

APPLICATION OF PHOTONICS TECHNOLOGY IN THE ENERGY INDUSTRY

Asia Photonics Expo (APE), a world's leading comprehensive photonics platform, will be held at the Sands Expo and Convention Centre in Singapore from 26 to 28 February 2025. It focuses on cutting-edge technologies and emerging markets in the fields of optical communication, optics, laser, infrared, sensing, and display, including **laser equipment, optical coating equipment, infrared thermal imaging, gas leak detectors, patrol inspection robots**. It serves as a one-stop platform for professionals in the energy industry to seek upstream and downstream products, innovative technologies, engage in trade negotiations, and facilitate procurement.

Exhibit Profile

Materials: Raw Materials, Lithium Batteries, etc.

Production and Manufacturing: Laser Processing Equipment/Lasers, Automation Equipment, Vacuum Coating Equipment, Semiconductor Equipment, etc.

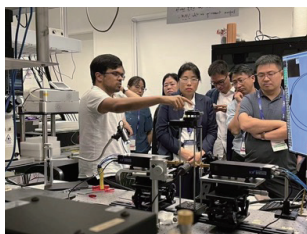
Testing and Measurement: 3D Vision/Inspectors, Infrared Technology, Test Chambers/Testers, Gas Analyzers/Leak Detectors, Infrared Thermal Imaging, Optical Fiber Communication, LiDAR, Industrial Sensors, etc.

CONCURRENT ACTIVITIES



Gala Dinner

Over 120 top-level executives of our exhibitors and partners attended the gala dinner and took the opportunity to engage in high-level discussions, exchange ideas, and explore potential collaborations.



Site Tour

APE co-organized with Singapore University of Technology and Design and LUX Photonics Consortium to curate a site tour which attracted over 40 companies to join, aiming to link between academia and industry.



Happy Hours

It will be held at VIP lounge to facilitate the networking and collaboration between exhibitors and VIP visitors.

CONCURRENT CONFERENCES

Application Forum

A series of application programmes will be dedicated to showcasing the application fields within manufacturing, medical, consumer electronics, etc.

Industry Forum

Explore the cutting-edge optoelectronic technology and gain in-depth insights into its latest developments across various photonics application fields, thereby driving innovation in upstream and downstream products.



BOOTH APPLICATION



APE AT A GLANCE

Application of Photonics Technology in the Energy Industry

26-28 February 2025
Sands Expo and Convention
Centre (Marina Bay Sands) L1

*Only part of exhibits, listed in no order.

Material

Raw Material

- Ceramic Target
- Quartz Glass
- SiO or SiO₂
- Strontium Carbonate
- Tungsten
- Ultra-Pure Tellurium / High-Purity Sulfur
- Crystal
- Infrared Optical Component
- Custom-Made Optical Component
- Ultraviolet-Transparent Optical Filter
- UV Photography Filter
- Telecentric Lens
- Welding Field Lens
- Fluoride Optical Component

Lithium Battery

- Near-Space Perovskite Photovoltaic Cells
- High-Energy-Density Lithium-Ion Batteries
- Long-Cycle Quasi-Solid-State Lithium Metal Batteries
- Flexible Batteries

Production & Manufacturing

Laser Processing Equipment / Laser

- Handheld/3D Laser Engraver
- Solder Ball Welding Machine
- Fully Automatic Laser Round Cutting Machine
- UV Laser Machine
- Precision Cutting Machine
- Femtosecond UV 30W Laser
- Solid-state UV Laser
- Picosecond Infrared Laser
- Pulsed Fiber Laser
- Semiconductor Laser
- Fiber Femtosecond Laser
- Mid-Infrared Solid-state Laser

Automation Equipment

- Mechanical Clamps
- Electromagnetic Valve
- Electrical Proportional Valve
- High Load Gripper
- Automatic Ultrasonic Aluminum Wire Welding Machine
- Three-axis Curved and Large-area Dynamic Focusing Scanning and Control System

Vacuum Coating Equipment

- Thin Film Solar Cell Pilot Production Line
- Nano-coating Preparation
- Electron Beam Evaporation Coating Equipment
- Ultrasonic Spraying Equipment
- Thermal Resistance Evaporation Coating Equipment
- Ion Beam Sputtering Coating Machine
- Monolithic PVD Coating Equipment
- IAD-Assisted Evaporation Coating Machine

Semiconductor Equipment

- Multi-chip Intelligent Mounting Equipment
- Die Bonder
- Water Inspection Equipment
- Chemical Vapor Deposition Equipment
- Annealing Furnace/Adhesive Equipment
- Plasma Surface Treatment Equipment/Cleaner
- Vacuum Reflow Soldering Furnace
- Coupling Platform

Measuring & Test Instrument

3D Vision/Inspection Equipment

- Non-standard Vision Inspection Equipment
- High-speed Vision Inspection Equipment
- 3D Optical Profiler
- 3D Optical Surface Measurement System
- New Energy Power Battery Coarse Aluminum Wire Bonding Tensile Testing System
- Welding In-Process Inspection System
- Three-dimensional Surface Profilometer
- Image Measurement Microscope

Infrared Technology

- Infrared Thermal Imager
- Handheld Infrared Thermal Imager
- New Energy Storage and Detection Products
- Wireless Network Cylinder Machine

Test Chamber/Test Machine

- High Voltage Accelerated Aging Test Chamber
- Rapid Temperature Change Test Chamber
- Cold and Hot Shock Test Chamber
- Vibration Test Machine
- Comprehensive Environmental Test Chamber
- Impact Test Machine
- Multi-functional Push-pull Force Tester

Gas Analysis/Leak Detector

- Laser Tracker
- Helium Mass Spectrometer Leak Detector
- Air-tightness Leak Detector
- High Sensitivity Photoacoustic Spectroscopy Trace Gas Monitor
- Laser Material Intelligent Analyzer

Lithium Battery

- SUNWODA
- CATL
- BYD
- LISHEN
- Gotion
- BAK
- HAN'S SLE
- FDB
- CABRI
- Eastar
- Hitium
- CR MICRO
- Tianneng
- CALB

Power Network

- STATE GRID
- CSG
- Energy China
- SEC
- CSG
- Schneider
- Electric
- Shanghai
- Electric
- CNOOC
- China
- Huaneng
- SABIC
- KINWONG
- CSCC
- GIEC
- NCEPU
- UESTC

Infrared Thermal Imaging

- Handheld Infrared Thermal Imager
- On-board VOCs Gas Emission Visualization Inspection System
- Fully Automatic Tool-type Thermal Imager
- UAV Infrared Thermal Imaging Payload
- Explosion-proof Infrared Gas Leak Detector
- Mining Safety Dual-spectrum Ball Machine
- A-Class Three-phase Power Quality Analyzer
- Thermal Imaging Binocular Heavy-duty Pan-tilt Online Monitoring Product

Optical Fiber Communication

- Super Sensing Optical Cable
- Wide Spectral Range Special Fiber and Fiber System
- Large Mode Field Mirror Fiber
- Fiber Bragg Grating Array
- Outdoor Optical Cable
- High Temperature Resistant Optical Fiber
- Power Optical Cable
- Copper Deformed Wire

LIDAR

- Solid-state LIDAR
- Thermal Imaging Panoramic Radar
- Aircraft Cabin Laser Wind Measurement Radar
- UAV-mounted Integrated LIDAR Hyperspectral Imaging System
- Ground-based Wind Measurement LIDAR
- Wind Measurement LIDAR Module

Industrial Sensor

- Infrared Combustible Gas Sensor
- Optical Fiber Accelerometer Sensor
- Displacement Sensor
- Intelligent Electrostatic Sensor
- Distance Measuring Sensor



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APE 2024 POST SHOW REPORT