



Anniversary SINCE 1997

**TAIPEI INNOVATIVE
TEXTILE APPLICATION SHOW
2016 台北紡織展
OCTOBER 17-19**



**TAIPEI WORLD TRADE CENTER
NANGANG EXHIBITION HALL**

台北世界貿易中心南港展覽館



2016 台北紡織展

開幕典禮 OPENING CEREMONY



New Highlights: Environmental Sustainability, Intelligent Textiles and Functional Applications

The Taipei Innovative Textile Application Show (TITAS) has entered its 20th year! TITAS 2016 revolved around the three major keystones of environmental sustainability, intelligent textiles, and functional applications, showcasing innovative highlights of Taiwan's textile industry. With 376 exhibitors from 10 countries at a display scale of 801 booths, TITAS this year set the finest record since its launch in 1997. Over a three-day exhibition period, approximately 35,000 visits were made by professional visitors and buyers, and representatives of more than 100 international brands and retailers were invited to carry out over 1,000 one-on-one purchasing meetings with exhibitors, creating business opportunities worth more than US\$60 million.

Under the auspices of the Bureau of Foreign Trade, Ministry of Economic Affairs (MOEA), TITAS 2016 was organized by the Taiwan Textile Federation (TTF), and successfully concluded on October 19. ROC President Tsai Ing-Wen attended the ribbon-cutting ceremony in person, and was accompanied by TTF Chairman Chan Chen Tien while visiting benchmark enterprises at the show. Many heavyweight textile entrepreneurs also made an

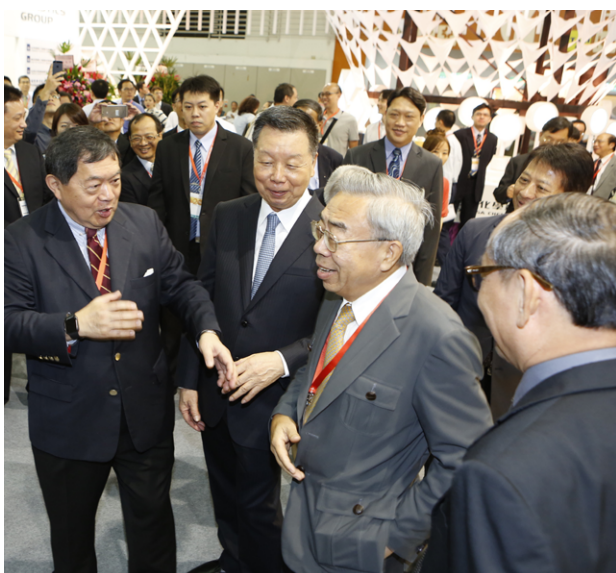
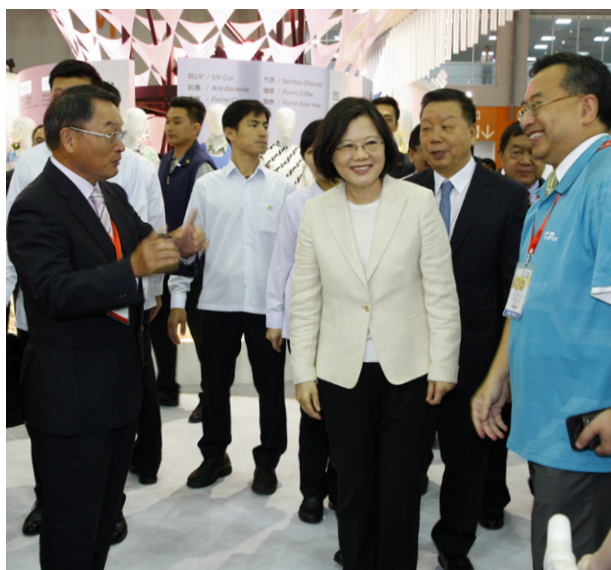
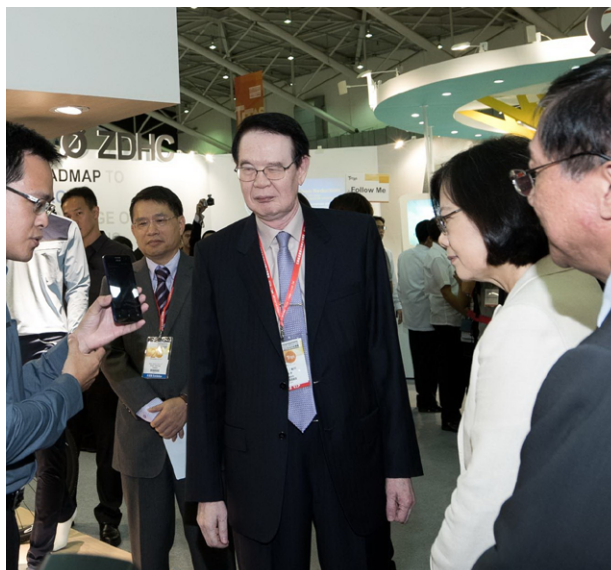
appearance, such as Formosa Plastics Group Chairman William W. Wong, Far Eastern New Century Chairman Douglas T. Hsu, Eclat Chairman Hung Cheng Hai, TexRay Chairman Ray Lin, New Wide Group General Manager Angela Chuang, and Tri Ocean Chairman Jammy Huang, while Economics Minister Chih-Kung Lee and Deputy Director General David Hsu of Bureau of Foreign Trade also attended the opening ceremony.

With sustainable innovation, Taiwan's textile industry breaks ground globally

According to TTF Chairman Chan Chen Tien, the textile industry is a very important source of foreign exchange earnings for Taiwan, and definitely not a sunset industry, but rather an industry successfully transformed by incorporating high technology. Today, Taiwan's functional textiles, made from eco-friendly materials and/ or through eco-friendly processes, have already established a distinctive image in the world marketplace. 90% of the functional fabrics used by Under Armour, for instance, are supplied by Taiwan, and Taiwan's functional fabrics were widely used for team jerseys in both the 2014 World Cup Brazil and the Rio 2016 Olympic, demonstrating the key position of Taiwan in the supply chain for global sports and outdoor wear.

In her remarks, President Tsai noted that TITAS has accompanied Taiwan's textile industry during its crucial stage in facing transitional challenges, testified its efforts in R&D and marketing, and built up its leading position in the field of functional textiles. The industry's innovation experience is worthy of consideration by other traditional industries. President Tsai said, "The textile industry used to be the industry that supported the people of Taiwan. Now, I am confident that it will be the industry to lead Taiwan into the future."

In addition to innovative functional textile products, the other two highlights of TITAS exhibits this year were sustainable textiles and smart textiles, which all became the focus of foreign media reports and the center of attraction of international buyers. The innovative smart technologies, the advanced sustainable production processes, and the multiple performance textiles together wrote a new page for the 20th Taipei Innovative Textile Application Show, and kick-started a future brimming with prospects.



Eco-friendly textiles move towards a sustainable future

The Paris Agreement, ratified by more than 70 countries around the world for the implementation of environmental protection, came into force on November 4, 2016. Responding to the rising environmental awareness among consumers, in order to obtain consumer recognition and to practice corporate social responsibility, Taiwan's textile industry has been actively producing sustainable textiles by adopting regenerated materials and eco-friendly production processes to achieve resource consumption reduction, efficient resource utilization, waste recycling, and zero emissions of harmful substances. Meanwhile, members of various sectors in the textile supply chain are eagerly working together to develop products with minimum carbon footprints.

In response to the focus of this exhibition, Formosa Plastics displayed the Group's latest technologies and applications around the theme "Smart Fashion, Sustainable Innovation". Its subsidiary Formosa Chemicals and Fibre introduced its fiber-grade PP pellets featuring eco-friendly, light weighted, quick-drying, thermal and comfortable, sweat discharging, easy to clean and chemical resistant, as well as a proprietary colored rayon fiber Crayon®. Another subsidiary Nan Ya Plastics presented green textiles such as the new biomass fiber Biopet and solution dyed yarn Chromuch. Formosa Taffeta, also a company under Formosa Plastics Group, introduced new technologies such as the Aquaoff® waterless dyeing and the new Boometex® recycled polyester production. The Aquaoff® waterless dyeing technology allows fabrics to be dyed in supercritical CO2 vessels, without using any water and dyeing auxiliary, a perfect eco dyeing process.



As a global leader in the green polyester industry, Far Eastern New Century (FENC) boasts green products that are innovative, functional, fashionable and differentiated. We see the company's abundant technology and R&D strength from the high performance of its natural, synthetic, regenerated and fine denier fibers. Chairman Hsu pointed out that green manufacturing is a big trend that not only benefits our environment but also implies lucrative opportunities. By probing further into "the use of discarded natural materials" (such as rice husk) and "materials recycling and reusing", the new development of the textile industry has only just begun.

Jintex is a leading brand in specialty chemicals for textiles and leather in Taiwan. The company has more than 150 products approved by Bluesign®, and is the first ZDHC (Zero Discharge of Hazardous Chemicals) contributor in Asia. In 2016, the company served as a demonstration unit for ZDHC chemicals management training, significantly showcasing Taiwan's efforts in the practice of environmental protection.

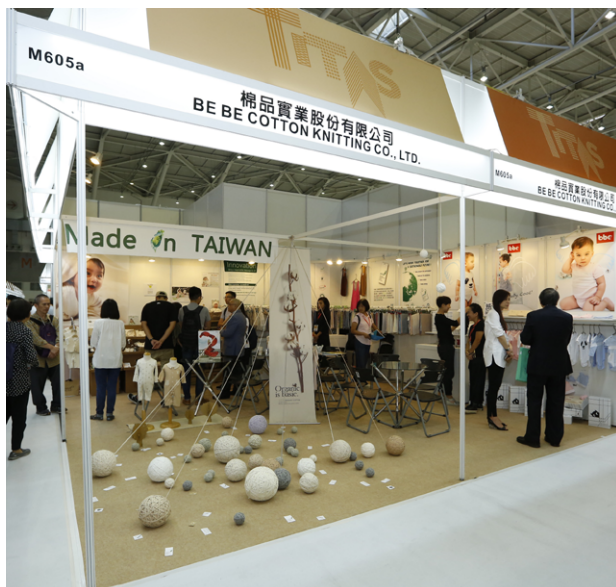
Everlight Chemical is committed to the R&D of eco-friendly technology and takes European and American standards as its benchmark. The company leads in adopting the green accounting system by taking into account the environmental costs as an important basis to make production decisions. In addition to pursuing technological innovation, the company also provides technical solution services concerning dyeing problems. At TITAS 2016, Everlight presented digital printing ink Everjet® RT & AT collections which adopt a green production process and are sediment free.



Be Be Cotton has long committed itself to becoming a sustainable fabric innovator. The company adopts Eco dyeing process for its fabric products, which requires only 3-4 times of dyeing and washing, rather than the 7 times for the conventional way. Also, during the process, dyeing and washing can be done at 60, and only 4 hours are needed to complete the whole process, compared with the 95 and 7 hours in a conventional method. Through this water conserving, energy and time saving technology, the carbon footprint is effectively reduced.

The Sheico Group has more than 40 years of experience in performance fabrics and apparel for water sports, with its core competency in moisture management of textiles. The group pays much attention to environmental issues. It has developed its own rubber recycling technology, and has obtained multiple international certifications including Bluesign®, Oeko-tex standard 100, UL (USA), ULC (Canada) and AS (Australia).

The S.Café yarn from Singtex has opened up a new direction for recycled textiles and already enjoyed international acclaim. Based on S.Café technology, Singtex's Airnest™ is a sustainable foam, presenting itself as a new alternative to petro-based ingredients while maintaining high performance in textiles. With more than 25% of coffee ground composite, Airnest™ has earned the US Department of Agriculture bio-based product certification and won the 2014 ISPO-Top 5 Award. The product provides odor control, UV protection, and temperature regulation functions. Besides replacing traditional foam materials to keep the body warm and comfy, it can be applied to a diverse range of end-use products.



Smart textiles open a new technological chapter

At this year's TITAS, we saw Taiwan's textile industry taking on market trends and perfectly combining the conversion of 'textiles to electronics' and 'electronics to textiles'. By integrating textiles with computer/communication/consumer electronics, a variety of smart textiles and wearable technologies are developed such as wearable flexible sensors, conductive metal fibers, cloud processing integration and wireless transmission technology, bringing a new type of product experience to the show.

FENC showcased DynaFeed, a new generation smart garment solution which has won the ISPO Gold Awards 2016/17. DynaFeed, a light weighted wearable technology, combines advanced biosensor with ultra-thin electrically conductive carbon nanotube polymer film to provide accurate biosignal and activity level data of the users to enhance their health management and athletic performance, without spending extra cost on devices. According to Chairman Hsu, the key factor to grasp the opportunity in the next wave of intelligent textiles is to be equipped with a complete industry chain covering from raw materials, yarn and fabrics to clothing. Specializing in only one segment will not give you a position in the market in the long run.

Formosa Taffeta displayed smart clothing at TITAS for the first time. Using hi-tech fabrics and Bluetooth connection with mobile apps, the company brought about a further upgrade in wearable technology. Current product functions include voice control smart clothes with colored LED display and temperature control smart clothes. The main purpose of these clothes is for safety and protection, while custom made products are also available to meet entertainment or health-oriented purpose.



The highlight of TexRay's displays this year was the smart clothes made with metal fiber. In particular the extremely hard stainless steel, which when extruded into filaments measuring one-tenth the width of a human hair, has a very soft and delicate touch. The company combines these stainless filaments with sensors to produce physiological monitoring device to measure vital signs. TexRay has been in the field of smart clothing for many years, and is now working in expanding applications to cover outdoor activities, sports training and remote home care, allowing clothing to become part of a smart lifestyle.

iQmax, a new smart textile brand from Asiatic Fiber, incorporates high-tech fiber and electronics to create a new element for functional apparel and smart clothing. The iQmax product line is a series of innovative textile modules. For instance, the LED module can be applied to clothes worn while exercising or riding a bicycle at night to increase safety; and the wearable and sensor module, using flat, soft and light weighted conductive tapes and containing 98 standard enameled wires coated with PU insulated films, is designed to ensure stable data transmission and wearing comfort.



Functional textiles construct new lifestyle

With respect to the development and application of functional textiles, Taiwan is not only an early bird but also a rich reaper. From the flexibility and temperature and humidity management, to the mixing and blending of different materials, new performances and technologies completely overturn the prior functions of fabrics. For instance, a special double-sided weave can not only make the fabrics breathable but also provide an excellent stretch and a crisp look to clothing. This kind of subtle techniques involving both fiber and weave gives an unprecedented variety of features to fabrics, making them a favorite choice by well-known international brands to use for tailored suits for their stylishness, lightweight and comfort.

Nan Ya Plastics brought us anti-UV fiber Suncool. Intended for thin and light fabrics, a special UV absorber is added to Suncool fiber to achieve UV protection effect. Also from Nan Ya, the conjugate stretch yarn Spanfit has a spiral structure by a heat treatment and is comfortable to wear. Formosa Chemicals and Fibre uses PP fiber for the inner layer of double layer functional fabrics, enabling moisture to be transferred from inside the fabrics to generate breathable and quick-drying effect, therefore suitable for sports and leisure wear.

FENC introduced its new polyester products, such as water-conserving and waste-reducing dope-dyed yarns, health-oriented anti-static heating fiber Sunex®, energy-accumulating luminous fiber TopLumins® for both safety and fashion purposes, and the one-way moisture transferring, quick-drying fiber TopDry®, a product developed in cooperation with 3M. TPEE, a waterproof



breathable film developed by FENC for outdoor functional textiles and unlike conventional solvent-based PU films, is eco-friendly and able to meet the increasing environmental demands from brands and consumers.

Eclat takes a 'user-oriented' approach to design its products which aim to reinforce the wonderful experience of engaging in various sports. Its functional products on display suited the needs of those with an athleisure or all-day-activity lifestyle. Four categories of products including Dry-Lite, Prime-Fit, Twist-Snug and Refined Knit were offered to meet the needs of different lifestyles.

In addition to engaging in the development of new materials and innovative finishing technology, New Wide Group has closely combined its manufacturing experience with fashion trends to make breakthrough in performance and eco textiles. The fashionable athleisure apparels on display demonstrated the versatility of knitted fabrics as well as the group's R&D strength.

Tri Ocean has long devoted itself to the R&D of Dreamfel®, a filament integrating performance and sustainability, and continues to explore the new possibility of this filament, with the latest focus on composite materials. Dreamfel® is light weighted, quick-drying, thermal, moisture transferring and sweat discharging, stain and chemical resistant, and easy to clean with good color fastness. The 3D (3 dimensional) Dreamfel® yarn was introduced at TITAS this year, which features light weighted and non-absorbent properties and can be used as padding material for clothing insulation and bedding.

Grandetex has brought out performance fabrics, including laminated and two or three-layered coated fabrics for ski, snowboarding, outdoor and work wear; waterproof and moisture permeable softshell laminated fabrics for outdoor wear in fall and winter; and moisture absorbent and fast drying, anti-UV, water repellent, antibacterial and thermal fabrics for outdoor and leisure market.

EricTex focused its display on Ultralight fabrics this year. When used for down jackets, the unique weaving technology and ventilation pores of the fabrics provide the best thermal effect. The new Moisture Windows fabrics from EricTex transfer sweat rapidly during exercising, while at the same time special motifs appear on fabric surface due to wetting effect.

NwoolTec™, a brand by Chia Her for functional wool textiles, appeals to sports, outdoor, leisure and fashion markets. NwoolTec™ possesses multiple functions including waterproof and moisture transferring, quick-drying, heat accumulating and thermal, odor absorbing and wear and tear resistant.

Multione provides a wide array of fabrics boasting of "fusion" (fashion x function). The brand adopts a weaving technique using a variety of colors by different proportions to create a profusion of color combinations on fabric surface. Apart from functional properties, these fabrics feature special motifs and patterns by way of space dyeing method.





Substantial Business Opportunities : Over 1,000 Purchasing Meetings with more than 100 Brands

Each year, the much-anticipated one-on-one meetings at TITAS enhance business prospects for the industry. This year, more than 100 international brands and retailers from 21 countries held over 1,000 purchasing meetings during the three-day exhibition period, creating a very vibrant business atmosphere for the show. In order to expand the marketplace for exhibitors, TTF has been keen to explore and invite new brands to the Show in recent years. Hence one-quarter of buyers invited this year are first-timers.

US brands made up the bulk of visiting brand representatives at this year's show. In the sports, outdoor and leisure category, in addition to such heavyweight players as Under Armour, North Face, Lafuma, Peak Performance, Ralph Lauren and Salewa, there were also many new comers, including America's Woolrich and Exxel Outdoors, Australia's One Planet and Vigilante, Norway's Stokke, the UK's Craghoppers, Germany's Elcline and Ion Bike, and Italy's Colmar, among others.

The application of functional fabrics has stepped into the fashion arena. In recent years, TITAS has also made considerable efforts to attract fashion brands. Apart from Burberry from the UK and Hugo Boss from Germany, both have attended for many years, fashion brands coming to the show this year included Michael Kors of the USA, IC Group-Tiger of Sweden, Marisa Lojas of Brazil, and Somsom of mainland China, to name a few.

Under Armour: a trend setter in sportswear

As the most dazzling sports brand in the world in recent years, UA buying representatives put it candidly that Taiwan is able to meet their one-stop shopping needs. In addition to the excellent supply chain, Taiwan offers them cooperation opportunities with high-tech companies, an advantage rarely available in other countries. They were also impressed with Taiwan's extraordinary weaving, dyeing and finishing technologies, such as fabrics which change color in response to temperature and humidity.

Millet-Eider-Lafuma: nature is the best product

This French group has a respect for nature, and its products align with this concept. Purchasing representatives from the group felt that every time they come to Taiwan, there are always surprises and discoveries. For example, they very much appreciated the waste water reprocessing and utilization system here. The strong momentum behind the R&D, plus the advantage of reasonable price and high quality, makes Taiwan's textile industry their best business partner.



Woolrich: sharing the same product concept with TITAS 2016

Established for more than 180 years, Woolrich's prospect is to become a real "sustainable business". Representatives from this American brand highly identified with the exhibition focus of eco-friendly and smart textiles at TITAS 2016. What prompted them to come here to look for business collaborators is Taiwan's excellent innovation, advanced manufacture, and solution-oriented service.

Mammut: looking for suppliers with international accreditation

The Swiss brand Mammut sells to the world with its materials coming mainly from Europe and the US, as well as Taiwan and mainland China. Brand representatives pointed out that in terms of fabrics quality and delivery, Taiwan enjoys a considerable advantage by keeping at a high and stable level. They have met some new potential suppliers arranged by TTF during this trip and are looking forward to establishing a long-term relationship.



TITAS 2017



October 16-18
Taipei Nangang Exhibition Hall 1

Exhibitors

| Exhibitor | Company | Share% | Booth | Share% |
|--------------|------------|------------|------------|------------|
| Domestic | 325 | 86 | 726 | 91 |
| Foreign | 51 | 14 | 75 | 9 |
| Total | 376 | 100 | 801 | 100 |

Exhibits

| Product Category | Company | Share% |
|------------------------------------|------------|------------|
| Apparel Textiles | 154 | 41 |
| Trimmings & Related Products | 58 | 16 |
| OEM/ODM Apparel & Accessories | 34 | 9 |
| Textile Machinery | 28 | 7 |
| Upholstery & Industrial Textiles | 27 | 7 |
| Cross Strait Textile Fair | 26 | 7 |
| Fiber, Filaments & Yarns | 23 | 6 |
| Related Services | 21 | 6 |
| Textile Inspection & Certification | 5 | 1 |
| Total | 376 | 100 |

Purchasing Products

| Product Category | Share% |
|------------------------------|--------|
| Apparel Textiles | 66 |
| – Functional Fabrics | 22 |
| – Fashion Fabrics | 16 |
| – Fibers | 15 |
| – Yarns | 13 |
| Ready to Wear & Sweater | 7 |
| Home Textiles | 5 |
| Industrial Textiles | 5 |
| Trimmings & Related Products | 5 |
| Accessories | 3 |
| Textile Machinery | 3 |
| Nonwoven Textiles | 2 |
| Inspection & Certification | 2 |
| Others | 2 |

Visitors

| Visitors | Number | Share% |
|--------------|---------------|------------|
| Domestic | 29,400 | 84 |
| Foreign | 5,600 | 16 |
| Total | 35,000 | 100 |

Top Ten Visiting Countries

| | |
|----------------|--------------|
| 1. Taiwan | 6. U.S.A. |
| 2. China | 7. EU |
| 3. Japan | 8. Thailand |
| 4. H.K. | 9. Vietnam |
| 5. South Korea | 10. Malaysia |



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Taiwan Textile Federation



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