carbon dioxide is converted into bicarbonate to form an important carbon source. Then the carbon was sequestered by microalgae through rapid photosynthesis. and convert it into algae powder. Produce algae meal feed with excellent protein and Omega-3. It is supplied for use in aquatic and livestock products to achieve sustainable development and circular economy.



連結網址｜https://www.violonbiotech.com/

新世紀環保服務股份有限公司

新世紀環保服務股份有限公司
NEW CENTURY ENVIRONMENTAL PROTECTION SERVICE CO., LTD.

資源循環
Resource Circulation

攤位編號 Booth No. | S135

#新世紀環保 #營建廢棄物 #再生級配

本公司具備完整的環保證照包括營建混合物(R-0503)再利用許可、土資場營運許可、甲級廢棄物清除許可、環境保護工程專業營造業證照。自公司創立迄今參與許多公共工程、高科技廠房新建工程或集合住宅工程等之營建混合物清理與營建工程餘土處理工作，以服務品質及客戶口碑，累積環保專業及實力，近年並拓展環保專業領域，成為囊括污染土壤整治、掩埋場活化再利用，生態水資源工程的全方位環保品牌。本公司的核心價值為「只要人與環境有關的事，就是我們關心的事」，除了透過環保工程創造美好生活環境，並致力於落實企業社會責任推動許多公益活動，為ESG實踐持續努力。

營建廢棄物經篩選分類處理後可生產可再利用的再生級配粒料，這些再生級配粒料可成為天然砂石的替代材料，作為低強度混凝土的拌合料或是營建工地假設工程使用，例如便道鋪設或防溢座等，不僅有效減少天然水泥的使用降低能源消耗和碳排放，還能減少新原料帶來的廢棄物。透過再生級配粒料的推動，是本公司為2050淨零碳排的具體行動。

連結網址｜https://ncep.com.tw/ncep/

鉅為有限公司
JU WEI LTD

鉅為有限公司
Ju Wei LTD.

資源循環
Resource Circulation

攤位編號 Booth No. | S113

#鉅為有限公司 #低碳濾網框架 #移動潔淨室

鉅為將專業的金屬濾網設計模組化，並提供濾網租賃服務，為企業提供低碳、高效能且高經濟的解決方案。

金屬原料採用再生鋁，綠色模組化設計，濾網使用後僅需更換濾材，更換後鉅為協助廢棄濾材清運，確保不會對環境造成傷害污染。

鉅為提供的租賃制方案，透過減少原材料使用和生產過程的能耗，降低碳排並支持全球低碳經濟轉型，配合租賃一條龍服務，進一步提升運營效率。

鉅為目前為株式会社プレシード潔淨棚產品台灣總代理，移動式潔淨棚具有多項優點，適合需要靈活潔淨環境的場合。它具備高度的可移動性和靈活性，能根據需求輕鬆轉移，適合臨時或多變的工作環境。配備高效的HEPA或ULPA過濾系統，能有效過濾空氣中的微小顆粒，滿足半導體、製藥和精密製造等行業的高潔淨要求。此外，它能適應不同的潔淨等級需求，並靈活應用於不同空間，為需要快速擴充潔淨區的企業提供了理想的解決方案。

連結網址｜https://unijw.com/

碳循環應材股份有限公司
CARBON RECYCLE APPLIED MATERIALS

碳循環應材股份有限公司
Carbon Recycling Materials Co., Ltd.

資源循環
Resource Circulation

攤位編號 Booth No. | S207

#CRAM #PCR低碳再生塑膠 #PCR低碳再生鋁

低碳循環塑膠

CRAM擁有40年回收再生領域專業度，PCR低碳再生塑膠獲得德國萊因TÜV環保材質與碳足跡驗證（ISO14021、ISO14067），嚴選PCR潔淨來源，全球優選採購，PCR低碳再生塑膠材料系列包含：泛用塑膠ABS系列．PS系列．PP系列；工程塑膠 PC系列．PC/ABS系列．PPO系列等。

創新低碳技術，提供材料特殊物性的客製化服務：防火、耐候性、耐衝擊、抗UV、抗靜電、玻纖、碳纖、奈米碳管等，製程過程中採取多段全物性檢測的質量保證，提供品質穩定的優質PCR低碳塑膠，碳排放僅為新料的十分之一，應用領域包含家用、資通訊、半導體等等。每年約有88,000公噸廢塑膠在CRAM工廠重獲新生。

CRAM提供PCR低碳再生塑膠，獲得德國萊因TÜV環保材質與碳足跡驗證（ISO14021、ISO14067），PCR低碳再生塑膠材料系列包含：泛用塑膠ABS系列．PS系列．PP系列；工程塑膠 PC系列．PC/ABS系列．PPO系列等。
創新低碳技術，提供材料特殊物性的客製化服務：防火、耐候性、耐衝擊、抗UV、抗靜電、玻纖、碳纖、奈米碳管等，製程過程中採取多段全物性檢測的質量保證，提供品質穩定的優質PCR低碳塑膠。

低碳循環鋁材

CRAM擁有40年回收再生領域專業度，PCR低碳再生鋁材獲得德國萊因TÜV環保材質與碳足跡驗證（ISO14021、ISO14067），CRAM擁有完整的循環再生供應鏈系統，嚴選PCR潔淨來源，全球優選採購，PCR低碳再生鋁材料包含：ADC12系列．6000系列，碳排放僅有新鋁的20分之一。

另外CRAM也開發了低碳鋁捲，使用水力發電製作，碳排放約為新鋁的五分之一。應用領域包含家用、資通訊、交通載具等等。每年約有30,000公噸金屬廢棄物在CRAM工廠重獲新生。

CRAM的PCR低碳再生鋁材獲得德國萊因TÜV環保材質與碳足跡驗證（ISO14021、ISO14067），PCR低碳再生鋁材料包含：ADC12系列．6000系列，碳排放僅有新鋁的20分之一。另外CRAM也開發了低碳鋁捲，使用水力發電製作，碳排放約為新鋁的五分之一。應用領域包含家用、資通訊、交通載具等等。

連結網址｜https://www.cram-cc.com/

香港商德莎有限公司台灣分公司
Tesa Tape (Hong Kong) Ltd., Taiwan Branch

資源循環
Resource Circulation

攤位編號 Booth No. | S235

#德莎膠帶 tesa tape #可持續封箱膠帶 #環保膠帶

為了幫助永續且可持續發展，tesa在過去幾年內推出了兩款可持續封箱膠帶（CST）系列，以滿足日益增長的可持續解決方案需求，第一種是紙基封箱膠帶其基材是來源於可追蹤管控的森林資源，另一種則是以再生（PCR）塑膠為基材的薄膜封箱膠帶，這兩款膠帶均採用無溶劑塗布工藝，提高了能耗效率並減少了VOC的排放。
tesa可持續封箱膠帶系列皆適用於自動包裝工藝，以提高生產效率，除此之外，膠帶可接受多種油墨印刷，適用於產品定製和品牌推廣，從可回收角度，我們的封箱膠帶可以隨紙板材料一起被丟棄，並在處理過程中進行回收利用（德莎產品皆擁有INGEDE Method 12或PTS-RH 021：2012等認證）。

To contribute to sustainability, tesa has launched two assortments of carton sealing tape (CST) in recent years, addressing the growing demand for sustainable solutions. The first assortment is a paper CST made from sustainably sourced paper, while the second is a filmic CST with a backing made from post-consumer recycled (PCR) plastic. Both assortments are produced using a solvent-free coating process, which enhances energy efficiency and reduces VOC emissions. The tapes can be applied both manually and automatically and are printable with various inks for advertising and brand awareness purposes. Additionally, the entire packaging can be disposed of with the carton without disrupting the recycling process （INGEDE Method 12 or PTS Certificates）.

40多年來，我們的tesa® 4965 Original膠帶一直是眾多行業和應用的首選解決方案。如今，我們在環保性能上更進一步，通過生物質平衡方法為新一代產品採用了90%消費後回收PET基材，使其碳排放量減少了40%以上。因此，我們的新一代tesa® 4965 Original Next Gen在不犧牲性能或品質的前提下，提供了一種資源利用高效的解決方案，積極回應客戶及利益相關者對更高層次可持續性的期待和要求。相同的性能，更低的碳排放。

For over 40 years, our double-sided tesa® 4965 Original has been the solution of choice for dozens of industries and applications. Now we have made it even better with a 40%1 reduction in CO2 emissions, achieved through the implementation of the biomass balance approach and by equipping the new generation with a 90% post-consumer recycled PET backing. With no compromise in performance or quality, our new tesa® 4965 Original Next Gen is a resource-efficient way to meet the growing demand for more sustainability from customers and stakeholders alike. Same performance. Less carbon emissions. It just makes sense.

連結網址｜https://www.tesa.com/en/industry

包装と環境・廃棄物の専門サイト NIPPO INTERNET
日報ビジネス株式会社

永續城市
Sustainable City

NIPPO BUSINESS CO.,LTD.

#N-EXPO/GWPE #circular economy #decarbonization

攤位編號 Booth No. | S143

Deployment & Expansion of Environmental Business.Exhibition Content: Thermal, air, water, soil, environmental cleanup, improvement/measurement/analysis of workenvironments, collection/transportation, IT/solution technologies, waste disposal/recycling, local governments, civil engineering/construction/disaster prevention,biomass, environmental software,asbestos measures, etc.

Promotion of Business for CO2 Reduction, New Energy Utilization and Energy Saving.Exhibition Content: Renewable energy, energy conservation, greening, CO2 emission reduction systems, climate changemeasures, heat countermeasures, collaboration between industry, academia, and government,research seeds, etc.

連結網址｜https://www.n-expo.jp/eng2025/

台灣節能膜科技(股)公司
TAIWAN ENERGY SAVING FILM COMPANY

永續城市
Sustainable City

攤位編號 Booth No. | S139

#節能膜 #節能玻璃 #台灣節能膜

專業技師團隊-建築.汽車的隔熱法寶!節能膜阻隔紅外線率達92%-98%,但仍然可讓可見光70%穿透,有效的讓紅外線離開,讓熱輻射減少進入,自然就可以減少冷氣用電量!專業施工團隊,到府施工!

Professional technician team - the magic weapon for heat insulation in buildings and automobiles! The energy-saving film blocks infrared rays by 92%-98%, but still allows 70% of visible light to penetrate, effectively letting infrared rays leave and reducing the entry of thermal radiation, which naturally reduces Air conditioner electricity consumption! Professional construction team, on-site construction!

安裝節能隔熱玻璃,一勞永逸,雖然節能玻璃與貼節能膜隔熱效果都很好,但是約每10年就要更換隔熱膜,而玻璃一旦安裝就可永久使用!Low　R&E節能玻璃使用奈米材料,阻斷熱輻射進入,非常適合熱帶地區使用!

Installing energy-saving insulated glass is a one-and-done solution. Although energy-saving glass and energy-saving film have very good insulation effects, the insulating film needs to be replaced about every 10 years, while glass once installed can be used permanently! Low R&E energy-saving glass uses nanomaterials to block the entry of heat radiation, making it very suitable for use in tropical areas!

連結網址｜https://www.guardiantw.com/

JOIN IT
在一起永續科技股份有限公司

台灣智慧淨零建築產業聯盟

永續城市
Sustainable City

在一起永續科技股份有限公司
Join It Sustainable Tech. Co., Ltd

攤位編號 Booth No. | S240

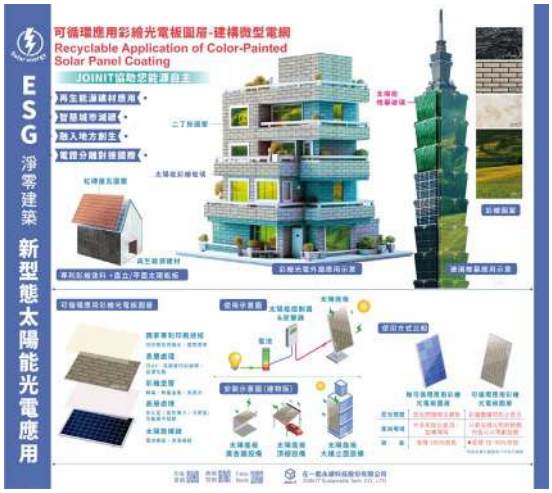
#在一起永續科技股份有限公司 JOIN IT #可循環彩繪光電塗層再生能源建材技術 #彩繪光電技術的永續經濟

在一起永續科技(股)公司在推動數位與永續轉型的背景下，隨著全國AI應用的提升和2050年淨零目標實踐，增加城市綠電發電面積成為產業落地的關鍵因素。為此，開發了創新的「可循環彩繪光電塗層再生能源建材技術」，以將外觀製成各種不同建材樣式，並有效解決反光問題，並與建築物的牆面、帷幕玻璃等結合，突破傳統光電板僅能安裝於屋頂的限制，讓建築物的每一面牆都成為發電面積，並針對傳統光電板回收過程中的高碳排放問題，提供了解決方案，並將仍具發電能力的光電板再生為近零碳排的建材，有效減少造成2至3次碳排放及對環境的二次污染，並能持續產生再生能源，極大程度上推動了循環經濟的發展，對實現國家淨零碳排放目標有著重要的促進作用。

Join It has developed an innovative "Recyclable Application of Color-Painted Solar Panel Coating." This technology allows for various aesthetic designs of building materials while effectively solving reflection issues. By integrating with building walls, curtain glass, and other surfaces, it breaks the limitation that traditional solar panels can only be installed on rooftops, enabling every wall of a building to serve as a power-generating surface.

Additionally, this technology addresses the high carbon emissions associated with the recycling process of traditional solar panels by providing solutions to repurpose solar panels with remaining power generation capabilities into nearly zero-carbon building materials. It effectively reduces secondary carbon emissions and minimizes secondary environmental pollution while continuously generating renewable energy. This technology significantly promotes the development of a circular economy and plays a crucial role in achieving national net-zero carbon emission goals.

「可循環彩繪光電塗層再生能源建材技術」是少數能同時應用於淨零建築的「蘊含碳排EC期」(興建、更新、拆除階段)和「使用碳排OC期」(營運階段)的再生能源建材。這使得該技術在建築物整個生命周期中都具有顯著的減碳效益，為淨零建築提供了高效、低碳的解決方案。
除建築外牆之應用，彩繪太陽能板若應用在招牌上，除了能增加綠電使用面積，在商業價值上更能將原本的招牌會計科目認列的「費用」轉為「投資」，將常年使用造成的「折舊」轉換為天天日照產生的「綠電與碳權的資產」，透過其創新解決方案，展現了對環境保護的承諾，並為全球永續發展設定了新的標準。



The "Recyclable Application of Color-Painted Solar Panel Coating" is one of the few renewable energy building material technologies that can be applied to net-zero buildings during both the "Embodied Carbon (EC) Phase" (construction, renovation, and demolition stages) and the "Operational Carbon (OC) Phase" (operational stage). This gives the technology substantial carbon reduction benefits throughout the entire lifecycle of a building, providing an efficient and low-carbon solution for net-zero construction.

In addition to building facades, painted solar panels can be applied to signage, which not only expands the scope of renewable energy usage, but also reclassifies the accounting treatment of signage from an 'expense' to an 'investment.' Through this innovative solution, we demonstrate our commitment to environmental protection and set a new standard for global sustainable development.

連結網址｜https://www.joinit.com.tw/

SONiCE BiZ
好友零一站通

好友電智慧科技股份有限公司
Sonice AIoE Corporation

永續城市
Sustainable City

攤位編號 Booth No. | S145

#好友電一站通 #充電營運一站式上架平台 #充電營運商

好友電一站通：專為微型充電營運商量身打造，是一個專屬的充電站上架平台，透過好友電一站通，您可以輕鬆建立自己充電站，並透過「全台充電地圖」App，讓數萬名電動車車主快速找到你的充電站進行充電。我們提供從機電規劃、工程施作、充電樁安裝到營運上架及會員金流管理的一站式全方位解決方案，讓您輕鬆踏上充電營運商之路，享受源源不絕的投資報酬。

Sonice Biz is a platform tailored for micro charging operators to list their stations. With it, you can easily establish your own EV charging station and make it visible to thousands of EV drivers through the "Taiwan Charging Map" app. Drivers can quickly locate your station for charging. We offer an all-in-one solution, covering everything from electrical planning, engineering, charger installation, to operations, listings, and payment management. This makes becoming a charging operator simple and efficient, allowing you to enjoy continuous returns on your investment.

好友電一站通：深知個人站主資源有限、建立充電站困難的痛點，憑藉我們多年在系統服務、第三方充電服務營運建設與家用社區安裝等的多重專業知識，協助大型充電營運商建立並營運超過百個充電站，服務數萬名車主使用充電服務，我們不僅能助你成功上架充電站，還能有效維護營運，確保您的充電站靈活且快速地對應市場趨勢變化。

Sonice Biz understands the challenges faced by individual station owners, such as limited resources and the difficulties of setting up charging stations. With years of expertise in system services, third-party charging operations, and residential/community installations, we've helped major charging operators establish and run over 100 stations, serving tens of thousands of EV drivers. We not only assist in getting your charging station listed but also ensure smooth operations, allowing your station to adapt quickly and effectively to changing market trends.

連結網址｜https://sonice-aioe.com/

MY HONG TE
奉茶行動

原點社會企業股份有限公司 (奉茶行動)
CircuPlus Ltd.

永續城市
Sustainable City

攤位編號 Booth No. | S149

#ESG 無塑飲水方案 #ESG 社區參與方案 #REFILL 100% 喝水零廢

奉茶行動推出「RF100喝水零廢數據服務」，為企業ESG策略提供創新解決方案。透過物聯網(IoT)技術連結飲水機，將無塑飲水的成果轉化為可視化社會影響力。每次出水時，系統即時換算，顯示減少了多少支600毫升的寶特瓶，讓使用者直觀感受自身對永續發展的貢獻 ； 並藉由雲端、視覺化等模式，協助企業整合永續數據。從減少廢棄物的綠色辦公室方案，到強化利害關係人互動的社區參與項目；從培育未來人才的永續校園計劃，到提升內外部的ESG溝通價值，奉茶行動不僅幫助企業量化環境貢獻，還為其ESG策略提供有力支撐。我們致力於將永續理念轉化為可衡量的實際行動，推動企業品牌價值與社會永續發展。

CircuPlus' RF100 Service offers innovative ESG solutions. Using IoT, we visualize plastic-free water impact, showing bottles saved per use. We integrate sustainability data from green offices to stakeholder engagement. CircuPlus quantifies eco-contributions, supports ESG strategies, and turns sustainability into actions.

連結網址｜公司官網 https://www.circuplus.org/ ESG商務網站 https://refill100.org/

財團法人台灣尤努斯基金會
諾貝爾和平獎得主尤努斯博士授權機構

永續城市
Sustainable City

財團法人台灣尤努斯基金會
Foundation for Yunus Social Business Taiwan

攤位編號 Booth No. | S154

台灣尤努斯基金會致力於推廣尤努斯教授的社會企業模式與理念，透過教育、研究及社會企業創業孵化，幫助本地社會企業家和企業建立以社會使命為核心的商業模式。

基金會的使命包括：

1.推動社會企業教育與創業發展：透過工作坊、講座和培訓課程，協助企業與學生理解社會企業概念，培養社會創新人才。

2.促進跨界合作與國際連結：基金會與國內外的學術機構、企業及政府單位合作，共同推動社會創新與企業永續發展。

3.支持社會企業融資與資源媒合：基金會提供資金支持、專業諮詢及資源媒合，協助社會企業取得永續發展所需的資源。

展覽以「三零世界」為主題，設置三個主要展區：零貧窮區（Zero Poverty Zone）、零失業區（Zero Unemployment Zone）及零碳排區（Zero Net Carbon Zone）。運用實際個案呈現社企的實際成果，帶領參觀者了解台灣尤努司基金會的背景、帶給企業永續解決方案，並展示真實案例與未來發展願景。

連結網址｜https://www.yunustw.org/

新加坡商旭潤有限公司 台灣分公司
SINGAPORE XU RUN HOLDINGS PTE LTD TAIWAN BRANCH

資源循環
Resource Circulation

攤位編號 Booth No. S136

#除塵蟎 #水濾式 #零耗材

DOLPHIN是一種多功能水慮式清潔系統，所有生產和配件均來自德國。
它擁有四項外觀設計專利，主要設計採用“L-Lamella”分離器，可有效過濾灰塵顆粒和細小微生物。使用水清洗空氣、去除灰塵的概念，強調完全零耗材，以保持環境自然。

Dolphin is a multi-functional water-based cleaning system where all production and accessories are come from Germany. It has four design patents. Dolphin highly praised the real use of water cleaning and removing dust concept, emphasizing there is absolutely zero filter and dust bag in order to be environmental natural. With the main design "L-Lamella" separator, it can effectively filter dust particles, micro-bacteria and micro-organisms. The filtration performance is almost perfect.

德國海豚是一種多功能水慮式清潔系統，使用水清洗空氣、去除灰塵的概念，強調完全零耗材，以保持環境自然。

連結網址｜https://www.facebook.com/twdeguohaitun

新宏興營造股份有限公司
SIN HONG SING CONSTRUCTION CO., LTD.

永續城市
Sustainable City

新宏興營造股份有限公司
SIN HONG SING CONSTRUCTION CO., LTD.

攤位編號 Booth No. | S142

#新宏興營造股份有限公司 #全基企業有限公司 #現場固化區段翻修技術工程

新宏興營造為甲級綜合營造業，參與多項中央及各縣市政府重大公共工程。業務範圍包含土木工程-土地重劃、園區開發、道路橋梁；管線工程-電力、污水下水道、再生水；水處理工程-污水處理廠、再生水廠；建築工程-辦公大樓、廠房等。近年來多次獲得公共工程金質獎、公共工程金安獎、國家卓越建設獎榮譽。新宏興具備專業營建管理及施工團隊，並長期與國外公司技術合作，引進專業施工機械-短管推進設備。新宏興企業總部與後勤維護廠房設立於高雄和發產業園區，提供企業永續經營與長久發展的根基。重視「安全」、「進度」、「品質」、「務實創新」、「追求永續」為新宏興公司核心價值，將持續攜手政府與企業，致力於構築永續城市。

Sin Hong Sing Constrution Co. is a Level A general contractor, engaged in numerous major public infrastructure projects. Its business development includes civil engineering—land readjustment, industrial park development, roadways and bridges; pipeline engineering—power systems, wastewater sewers, and reclaimed water systems; water treatment engineering—wastewater treatment plants and water reclamation facilities; and building construction—office buildings and industrial plants. In recent years, it has been repeatedly recognized with the Public Construction Golden Quality Award, Golden Safety Award.

Sin Hong Sing possess a professional construction management and execution team and has maintained long-term technical collaborations with international companies, introducing specialized construction machinery, such as microtunneling equipment. The corporate headquarters and maintenance facilities are located in Kaohsiung, providing a solid foundation for the company's sustainable operations and long-term growth. Prioritizing "Safety," "Progress," "Quality," "Pragmatic and Innovative," and "Pursuit of Sustainability" as core values, Sin Hong Sing will continue to collaborate with the government and enterprises in the development of sustainable cities.

全基企業是一家致力於開發管道系統解決方案的服務商，專業進口污水及飲用水等下水道檢測與管道修復的高質量產品及技術。全基擁有熱忱的員工和強大的技術服務團隊，擁有20多年管道修復經驗，並與國際產品及技術保持密切合作，使我們能夠提供完整的系統，涵蓋污水下水道、再生水管道以及飲用水管道，從管內檢測到各類複雜管道的維護、翻修與更新工程。

Leestone Engineering & Mercantile Co. is a service provider focused on developing pipeline system solutions, specializing in the import of high-quality products and technologies for sewer inspection and pipeline rehabilitation. Leestone boasts a dedicated workforce and a robust technical service team, with over 20 years of experience in pipeline rehabilitation and close collaborations with international suppliers of products and technologies. Leestone delivers comprehensive systems for wastewater sewers, reclaimed water pipelines, and potable water systems, offering services ranging from internal pipeline inspection to the maintenance, rehabilitation, and refurbishment of complex pipeline networks.






連結網址｜https://www.polygretco.com/

聖育科技

聖育科技股份有限公司
Inforcom Technology Inc.

台灣智慧淨零建築產業聯盟

永續城市
Sustainable City

攤位編號 Booth No. | S240

#聖育科技 #智慧建築 #數位雙生

聖育科技是智慧建築大廠樺康智雲的經銷商，這次與樺康智雲共同展出「數位雙生技術」，數位雙生技術運用於建築業之雲端應用，實現建築全生命週期管理，從設計、建造、維運階段全局把握！從建材選用、降低能耗、效能提升、減碳管理，24hr不間斷實時監控分析，即時提供最佳化調整(e.g. 空間舒適度、預冷控制)，持續蒐集感測數據進行演算分析，自動提出預測性維護建議，並透過雙生演算模型，模擬不同操作方案所產生的影響，為企業打造專屬的節能減排解方。

Digital Twins:
The application of digital twin technology in the cloud for the construction industry enables comprehensive lifecycle management of buildings, covering the design, construction, and operation phases. From material selection to energy consumption reduction, performance enhancement, and carbon reduction management, the system provides 24/7 real-time monitoring and analysis. It offers immediate optimization adjustments (e.g., spatial comfort, pre-cooling control) and continuously collects sensor data for algorithmic analysis. The system automatically generates predictive maintenance suggestions and simulates the impact of different operational strategies through digital twin analysis models, creating a tailored energy-saving and emission-reducing solution for enterprises.

聖育科技作為樺康智雲經銷商，與樺康智雲共同展出「智慧物業管理系統」，整合BIM+FM+BA三大系統，以BIM或2D圖資應用為基礎，並可結合BA監控數據整合並導入AI演算模型，強化BIM FM智慧設備管理，提供即時異常告警派工和數據分析等功能。為協助大樓業者輕鬆減碳，物管結合碳盤查功能，蒐集建物用電數據、廢棄物清運紀錄，與設備用油或冷媒排放活動進行碳排計算，以視覺化圖表呈現碳排放活動匯出。並且結合智慧建築管理系統，能夠無縫接收各設備數據資料，控管整體建築能源效能，全方位優化管理效率，打造智慧化物業管理模式，為智慧建築發揮更大效能與價值。

Smart Facility Management:
Based on BIM or 2D data application to integrate BIM, FM, and BA systems, while incorporating BA monitoring data and AI algorithms to enhance BIM FM smart equipment management. It provides real-time abnomaly alerts and data analysis functions. To help building operators achieve carbon reduction, the facility management system integrates carbon inventory functionality, collecting data on building electricity usage, waste disposal records, and equipment fuel or refrigerant emissions to calculate carbon output. Carbon emission activities are visualized in graphical charts. By integrating with the smart building management system, it seamlessly receives data from all equipment, managing overall building energy performance, optimizing management efficiency, and creating a smart facility management model. This approach maximizes the effectiveness and value of smart buildings.

連結網址｜https://www.inforcom.com.tw/

誠宇國際股份有限公司
Cheng Yu International Co., Ltd.

永續城市
Sustainable City

攤位編號 Booth No. | S151

#小麥吸管 #茶吸管 #誠宇國際-微笑海龜

誠宇國際致力開發環保吸管、環保餐具及用品，如：小麥吸管、茶纖維吸管、可重複使用的小麥餐具（叉、匙、筷子）、環保杯、茶纖維牙線棒、茶纖維咖啡杯、茶纖維一次性刀叉匙……等，亦可為客戶客製化各項環保產品（例：環保提袋、農用地膜、保養品瓶罐……）、提升品牌形象。

小麥吸管和茶吸管屬於一次性的環保吸管，分別是小麥纖維or茶纖維製作，屬於農業資材回收再利用，真正達到環保循環經濟，符合ESG的全球環保趨勢，生物可分解，無傳統5P塑膠，無塑化劑，無重金屬。產品已外銷至世界各國：美國、加拿大、英國、法國、挪威、澳洲、香港、澳門……
誠宇國際希望公司所有產品都是能利他而且不傷害這塊土地，因此產品開發朝向友善大地的目標前進。

連結網址｜https://www.smilingturtle.com.tw/

資拓宏宇

資拓宏宇國際股份有限公司
iisi

台灣智慧淨零建築產業聯盟

永續城市
Sustainable City

攤位編號 Booth No. | S240

#資拓宏宇 #歐碳永續雲 #永續碳盤查

歐碳永續雲
企業一站式永續資訊入口

・洞悉企業碳管理需求
組織溫盤搭配產品碳足跡、碳中和及碳權模組協助企業滿足國際規範及國內法規之要求。
・強化氣候風險管理
判讀國內外專業氣象資料&文獻，協助企業掌握自身及供應鏈氣候衝擊之風險。
・合規
滿足不同ESG議題之揭露需求，協助企業加速因應產出合規文件。
・安全
多年政府大型專案開發經驗，產品設計首重資安，企業無須擔心資料外洩疑慮。
・專業
開發團隊囊括各專業領域人員以企業管理者思維投入參與，搭配使用者反饋，產出具備洞悉觀察之評估結果。
・友善
從ESG實際執行者的角度出發，導入直觀操作方式，有效提升盤查效率，縮短作業時間。

O Carbon Cloud for Sustainability
A one-stop hub for corporate sustainability information

・Understanding Corporate Carbon Management Needs
Assisting enterprises in meeting international standards and domestic regulations through organizational carbon inventories combined with product carbon footprint, carbon neutrality, and carbon credit modules.

・Strengthening Climate Risk Management
By interpreting domestic and international meteorological data and literature, we assist enterprises in understanding the risks of climate impacts on themselves and their supply chains, thereby strengthening their climate resilience.

連結網址｜https://www.iisigroup.com/

WISING
緯詠智能股份有限公司

緯詠智能股份有限公司
Wising Corporation

永續城市
Sustainable City

攤位編號 Booth No. | S249

#供應商評鑑 #綠色採購 #低碳轉型

TRENDENGINE AI供應鏈管理平台，具備一站式管理、AI賦能、Open Data整合與記錄保存管理的功能，整合OCR、爬蟲和GPT等技術，利用AI分析內外部供應商ESG數據，發展出供應商永續性管理方案，提高供應鏈查核效率和永續風險評估品質，協助企業能更精準而有效率地蒐集分析關於供應鏈的大數據，進而可在龐大且高度動態的供應鏈中有效管理各領域ESG議題，協助公司做出正確的決策，提升永續力的同時亦鞏固整體競爭力。

TRENDENGINE AI Supply Chain Management Platform is equipped with one-stop management, AI-enabled, Open Data integration and record-keeping management functions. It integrates OCR, crawler and GPT technologies, and uses AI to analyze internal and external suppliers' ESG data, develops solutions for supplier sustainability management, and improves the efficiency of supply chain audits and the quality of sustainability risk assessment, helping companies to more precisely and efficiently collect and analyze big data about the supply chain, and then effectively manage ESG issues in various fields in the huge and highly dynamic supply chain, helping companies to make the right decisions. It helps enterprises collect and analyze big data about the supply chain more accurately and efficiently, so that they can effectively manage ESG issues in various fields in the huge and highly dynamic supply chain, help companies make the right decisions, and enhance sustainability while consolidating their overall competitiveness.

連結網址｜https://www.guardiantw.com/

台灣智慧淨零建築產業聯盟

永續城市
Sustainable City

攤位編號 Booth No. | S240

華康智雲股份有限公司
Ennowell Co., Ltd.

#華康智雲 #數位雙生 #智慧建築

數位雙生
Digital Twins

數位雙生技術運用於建築業之雲端應用，實現建築全生命週期管理，從設計、建造、維運階段全局把握！從建材選用、降低能耗、效能提升、減碳管理，24hr不間斷實時監控分析，即時提供最佳化調整(e.g.空間舒適度、預冷控制)，持續蒐集感測數據進行演算分析，自動提出預測性維護建議，並透過雙生演算模型，模擬不同操作方案所產生的影響，為企業打造專屬的節能減排解方。

The application of digital twin technology in the cloud for the construction industry enables comprehensive lifecycle management of buildings, covering the design, construction, and operation phases. From material selection to energy consumption reduction, performance enhancement, and carbon reduction management, the system provides 24/7 real-time monitoring and analysis. It offers immediate optimization adjustments (e.g., spatial comfort, pre-cooling control) and continuously collects sensor data for algorithmic analysis. The system automatically generates predictive maintenance suggestions and simulates the impact of different operational strategies through digital twin analysis models, creating a tailored energy-saving and emission-reducing solution for enterprises.

智慧物業管理
Smart Facility Management

整合BIM+FM+BA三大系統, 以BIM或2D圖資應用為基礎，並可結合BA監控數據整合並導入AI演算模型，強化BIM FM智慧設備管理，提供即時異常告警派工和數據分析等功能。為協助大樓業者輕鬆減碳，物管結合碳盤查功能，蒐集建物用電數據、廢棄物清運紀錄，與設備用油或冷媒排放活動進行碳排計算，以視覺化圖表呈現碳排放活動匯出。並且結合智慧建築管理系統，能夠無縫接收各設備數據資料，控管整體建築能源效能，全方位優化管理效率，打造智慧化物業管理模式，為智慧建築發揮更大效能與價值。

Based on BIM or 2D data application to integrate BIM, FM, and BA systems, while incorporating BA monitoring data and AI algorithms to enhance BIM FM smart equipment management. It provides real-time abnomaly alerts and data analysis functions. To help building operators achieve carbon reduction, the facility management system integrates carbon inventory functionality, collecting data on building electricity usage, waste disposal records, and equipment fuel or refrigerant emissions to calculate carbon output. Carbon emission activities are visualized in graphical charts. By integrating with the smart building management system, it seamlessly receives data from all equipment, managing overall building energy performance, optimizing management efficiency, and creating a smart facility management model. This approach maximizes the effectiveness and value of smart buildings.

連結網址｜https://ennowell.com/

PAUL WURTH
SMS group

盧森堡商保沃思國際(股)公司 台灣分公司
Paul Wurth International S.A. Taiwan Branch

永續城市
Sustainable City

攤位編號 Booth No. | S150

連結網址｜www.paulwurth.com

SANTI RENEWABLE ENERGY 三地能源

三地能源股份有限公司
SANTI RENEWABLE ENERGY

能源 Energy

攤位編號 Booth No. | S347

#三地能源 #特爾電力 #環創電行

「特爾電力」為建構電動車的「充電生活圈」，已於全台建置70個快、慢充站點，在各縣市都至少設有一站，且持續建置中。同時攜手北基、中油、台亞、台糖等加油站、全家、萊爾富等龍頭超商、全聯超市、美麗華百貨、南投日月町商場、國道西螺站和大武之心休息站等複合生活機能場域佈點。積極搶進家充市場，與遠雄建設及三地開發合作，提供建商全方位的住家充電解決方案，替車主打造更觸手可及的補電生活圈。

「環創電行」專注於電動巴士的銷售業務，並獲得鴻華先進Model T的獨家代理權，銷售電動巴士給大都會客運、台中客運、臺北客運、高雄客運、府城客運等9家客運業者。同時，整合經銷體系與特爾電力的充電服務，目前特爾電力已建置超過15個電巴充電站點，為客運業者提供從電動巴士採購、電動巴士充電站規劃建置、EMS電能管理系統的全方位一條龍服務，實現能源監控與需量控制。

連結網址｜https://www.santienergy.com/

元融科技有限公司

元融科技有限公司
YUAN RONG TECHNOLOGY

能源
Energy

攤位編號 Booth No. S215

#一條龍太陽能工程服務：從設計到維護的永續之道
#專業引領、安全至上、永續發展：元融的綠色能源願景

元融致力於提供一條龍的太陽能工程服務，從初期設計到長期維護，謹慎地掌握每一個環節，確保以最高品質與效率完成專案。透過專業的團隊，元融在現勘測量、設計規劃、文件申請、加工施工到後續維護的每個階段，都秉持著專業、安全與永續的核心價值。我們採用先進的自動化鋼構焊接技術，以提升施工精準度與結構穩定性，確保每一個工程不僅高效能運作，更能符合能源永續的願景。此外，元融也為客戶提供穩定且可靠的儲能系統設計與能源管理方案。這些技術創新不僅提升了能源使用效率，更為未來的綠色能源轉型奠定了堅實的基礎。元融的目標不僅在於提供卓越的太陽能解決方案，更致力於推動整個行業朝向更安全、更永續的方向發展。

Yuan Rong is dedicated to providing comprehensive solar engineering services, carefully managing every phase from initial design to long-term maintenance to ensure top quality and efficiency. Our professional team embodies the core values of professionalism, safety, and sustainability throughout site surveys, design, documentation, fabrication, construction, and maintenance. By employing advanced automated steel structure welding, we enhance construction precision and structural stability, ensuring each project not only operates efficiently but also meets sustainable energy objectives. Additionally, Yuan Rong offers reliable energy storage system designs and energy management solutions, driving better energy utilization and laying a strong foundation for the green energy transition. Our commitment goes beyond delivering exceptional solar solutions; we aim to lead the industry toward a future defined by greater safety and sustainability.

元融秉持著「專業引領、安全至上、永續發展」的核心價值，致力於推動綠色能源的未來。作為太陽能工程領域的領導者，元融在每一個專案的執行過程中，嚴格遵循這三大原則。我們的團隊運用先進的自動化機器手臂技術進行鋼構點焊，不僅大幅提升了施工精準度，還顯著提高了結構的穩定性與耐用性。這些技術的應用不僅提高了施工效率，還確保了工地的安全性，並減少了資源浪費，完全符合永續發展的目標。此外，元融在能源管理與儲能系統設計方面的創新，進一步提升了能源使用的效率與穩定性。我們的願景不僅在於提供卓越的太陽能解決方案，更在於透過技術創新，引領行業走向更加綠色與永續。

Yuan Rong adheres to the core values of "Professionalism, Safety First, and Sustainable Development" to advance the future of green energy. As a leader in solar engineering, Yuanrong strictly follows these principles in every project. Our team utilizes advanced automated robotic welding technology for steel structures, significantly enhancing precision, stability, and durability. This not only boosts construction efficiency but also ensures site safety and minimizes resource waste, aligning with sustainability goals. Additionally, our innovations in energy management and storage systems further optimize energy use and stability. Our vision extends beyond delivering outstanding solar solutions; we aim to drive the industry towards greater sustainability through technological innovation.

連結網址｜https://yuanrong-tech.com.tw

加 雲 聯 網
Intelligent Cloud Plus

加雲聯網股份有限公司
Intelligent Cloud Plus Co., Ltd.

能源
Energy

攤位編號 Booth No. | S248

#EMS 能源管理系統 #智慧電網 #用電大戶/契約容量

「iVPP虛擬電廠智慧雲」是加雲的核心產品。團隊利用資通物聯網、電控和軟體開發的專業技術，從表前到表後提供全方位的服務，並與用電量在2000kW至5000kW之間的數千家企業建立合作關係，提供包括儲能、充電樁、太陽能、離岸風電等再生能源整合服務，為企業永續轉型提供多元化的解決方案。

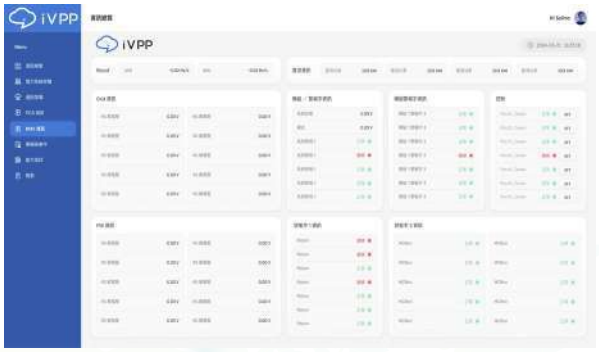
企業用戶可應用「iVPP虛擬電廠智慧雲」進行用電數據分析，透過AI技術對碳排量與能源管理進行最佳化運算。並整合參與台電輔助服務、需量競價等功能，幫助企業制定最佳化的用電排程與用電計畫。此外，加雲聯網也提供建置儲能自發自用的方案，透過協助企業參與輔助服務交易、尖離峰移轉（電能套利）以及優化契約容量，實現更高效、更彈性的能源調度。

Enterprise users can utilize the "iVPP" for electricity data analysis, optimizing carbon emissions and energy management through AI technology. Integrates functions such as participation in Taipower's auxiliary services and demand bidding, helping companies develop optimized electricity scheduling and plans. In addition, ICP offers solutions for building self-consumed energy storage, assisting companies in participating in auxiliary service transactions, peak-shaving and off-peak shifting (energy arbitrage), and optimizing contract capacity to achieve more efficient and flexible energy dispatch.

「資料採集與監控系統」(SCADA)，是發電站和變電站的自動化軟體控制基礎。可滿足各種電力監控需求，從發電廠、電網到各式變電站。

SCADA HMI控制軟體擁有能源管理應用中所有功能，可滿足電力監控領域較特殊之要求，無論是獨立系統或具遠程用戶端和SQL數據儲存之複雜Redundant複聯模式，都能最佳的適應任何模式或結構。可透過事件/警報觸發或以定期方式產生客製化報告，同時管理多種通信協定-從簡單的Modbus到IEC 61850(MMS和GOOSE)，包括主設備和從設備，也包括用於控制中心通信之通用協定，例如IEC60870-5-104/101，DNP3.0或OPC UA。

The SCADA HMI control software encompasses all functions required for energy management applications, meeting the specific demands of the power monitoring field. Whether in standalone systems or complex redundant configurations with remote clients and SQL data storage, it can optimally adapt to any mode or structure. It can generate customized reports either triggered by events/alarms or on a scheduled basis, while managing multiple communication protocols—from simple Modbus to IEC 61850 (MMS and GOOSE), including both master and slave devices, as well as general protocols for control center communication, such as IEC 60870-5-104/101, DNP3.0, or OPC UA.



連結網址｜https://www.icp-si.com/

Asia Hydrogen Energy

亞氫動力股份有限公司
Asia Hydrogen Energy Corp.

能源
Energy

攤位編號 Booth No. | S247

#亞氫動力 #沼氣與天然氣發電 #氫能發電

亞氫動力近年來大力投入沼氣發電業務，攜手合作夥伴-台以環能，共同於台南設置全台灣最大禽畜糞沼氣中心，目前已建置330kW發電容量，未來將持續擴大至最大發電量2MW。亞氫動力引進日本大廠Yanmar的發電機，不只可處理畜牧業的沼氣，也可用於天然氣；兩者皆可產出熱水，達到熱電聯供效益，降低總能源碳排係數，協助企業對廢水或淨零碳排的需求，打造完整的能源系統，提高投報率。

AHE start to invest biogas business , and cowroks with YANMAR company of famous generator equimpent ,which is not only could generate power, and also combined heat energy , total energy efficiency is over 85%
It would not only reduce carbon emmision and also be increasing IRR of project case

連結網址｜https://www.ah2e.com

品洲科技有限公司
Triplex Engineering Technology Co. Ltd

能源
Energy

#燃燒優化 #節能減排 #Eutech

攤位編號 Booth No. S250

德國優泰克 二維煙溫測量儀 2D Euflame

燃煤鍋爐及垃圾焚化爐共同的挑戰 - 燃料來源多元，元素組成熱值變動下，如何有效優化燃燒調整及空污排放控制成為重要課題。燃燒火焰煙氣偏流、爐膛局部熱源集中，均會造成爐管表面附著腐蝕結渣物而發生非預期性破管。此外，煤炭履歷資料中飛灰結渣指數及灰熔點溫度(DT、ST、HST&FT)管理亦與結渣和積垢、環保數據(NOx)及戴奧辛排放控制等皆與爐膛出口煙氣溫度(FEGT)息息相關。因此，掌握精確且即時的爐膛出口煙氣分佈對優化燃燒至關重要。EUflame是一種基於紅外線原理的量測系統，專為取得這一重要訊息以作為燃燒調整之依據而設計。

特點：

1.精確測量爐膛出口煙氣溫度分佈
2.準確定位火焰形狀
3.適用於燃煤、生質能、天然氣及垃圾廢棄物等系統
4.有效執行燃燒優化調整
5.利於SNCR / SCR系統注氨優化控制

The flame temperature and its distribution are fundamental properties of the combustion process influencing coal devolatilization, pollutant formation, heat transfer, unburned carbon (LoI) as well as slagging and fouling. Moreover, an unrecognized imbalance of the flame ball position may impose excessive stress on boiler parts leading to premature system failure. Reliable information on the temperature and its distribution are therefore paramount for an optimal boiler operation.
EUflame is an optical sensor based system specially designed for the application in fossil-fired steam generators to measure the furnace exit gas temperature (FEGT).
Benefit:

1.Precise measurement of FEGT distributions
2.Flame ball centering, Combustion and flame monitoring
3.Applicable to hard coal, lignite, biomass, gas etc.
4.Efficiency and availability improvement
5.Essential pre-requisite for robust and optimal SNCR operation

德國優泰克 虛擬風量計 Eusoft air

欲達成高效和最佳的製程控制需要準確可靠的製程資訊。這對於燃燒時的氣流分佈尤為重要：挑戰在於實現空氣和燃料在各個燃燒器的完美混合，因為這對效率、排放和燃燒品質皆有重大影響。現今於機組中應用的傳統氣流測量技術已難以勝任：不僅安裝成本過高，維護負擔也非常高，最重要的是，其量測數據的準確性和穩定性皆不足。這就是EUsoftair先進的虛擬風量測量儀的用武之地。它是一種巧妙的軟體，能夠從現有的DCS數據中持續確定完整的氣流。

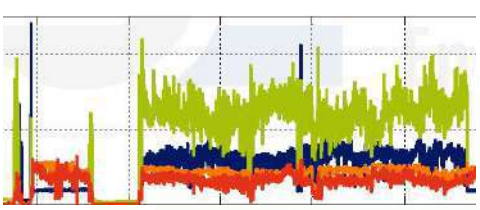
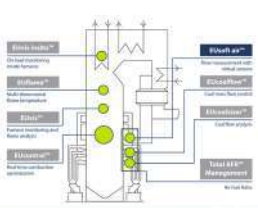
特點：1.資料無縫集成至DCS　2.可靠且精確的量測　3.硬體量少，無需維護　4.有效改善燃燒控制

Efficient and optimal process control requires precise and reliable process information. This is particularly true for the air flow distribution in a thermal steam generating unit: The challenge is to achieve perfect mixing of the air and the fuel at the individual burners, as this has strong repercussions on efficiency, emissions and combustion quality. Conventional air flow measurement technology reaches its natural limits when equipping an entire boiler: Not only is it too costly to install, the maintenance burden is very high, and, above all, the readings are not as accurate and robust as required over the entire operating range.
This is where EUsoft air steps in, a next generation virtual sensor. Essentially, it is a clever piece of software that continuously determines the complete air flows from readily available DCS data.
Benefit:

1.Seamless integration into DCS
2.Reliable and accurate measurement
3.Limited hardware requirements, No maintenance necessary
4.Improved combustion control



▲德國優泰克 二維煙溫測量儀 2D Euflame



▲德國優泰克 虛擬風量計 Eusoft air

連結網址｜https://www.tet-triplex.com/

橙然能源股份有限公司
Mobius Renewable Energy Co.,Ltd

能源
Energy

攤位編號 Booth No. S114

#永續發展服務 #能源管理服務 #節能改善服務

透過實際的節能減碳、創能與售電服務，協助企業實現碳中和，達成永續發展的目標
1.碳足跡 1S014067 2018 產品與服務碳足跡計算指引
2.碳盤查 ISO14064-1 2018 組織溫室氣體排放量盤查登錄
3.能源管理 IS050001 循環改善並結合組織日常實務之能源管理
4.減量專案執行
5.創能項目執行
6.綠電交易執行
7.國際第三方認證

世倉國際股份有限公司
WAP International CO., LTD

智慧製造
Smart Manufacturing

攤位編號 Booth No. | S454

#穿梭式貨架 #重量型貨架 #後推式貨架

重型貨架是使用最普遍的一種貨架，由於存儲物品較重，需配合棧板和堆高機使用，又稱為橫樑式貨架。重型貨架的存儲密度較低，但有良好的揀取效率和較低的造價。
穿梭式貨架系統是由貨架、穿梭台車及堆高機組成完整的高密度存儲系統，這種高效率的存儲方式為提高倉庫空間利用率帶來新的選擇。

Pallet racking is commonly used for storage of items packed with pallets, picked or loaded with forklift. Pallet racking has low storage density but high picking efficiency & low costs.
Radio shuttle is a racking system with high density storage including racking and electrically powered pallet runners which work with forklifts.
This high efficient storage solution provides a new option to maximum use of ware house volume.

後推式貨架是一種兼顧了存取效率和密集存儲的貨架形式，其原理是以傾斜軌道連接前後橫樑，多層台車重疊放置於軌道上，存儲貨物時從貨架前端將貨物置於頂層台車上，後續儲存貨物時，會將原先貨物推向裡面並依次放置於下一台台車上。當外側貨物被取走時，裡面的台車會因重力自動滑向外側。可以規劃儲位深度為2~4個棧板，較橫樑式貨架增加約30%存儲空間，適合少樣多量物品。

The push-back rack is a racking form that takes into account the access efficiency and intensive storage. Its principle is to connect the front and rear beams with inclined rails. When the goods are subsequently stored, the original goods will be pushed inside and placed on the next trolley in turn. When the outer goods are taken away, the inner trolley will automatically slide to the outer side due to gravity. The storage depth can be planned to be 2~4 pallets, which increases the storage space by about 30% compared with the beam-type shelves, which is suitable for a small variety of items.

連結網址｜http://wapracking.com.tw

台灣耶拿儀器有限公司
Analytik Jena Taiwan Co., Ltd.

智慧製造
Smart Manufacturing

攤位編號 Booth No. | S446

#MICAP-OES 1000 微波共振耦合氮氣電漿 ICP-OES
#HVC 360 髮夾線及電動車繞線模組線上檢測儀 #節能減碳的 ICP-OES

永續環境及能源材料的研究分析利器，美國 Radom 公司推出最節能減碳的 MICAP-OES 1000 N2-based Microwave ICP-OES 全新登場!! 企業 ESG 目標達成的最佳工具!! 獨家專利微波共振電漿耦合材料: Cerawave!! 使用一般等級(4N)的氮氣產生電漿，不需要 RF Generator，也無須外接水循環冷卻機，操作及維護成本最低!! 歡迎來電洽詢及實機操作展示。

Radom Corporation, USA developed the solution for onsite instrumentation with Microwave Inductively Coupled Atmospheric Plasma – Optical Emission Spectrometer with 1000W power. This innovative nitrogen-based plasma atomic spectroscopy instrument replaces the traditional argon generated plasma technology. MICAP-OES 1000 uses highly efficient Cerawave technology which eliminates the electric watercooled coil found in commercially available ICP-OES instruments today. Cerawave does not need water or air cooling and nitrogen is less expensive than argon. The power of Cerawave technology, coupled with a high-resolution echelle polychromator with CMOS detector, provides simultaneous measurement of elements in the prepared sample. The ability to screen core samples on location means results can be determined more quickly. An added benefit is the ability to collect more samples in an area to create a comprehensive map of the potential yield.

電動車馬達研發的必備儀器，丹麥 DSE Test Solution 公司針對髮夾線(Hairpin)及電動馬達模組(E-motor)的表面破損檢測工具：HVC 360 Series。採用導電軟毛刷設計，達到全方位360度線材表面絕緣層破損檢測，絕無死角!! 有效減少電動車研發生產成本，以及提高電動車馬達品質及良率!! 操作容易，維護成本低，電動車研發的最佳工具!! 可手動操作，亦可整合在 Hairpin 繞線機 PLC 系統達到線上檢測篩選功能!!

DSE Test Solution, Denmark manufactured and supply high quality test equipment for the wire and cable industry for more than 30 years already. The HVC 360 Seris use the low tension of the soft conductive brushes brings new opportunities for superior quality control of a wide range of dimensions - and with a full 360-degree surface coverage. The HVC 360 Series Measuring Head offers the end user of wire an effective way to detect defects as pin-holes or cracks in the insulation of the wire before start processing. Adding this measuring head before winding a rotor, coil, transformer, hairpin etc. secures the final product is not turned into scrap due to missing or insufficient insulation of the wire. Checking missing overlap for wrapped wire is possible too. Direct access to detected fault output makes it possible to stop the winding process or do a marking of the wire.

連結網址｜http://www.analytik-jena.com.tw

4 廣告及贊助
Advertisement & Sponsor

主辦單位 | Organized by

tass 社團法人 台灣永續供應協會

interplan 安益國際集團 / intercon™ 茵康國際

指導單位 | Advised by

環境部 Ministry of Environment

經濟部國際貿易署 International Trade Administration

高雄市政府 Kaohsiung City Government

協辦單位 | Co-organized by

中華經濟研究院 CHUNG-HUA INSTITUTION FOR ECONOMIC RESRARCH

ETtoday 新聞雲

TCIA 台灣化學產業協會 Taiwan Chemical Industry Association

交通部 Ministry of Transportation and Communications, R.O.C.

交通部運輸研究所 Institute of Transportation, MOTC

金屬工業研究發展中心 METAL INDUSTRIES RESEARCH & DEVELOPMENT CENTRE

國立高雄科技大學 National Kaohsiung University of Science and Technology

台灣經濟研究院 Taiwan Institute of Economic Research

台灣科技產業園區電機電子工業同業公會 TAIWAN TECHNOLOGY INDUSTRIAL PARK ELECTRICAL AND ELECTRONIC MANUFACTURER'S ASSOCIATION

台灣資源再生協會 The Formosa Association Of Resource Recycling

台灣資源再生工業同業公會 Taiwan Resource Recycling Industries Association

TAISE 台灣永續能源研究基金會 Taiwan Institute for Sustainable Energy

TSSA 台灣智慧城市產業聯盟 Taiwan Smart City Solutions Alliance

贊助單位 | Sponsored by

中華郵政

DS Energy 鼎日能源

凱基銀行

台灣金融服務業聯合總會 Taiwan Financial Services Roundtable

桃園國際機場股份有限公司 Taoyuan International Airport Corporation Ltd.

桃園 永續資源館 TAOYUAN SUSTAINABLE RESOURCE CENTER

TASS2025

亞洲永續供應+循環經濟會展
Sustainable Taiwan Expo

SEE YOU NEXT YEAR !

November 5 - 7 | 高雄展覽館 Kaohsiung Exhibition Center