ISTFA/2025

51ST INTERNATIONAL SYMPOSIUM FOR TESTING AND FAILURE ANALYSIS

NOVEMBER 16–20 | PASADENA CONVENTION CENTER, PASADENA, CA

SHOW DIRECTORY

ORGANIZED BY:

ASM INTERNATIONAL

EDFAS
Electronic Device Failure Analysis Society
ASM INTERNATIONAL

OFFICIAL MEDIA SPONSOR:

ELECTRONIC DEVICE FAILURE ANALYSIS
A RESOURCE FOR TECHNICAL INFORMATION AND INDUSTRY DEVELOPMENTS

ISTFAEVENT.ORG

ISTFA 2025 ORGANIZING COMMITTEE

Special thanks to the ISTFA 2025 Technical Program volunteers for another outstanding conference. Your hard work and dedication are greatly appreciated.

Committee Members

General Chair:

Renee Parente
AMD

Vice General Chair:

Kristofor Dickson
NXP

Technical Program Chair:

Ted Kolasa
Northrop Grumman

Past General Chair:

Yan Li
Samsung

Tutorial & Short Course Chairs:

Erwin Herndarto
Silicon Labs

Daminda Dahanayaka
IBM

Panel Chairs:

Wentao Qin
Microchip

Greg Johnson
Zeiss

Exposition Chairs:

Sebastian Brand
Fraunhofer IMWS

Chris Richardson
Allied

User Group Chairs:

Anita Madan
Independent Consultant

Cecile Bonifacio

Jayant D'Souza
Siemens

Movie Chairs:

Peng Li
Intel

AV Chairs:

Rose Ring
Thermo Fisher

Chuan Zhang
Nvidia

FA Technology Roadmap Chair:

Vinod Narang
AMD

Keith Serrels

Local Arrangements Chair:

Seraina Murphy
The Aerospace Corporation

University Chairs:

Umberto Celano
Arizona State University

International Chairs:

Rose Ring
Thermo Fisher

Dayanand Nagalingam
GlobalFoundries

TABLE OF CONTENTS

ASAP-1® In Situ

5-AXIS DIGITAL MILL & POLISHER

EXPANDING THE SAMPLE PREP TOOLKIT

'In Situ' RST Measurement

- **Single footprint system solution**
- **Eliminates tilt/curve translation errors**

Ultra-High Res Cameras

- All systems now include 3 UHD cameras at **Target**, **45° Side**, and **45° Front** positions
- **NEW** NIR Illumination Mode provides through-silicon imaging

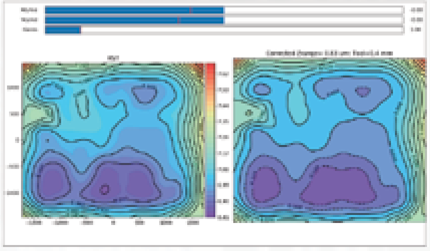
Work with Overlays

- Import Optical, X-RAY, and C-SAM images
- Image manipulation tools include **Rotate**, **Stretch**, **Resize**, and **Layer-Locking**

Unique Legacy Modules

- Thermal Relaxation (heat & cool) stage
- Automated Endpoint Module - Capacitance/Resistance based

MEET 3D & CURVED/WARPED SURFACE CHALLENGES WITH ADAPTIVE MODULES



+/- 0.4µm in overall uniformity in thinned area,
+/- 0.12µm in required zone

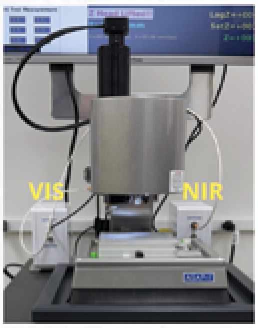
Combined Mapping & Polishing Control

Generated data provides an adapative model to obtain final RST and thickness profile

Fluid Control System

Dose & remove lubricants or abrasives while maintaining a live view of the process

IN SITU THROUGH-SILICON RST MEASUREMENT



Code	Spectrometer	Application
UT-F3	NIR	Standard thinning
UT-VIS	Visible Light Extension	Ultrathinning (<10 microns)

Two In Situ options are available for measuring and mapping remaining silicon thickness (RST).

ULTRA TEC
MANUFACTURING, INC.

Toll Free (US) 1-877-542-0609
Tel: 1-714-542-0608 Fax: 1-714-542-0627
e-mail: info@ultratecusa.com
www.ultratecusa.com

GENERAL INFORMATION

CONFERENCE REGISTRATION HOURS

Pasadena Convention Center, Exhibit Hall Foyer

Saturday, November 15 | 4:00 – 6:00 p.m.
Sunday, November 16 | 7:00 a.m. – 5:00 p.m.
Monday, November 17 | 7:00 a.m. – 5:00 p.m.
Tuesday, November 18 | 7:30 a.m. – 5:30 p.m.
Wednesday, November 19 | 7:30 a.m. – 4:00 p.m.
Thursday, November 20 | 7:30 – 1:00 p.m.

EXPOSITION DATES AND TIMES

Pasadena Convention Center, Exhibit Halls A&B

Tuesday, November 18 | 9:30 a.m. – 6:00 p.m.
Wednesday, November 19 | 9:00 a.m. - 4:00 p.m.

LUNCH AND REFRESHMENT BREAKS

Monday, November 17
Refreshment Break 10:00 – 10:20 a.m. | Meeting Room Foyer
Lunch 12:20 – 1:40 p.m. | User Group Meeting Rooms
Refreshment Break 2:40 – 3:00 p.m. | Meeting Room Foyer

Tuesday, November 18
Exhibit Halls A&B
Refreshment Break 9:30 – 10:30 a.m.
Lunch 11:50 a.m. – 12:50 p.m.
Refreshment Break 2:50 – 3:20 p.m.

Wednesday, November 19
Exhibit Halls A&B
Refreshment Break 9:00 – 9:30 a.m.
Lunch 11:30 a.m. – 12:30 p.m.
Refreshment Break 3:00 – 4:00 p.m.

Thursday, November 20
Refreshment Break 9:40 – 10:00 a.m. | Meeting Room Foyer
Lunch 11:20 a.m. – 12:50 p.m. | User Group Meeting Rooms

STAY CONNECTED AT THE SHOW

Follow show news on X (formerly Twitter), Facebook and LinkedIn. Share your photos and videos by using #ISTFA2025.

MOBILE APP

Download the official event app for Apple and Android devices by searching 'ISTFA 2025'.

SPECIAL NOTE: the only way to view the full ISTFA technical program is via the mobile app or via the ISTFA 2025 website.

Access all of the following features on your smart phone:

- Search for exhibitors, read their company profiles, and request meetings
- Locate the booths of your favorite exhibitors on the exhibit hall floor plan
- View the technical schedule and search for presentations that interest you
- Create an itinerary and review your saved presentations and exhibitors
- Search for speakers and connect with other attendees at the eve
- Complete a survey for each tutorial presentation and the Best Paper!

INTERNET ACCESS

Complimentary WiFi access for attendees is available throughout the Hilton Pasadena Convention Center.
Network: ISTFA; Password: ISTFA 2025

Scan the QR code below to view the ISTFA 2025 Technical Program!

SCAN ME

OR CLICK HERE!

SCHEDULE AT-A-GLANCE

**AS OF 11/4/25*

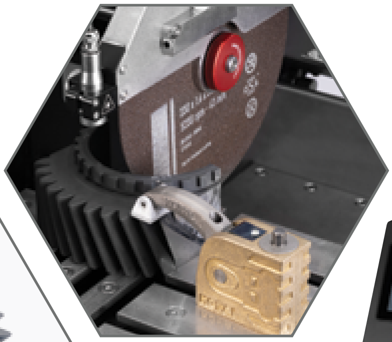
SATURDAY, NOVEMBER 15, 2025		
8:30 a.m. – 12:30 p.m.	Physical Failure Analyses for Solving Problems* *(REGISTRATION REQUIRED)*	The Westin, San Marino
1:30 – 5:30 p.m.	Beam Based Defect Localization* *(REGISTRATION REQUIRED)*	The Westin, San Marino
4:00 – 6:00 p.m.	Registration Open	Exhibit Halls A&B Foyer
SUNDAY, NOVEMBER 16, 2025		
7:00 – 8:00 a.m.	Author's Coffee/Briefing	Ballroom F
7:00 a.m. – 5:00 p.m.	Registration Open	Exhibit Halls A&B Foyer
8:00 a.m. – 5:20 p.m.	Tutorial Programming	Ballrooms A, B, C
10:00 – 10:20 a.m.	Morning Refreshment Break	Meeting Space Foyer
12:20 – 1:30 p.m.	Lunch	Ballrooms D&E
3:30 – 3:50 p.m.	Afternoon Refreshment Break	Meeting Space Foyer
MONDAY, NOVEMBER 17, 2025		
7:00 – 8:00 a.m.	Author's Coffee/Briefing	Ballroom F
7:00 a.m. – 5:00 p.m.	Registration Open	Exhibit Halls A&B Foyer
7:30 – 10:00 a.m.	Opening Session & EDFAS General Meeting	Ballroom D
10:00 – 10:20 a.m.	Morning Refreshment Break	Meeting Space Foyer
10:20 a.m. – 5:00 p.m.	Technical Programming	Ballrooms A, B, C
12:10 – 1:40 p.m.	FIB + SPM User Group Discussions & Lunch	Ballrooms D&E
2:40 – 3:00 p.m.	Afternoon Refreshment Break	Meeting Space Foyer
5:00 – 6:30 p.m.	Tools of the Trade Tour* *(PRE-REGISTRATION REQUIRED)*	Exhibit Halls A&B
6:30 – 9:30 p.m.	Social Networking Event* *(TICKETS SOLD OUT)*	The Westin, Fountain Ballroom
TUESDAY, NOVEMBER 18, 2025		
7:00 – 8:00 a.m.	Author's Coffee/Briefing	Ballroom F
7:30 a.m. – 5:30 p.m.	Registration Open	Exhibit Halls A&B Foyer
8:30 – 9:30 a.m.	Keynote Session: Dr. Liwei Wang, Senior Director of Heterogeneous Integration Foundry Technology Development, AMD	Exhibit Halls A&B - Industry Forum
9:30 – 10:30 a.m.	Morning Refreshment Break	Exhibit Halls A&B
9:30 a.m. – 6:00 p.m.	Exhibit Hall Open	Exhibit Halls A&B
10:00 a.m. – 4:20 p.m.	Technical Programming	Ballrooms A, B, C
11:50 – 12:50 p.m.	Lunch on the Expo Floor	Exhibit Halls A&B
2:10 – 2:50 p.m.	The Capital Equipment Buying Journey in FA Labs	Exhibit Halls A&B - Industry Forum
2:50 – 3:20 p.m.	Afternoon Refreshment Break	Exhibit Halls A&B
3:20 – 4:50 p.m.	AI User Group Discussion	Ballroom D
4:30 – 6:00 p.m.	Welcome Reception with Exhibitors	Exhibit Halls A&B

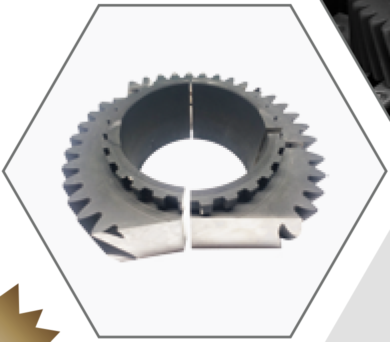
CONTINUED ON NEXT PAGE

SCHEDULE AT-A-GLANCE

**AS OF 11/4/25*

WEDNESDAY, NOVEMBER 19, 2025		
7:00 – 8:00 a.m.	*AUTHOR'S COFFEE/BRIEFING*	Ballroom F
7:30 a.m. – 4:00 p.m.	*REGISTRATION OPEN*	Exhibit Halls A&B Foyer
8:00 a.m. – 3:00 p.m.	Technical Programming	Ballrooms A, B, C, D, Industry Forum
9:00 a.m. – 4:00 p.m.	Exhibit Hall Open	Exhibit Halls A&B
9:00 – 9:30 a.m.	Morning Refreshment Break	Exhibit Halls A&B
9:00 – 10:30 a.m.	Sample Prep User Group Discussion	Ballroom D
10:30 – 11:30 a.m.	Keynote Session: Steven Herschbein, Independent Consultant, IBM/GFS Retired	Exhibit Halls A&B - Industry Forum
11:30 a.m. – 12:30 p.m.	Lunch on the Expo Floor	Exhibit Halls A&B
12:30 – 1:30 p.m.	Women in Electronics Failure Analysis (WEFA) Session	Exhibit Halls A&B - Industry Forum
1:30 – 3:00 p.m.	Panel Discussion: Scaling Beyond Moore's Law: Heterogeneous Computing and Advanced Packaging	Exhibit Halls A&B - Industry Forum
3:00 – 4:00 p.m.	Expo Dessert Reception, Poster Session, and Video Contest	Exhibit Halls A&B
THURSDAY, NOVEMBER 20, 2025		
7:00 – 8:00 a.m.	Author's Coffee/Briefing	Ballroom F
7:30 a.m. – 1:00 p.m.	Registration Open	Exhibit Halls A&B Foyer
8:00 a.m. – 2:10 p.m.	Technical Programming	Ballroom A, B, C
9:40 – 10:00 a.m.	Morning Refreshment Break	Meeting Space Foyer
11:20 a.m. – 12:50 p.m.	OFI + SIP User Group Discussions & Lunch	Ballrooms D&E





SHOW DIRECTORY

EXPOSITION DATES AND TIMES

Pasadena Convention Center, Exhibit Halls A&B

TOOLS OF THE TRADE TOUR

Monday, November 17 | 5:00 p.m. – 6:30 p.m.
(Pre-Registration Required)

EXHIBIT DATES & TIMES

Tuesday, November 18 | 9:30 a.m. – 6:00 p.m.

- Morning Refreshment Break | 9:30 – 10:30 a.m.
- Lunch on the Expo Floor | 11:50 a.m. – 12:50 p.m.
- Afternoon Refreshment Break | 2:50 – 3:20 p.m.
- Welcome Reception with Exhibitors | 4:30 – 6:00 p.m.

Wednesday, November 19 | 9:00 a.m. – 4:00 p.m.

- Morning Refreshment Break | 9:00 – 9:30 a.m.
- Lunch on the Expo Floor | 11:30 a.m. – 12:30 p.m.
- Expo Dessert Reception, Poster Session, and Video Contest | 3:00 – 4:00 p.m.

We appreciate and acknowledge the following sponsors

CORPORATE SPONSOR:

ThermoFisher SCIENTIFIC

SPONSORS:

ALLIED HIGH TECH PRODUCTS, INC.
AMERICAN ELEMENTS THE ADVANCED MATERIALS MANUFACTURER®
BSET EQ Plasma & Thermal Solutions
Tescan Accelerating the Art of Discovery
ULTRA TEC MANUFACTURING, INC.
ZEISS

SUPPORTERS:

DIGIT DC CONCEPT FA Solution and HighTech Equipment
JIACO INSTRUMENTS
nanoScience Instruments
NEOCERA MAGMA
QUARTZ
SELA WE CLEAVE THE WAY
SIEMENS
TED PELLA, INC. Microscopy Products for Science and Industry

OFFICIAL MEDIA SPONSOR:

ELECTRONIC DEVICE FAILURE ANALYSIS
A RESOURCE FOR TECHNICAL INFORMATION AND INDUSTRY DEVELOPMENTS

UPDATED 10/8/25

ORGANIZED BY:

ASM INTERNATIONAL
EDFAS Electronic Device Failure Analysis Society ASM INTERNATIONAL

BSET EQ
Plasma & Thermal Solutions

VISIT US !!!
ISTFA 2025
BOOTH # 523

BSET EQ has proudly served the semiconductor failure analysis industry since 1998.

Our decapsulation tools were the **first** to expose second bonds in BGA, **first** to perform damage free exposure of first and second bonds with copper technologies, and **first** to perform damage free exposure silver wires and other Ag technologies.

Still the largest install base with over 25 years of experience in plasma decap!

Today's PLASER™ has many advanced features that make it the system of choice for your plasma decap needs.

PLASER™ Features:
- Advanced controller
- Automated "Next Step" filler removal
- Integrates with laser systems
- Progress monitor camera
- Precision automated stage
- Proprietary plasma source(s) are ION free
- Multiple sources available to suite your needs
- Automatic ultrasonic sample cleaning routines
- Precision temperature control at sample stage
- O_2 only process, where applicable
- High throughput options available

PLASER™

FA-2000 Tabletop

Our FA series represents our top of the line reactors for single package or wafer processing in the semiconductor industry.

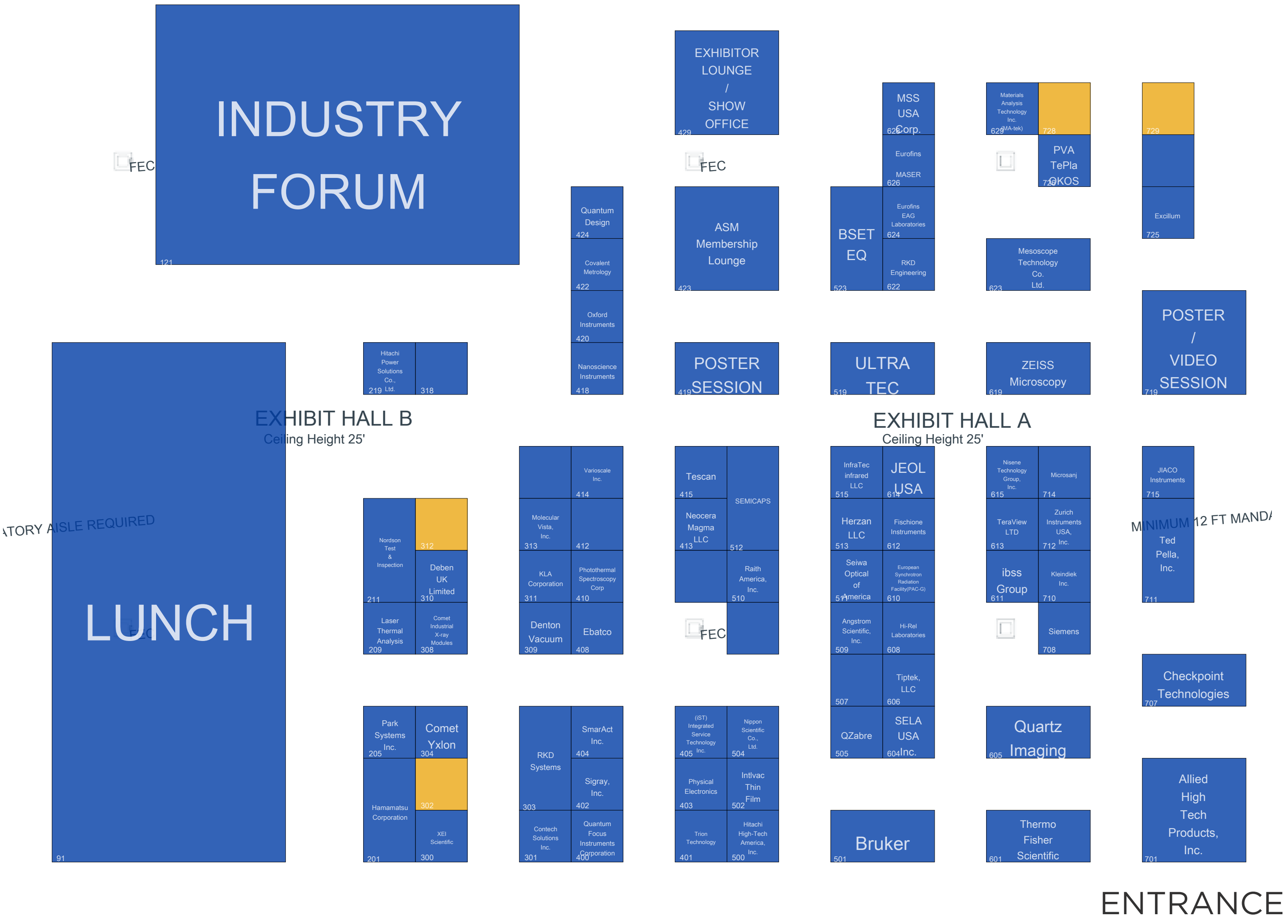
We deliver top notch performance and value at an affordable price to our potential and existing customers.

We have developed a standard format and footprint for the tool that houses all of the most commonly requested high end options for RIE, ICP and MW based processes.

We are happy to work to meet demanding customer specifications with regards to hardware, tooling and process performance, at all times.

BSET EQ – 2545 west 10th Street, Suite A, Antioch CA 94509 – Ph: (925) 755-2300 – www.bseteq.com

ISTFA 2025 FLOOR PLAN



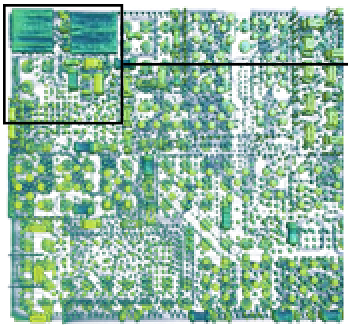
VIEW THE INTERACTIVE ISTFA 2025 FLOOR PLAN ON THE WEB HERE:

ISTFA FLOOR PLAN

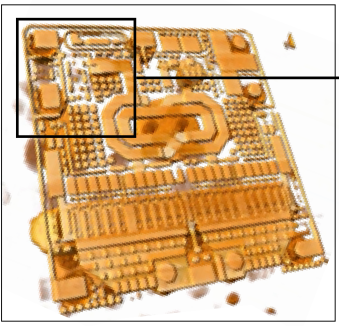
ISTFA EXHIBITOR LIST

ISTFA EXHIBITING COMPANIES	BOOTH #
3D-Micromac	318
Allied High Tech Products, Inc.	701
Angstrom Scientific, Inc.	509
Bruker Corporation	501
BSET EQ	523
Carl Zeiss Microscopy, LLC	619
Checkpoint Technologies	707
Comet Industrial X-ray Modules	308
Comet Yxlon	304
Contech Solutions Inc.	301
Covalent Metrology	422
DC - Digit Concept	411
Denton Vacuum	309
Deben UK Limited	310
Eurofins EAG Laboratories	624
Ebatco	408
Eurofins | MASER	626
European Synchrontron Radiation Facility (PAC-G)	610
Excillum	725
Fischione Instruments	612
Hamamatsu Corporation	201
Herzan LLC	513
Hi-Rel Laboratories	608
Hitachi High-Tech America, Inc.	500
Hitachi Power Solutions Co., Ltd.	219
ibss Group	611
Imina Technologies SA	507
InfraTec infrared LLC	515
Integrated Service Technology Inc. (iST)	405
Intlvac Thin Film	502
JEOL USA	614
JIACO Instruments	715
Keysight Technologies	508
KLA Corporation	311
Kleindiek Inc.	710
Laser Thermal Analysis	209
Materials Analysis Technology Inc. (MA-tek)	629
Mesoscope Technology Co. Ltd.	623
Microsanj	714
Molecular Vista, Inc.	313
MSS USA Corp	628
Nanoscience Instruments	418
NenoVision	412
Neocera Magma LLC	413
Nippon Scientific Co., Ltd.	504
Nisene Technology Group, Inc.	615
Nordson Test & Inspection	211
Oxford Instruments	420
Park Systems	205
Photothermal Spectroscopy Corporation	410
Physical Electronics	403
PVA TePla OKOS	726
Quantum Design	424
Quantum Focus Instruments Corporation	400
Quartz Imaging	605
Qzabre	505
Raith America, Inc.	510
RKD Engineering	622
RKD Systems	303
Robson Technologies Inc.	315
Seiwa Optical of America	511
SELA USA Inc.	604
SEMICAPS	512
Siemens	708
Sigray, Inc.	402
SmarAct Inc.	404
Ted Pella, Inc.	711
TeraView LTD	613
Tescan	415
Thermo Fisher Scientific	601
Tiptek, LLC	606
Trion Technology	401
ULTRA TEC	519
Varioscale, Inc.	414
Waygate Technologies	727
XEI Scientific, Inc.	300
Zurich Instruments USA, Inc	712

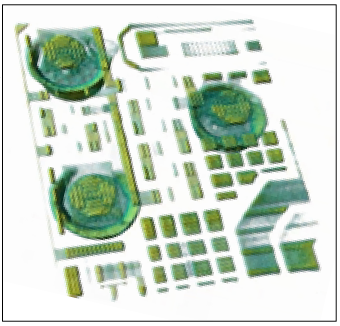
**as of 11/10/25*



3D view of a high/mid-band power amplifier package acquired at 5.4 µm voxel resolution in 90 seconds



Zoom in to the power amplifier module at 1 µm voxel resolution



Zoom in with highest resolution at 0.34 µm voxel resolution

TOOLS OF THE TRADE TOUR

What:	Demonstrations of the latest products and services. Learn useful information and see firsthand the latest tools in the industry. Take part in this private tour and see equipment in action right on the show floor. Registrants should meet at the entrance of the Exhibit Hall at 4:30 p.m. Pre-registration is required.
Where:	Expo Show Floor – Exhibit Halls A&B
When:	Monday, November 17, 2025 | 5:00 – 6:30 p.m.

ALLIED HIGH TECH PRODUCTS, INC.

Booth #: 701
Product/Tool Name: TechCut 6x Precision Sectioning Machine
Product/Tool Description: The TechCut 6x™ is a precision multiaxis sectioning machine that is highly configurable for a wide variety of cutting applications. Featuring fully programmable X, Y and Z-axis control, the system enables automated, repeatable sectioning of a wide range of materials.

Overview of Demonstration: Tour attendees will be able to view the NEW TechCut 6x precision sectioning machine and speak with Allied's representative regarding applications.

DIGITCONCEPT
4 Methods of IC Decap

Booth #: 411

JIACO INSTRUMENTS

Booth #: 715
Product/Tool Name: Microwave Induced Plasma (MIP) decapsulation and MIP+ etching

Product/Tool Description: Since 2016, JIACO Instruments' MIP decapsulation system has set the benchmark for semiconductor package decapsulation. Recognized in the 2022 JEDEC JESD22-B120 revision and supported by 30+ papers, MIP is essential for precision failure analysis. In 2024, we launched MIP+ to meet emerging challenges in advanced package and die etching.

Overview of Demonstration: JIACO Instruments continues to push the boundaries of FA—publishing new applications in automotive, WLCSP, memory, and GaAs decapsulation with our customers. We've expanded MIP capabilities based on feedback and are releasing new solutions to boost throughput. Join us on the Tour to learn more!

nanoScience Instruments

Booth #: 418
Product/Tool Name: Phenom Desktop SEM & SEMPrep SMART Ion Mill

Product/Tool Description: The Phenom Desktop SEM offers advanced electron microscopy and EDX/EDS analysis in a compact, easy-to-use platform. Its new software enhances the speed and ease of elemental analysis. Pairing the Phenom with the SEMPrep SMART Broad Beam Ion Mill enables superior sample preparation - taking your FA analysis to the next level.

Overview of Demonstration: Join our experienced applications scientist for a live presentation of the Thermo Fisher Scientific Phenom XL desktop scanning electron microscope (SEM) and the future of ion milling with the Technoorg Linda SEMPREP SMART Broad Beam Ion Mill. Explore the Phenom SEM's hardware, EDS software, automation features with python scripting, stitching capabilities, and its high-brightness cerium hexaboride source to quickly provide actionable FA results. Discover how the SEMPREP SMART Ion Mill can provide optimum SEM sample preparation like precision crosscuts and polishing using AI-assisted milling, plus NEW milling enhancements. This presentation will showcase the FA power of both technologies, providing attendees with a clear and comprehensive understanding of their capabilities.

QUARTZ

Booth #: 605
Product/Tool Name: PCI-AM for Automated Measurements

Product/Tool Description: PCI-AM Version 9 is an AI-powered, automated measurement solution for EM images of semiconductor devices. It delivers fast, consistent, and accurate results with just a click. From trenches and pillars to complex shapes, PCI-AM reduces manual work, improves repeatability, and ensures reliable, report-ready measurements every time.

Overview of Demonstration: We'll show how PCI-AM Version 9 transforms the measurement of microscope images with intelligent automation. It replaces tedious and sometimes inaccurate manual measurements with quick and accurate automation that saves your lab time and increases productivity. In particular, we'll demonstrate our new Template Matching system that allows you to design templates for features in your images, specify measurement locations and then perform the measurements automatically. You can do this on a single image, or on batches of images, offering a tremendous increase in productivity. Come see how PCI-AM delivers fast, repeatable, and accurate results, for data you can trust.

TOOLS OF THE TRADE TOUR

SELA
WE CLEAVE THE WAY

Booth #: 604
Product/Tool Name: MC20 Cleaving Through the Invisible

Product/Tool Description: The MC20 is a new, advanced micro cleaving solution equipped with improved IR optics for cross-sectioning crystalline materials, delivering an accuracy of approximately 3 microns in under one minute.

Overview of Demonstration: Stop by SELA booth #604 and experience the easiest and fastest way of cross-sectioning! Discover the new MC20 with advanced IR optics – delivering unmatched accuracy of 2–3 microns in under a minute. With just a few minutes of hands-on training, you'll make your first high accuracy cleave of an invisible target and see the unprecedented quality the MC20 can deliver.

SIEMENS

Booth #: 708

Product/Tool Name: Tessent Diagnosis (Hi-Res chain diagnosis)

Product/Tool Description: Software-based scan chain diagnosis has been used for early yield ramp over a number of technology nodes. This latest advance in software analysis produces targeted FEOL defect locations that cause scan chain shifting to fail.

Overview of Demonstration: Attendees will be introduced to a new technology that enhances the resolution of diagnosis for Front-end of line defects that cause scan shift failures. In this presentation, we will highlight the value of being able to simulate defect behaviors inside standard cells to make the FI/FA process more efficient and targeted.

ThermoFisher
SCIENTIFIC

Booth #: 601

Product/Tool Name: Comprehensive Failure Analysis Workflow: ELITE System, Helios Hydra 5+ PFIB-SEM, Meridian EX System, nProber System, Helios 6 HD FIB-SEM, Talos F200E (S)TEM

Product/Tool Description: End-to-end failure analysis solutions developed with 40+ years of expertise in semiconductors. From non-destructive fault isolation, precise and automated sample preparation, to atomic-resolution analysis and metrology. Our instruments deliver wafer-level, chip-level, and package-level workflows that enable emerging labs supporting mature technologies, all the way to leading manufacturers developing cutting-edge devices.

Overview of Demonstration: Our demonstration will reveal how engineers can leverage our experience for comprehensive failure analysis workflows that overcome their challenges and enable their innovations. We'll walk through the principles and key benefits of each technology and you'll be the first to know about our latest capabilities and updates for automation, throughput, and precision in fault localization, sample preparation, and analysis.

ULTRA TEC
MANUFACTURING, INC.

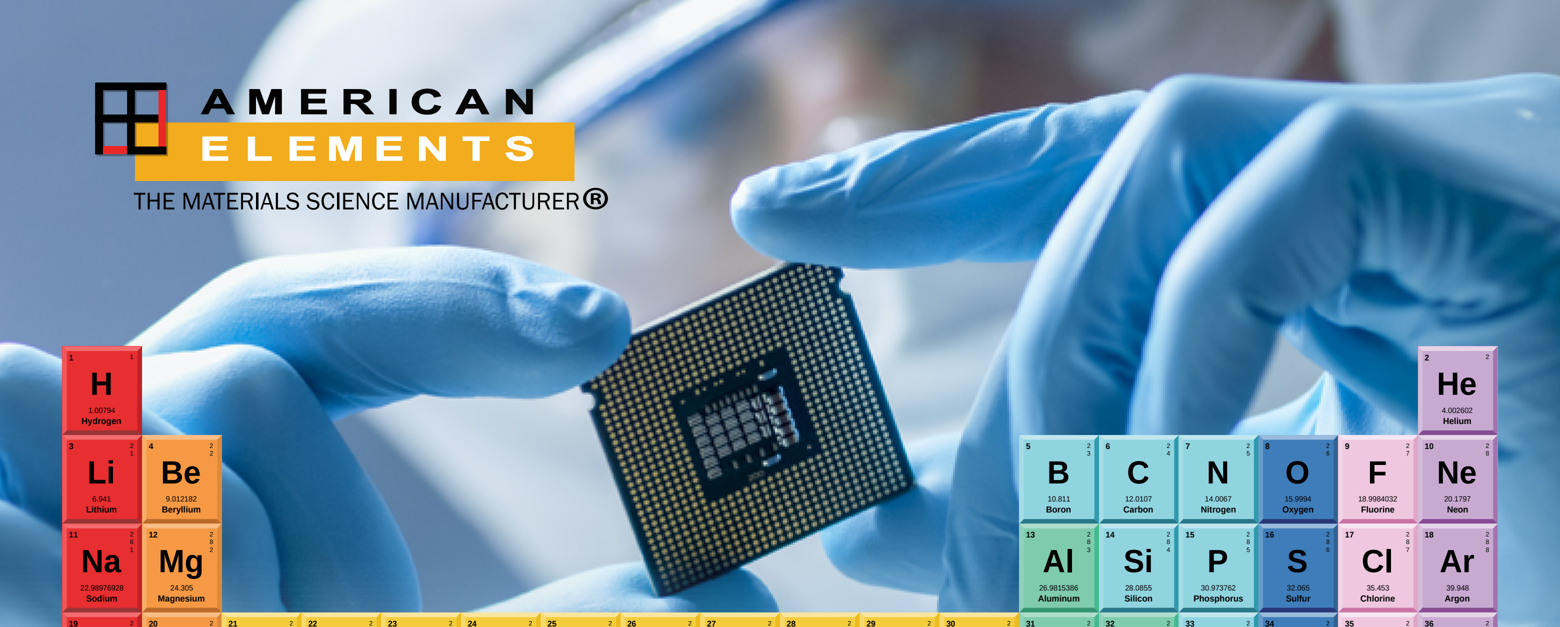
Booth #: 519
Product/Tool Name: ASAP-1 IN SITU

Product/Tool Description: Ultra-precision milling and selected area preparation tool for electronic failure analysis.

Overview of Demonstration: Introducing the latest updates to the ASAP-1® IN SITU system. We are proud to include the new upgrade to a larger market-leading TOUCHSCREEN INTERFACE for the system, with additional software updates

ZEISS

Booth #: 619
Product/Tool Name: ZEISS EM Toolkit
Product/Tool Description: ZEISS EMToolkit is an innovative, user-friendly software platform designed to automate electron microscope (EM) control, image analysis, and metrology. Tailored for R&D, Failure Analysis, and QA/QC labs in the electronics sector, this no-code platform integrates a drag-and-drop workflow builder, AI, and Python scripting, enabling seamless FE-SEM automation and enhanced productivity.
Overview of Demonstration: ZEISS will demonstrate the EMToolkit's powerful capabilities for automating electron microscope workflows. We will highlight the platform's intuitive drag-and-drop interface, seamless integration with SmartSEM, and advanced image analysis tools. We will show how the low-code environment simplifies complex tasks while offering flexibility for advanced users through Python scripting. The demonstration will also include programming constructs such as loops, conditions, and subroutines, illustrating how users can create dynamic, repeatable workflows tailored to specific applications. Participants will gain a clear understanding into how the EMToolkit enhances productivity, reduces manual effort, and meets the growing demand for EM automation.



1 **H** 1.00794 Hydrogen																	2 **He** 4.002602 Helium
3 **Li** 6.941 Lithium	4 **Be** 9.012182 Beryllium											5 **B** 10.811 Boron	6 **C** 12.0107 Carbon	7 **N** 14.0067 Nitrogen	8 **O** 15.9994 Oxygen	9 **F** 18.9984032 Fluorine	10 **Ne** 20.1797 Neon
11 **Na** 22.98976928 Sodium	12 **Mg** 24.305 Magnesium											13 **Al** 26.9815386 Aluminum	14 **Si** 28.0855 Silicon	15 **P** 30.973762 Phosphorus	16 **S** 32.065 Sulfur	17 **Cl** 35.453 Chlorine	18 **Ar** 39.948 Argon
19 **K** 39.0983 Potassium	20 **Ca** 40.078 Calcium	21 **Sc** 44.955912 Scandium	22 **Ti** 47.867 Titanium	23 **V** 50.9415 Vanadium	24 **Cr** 51.9961 Chromium	25 **Mn** 54.938045 Manganese	26 **Fe** 55.845 Iron	27 **Co** 58.933195 Cobalt	28 **Ni** 58.6934 Nickel	29 **Cu** 63.546 Copper	30 **Zn** 65.38 Zinc	31 **Ga** 69.723 Gallium	32 **Ge** 72.64 Germanium	33 **As** 74.9216 Arsenic	34 **Se** 78.96 Selenium	35 **Br** 79.904 Bromine	36 **Kr** 83.798 Krypton
37 **Rb** 85.4678 Rubidium	38 **Sr** 87.62 Strontium	39 **Y** 88.90585 Yttrium	40 **Zr** 91.224 Zirconium	41 **Nb** 92.90638 Niobium	42 **Mo** 95.96 Molybdenum	43 **Tc** (98.0) Technetium	44 **Ru** 101.07 Ruthenium	45 **Rh** 102.9055 Rhodium	46 **Pd** 106.42 Palladium	47 **Ag** 107.8682 Silver	48 **Cd** 112.411 Cadmium	49 **In** 114.818 Indium	50 **Sn** 118.71 Tin	51 **Sb** 121.76 Antimony	52 **Te** 127.6 Tellurium	53 **I** 126.90447 Iodine	54 **Xe** 131.293 Xenon
55 **Cs** 132.9054 Cesium	56 **Ba** 137.327 Barium	57 **La** 138.90547 Lanthanum	72 **Hf** 178.48 Hafnium	73 **Ta** 180.9488 Tantalum	74 **W** 183.84 Tungsten	75 **Re** 186.207 Rhenium	76 **Os** 190.23 Osmium	77 **Ir** 192.217 Iridium	78 **Pt** 195.084 Platinum	79 **Au** 196.966569 Gold	80 **Hg** 200.59 Mercury	81 **Tl** 204.3833 Thallium	82 **Pb** 207.2 Lead	83 **Bi** 208.9804 Bismuth	84 **Po** (209) Polonium	85 **At** (210) Astatine	86 **Rn** (222) Radon
87 **Fr** (223) Francium	88 **Ra** (226) Radium	89 **Ac** (227) Actinium	104 **Rf** (267) Rutherfordium	105 **Db** (268) Dubnium	106 **Sg** (271) Seaborgium	107 **Bh** (272) Bohrium	108 **Hs** (270) Hassium	109 **Mt** (276) Meitnerium	110 **Ds** (281) Darmstadtium	111 **Rg** (280) Roentgenium	112 **Cn** (285) Copernicium	113 **Nh** (284) Nihonium	114 **Fl** (289) Flerovium	115 **Mc** (288) Moscovium	116 **Lv** (293) Livermorium	117 **Ts** (294) Tennessine	118 **Og** (294) Oganesson
		58 **Ce** 140.116 Cerium	59 **Pr** 140.90765 Praseodymium	60 **Nd** 144.242 Neodymium	61 **Pm** (145) Promethium	62 **Sm** 150.36 Samarium	63 **Eu** 151.964 Europium	64 **Gd** 157.25 Gadolinium	65 **Tb** 158.92535 Terbium	66 **Dy** 162.5 Dysprosium	67 **Ho** 164.93032 Holmium	68 **Er** 167.259 Erbium	69 **Tm** 168.93421 Thulium	70 **Yb** 173.054 Ytterbium	71 **Lu** 174.9668 Lutetium		
		90 **Th** 232.03806 Thorium	91 **Pa** 231.03588 Protactinium	92 **U** 238.02891 Uranium	93 **Np** (237) Neptunium	94 **Pu** (244) Plutonium	95 **Am** (243) Americium	96 **Cm** (247) Curium	97 **Bk** (247) Berkelium	98 **Cf** (251) Californium	99 **Es** (252) Einsteinium	100 **Fm** (257) Fermium	101 **Md** (258) Mendelevium	102 **No** (259) Nobelium	103 **Lr** (262) Lawrencium		

COMPANY DESCRIPTIONS

3D-Micromac AG
Booth # 318
3D-Micromac AG is the industry leader in laser micromachining. We develop processes, machines, and turnkey solutions at the highest technical and technological level. Our microPREP PRO systems accelerate sample preparation for various analysis methods for failure analysis, such as TEM, SEM, APT, XRM, and micromechanical testing.
www.microprep.pro

Allied High Tech Products, Inc.
SPONSOR
Booth # 701
For over 42 years, Allied High Tech Products has provided sample preparation products for microscopic evaluation to the microelectronics industry. Allied manufactures state-of-the-art equipment at its California and Oklahoma locations with all design, manufacturing and assembly taking place in-house. Items on display include Allied's state-of-the-art X-Prep® Precision Polishing/Grinding/Milling Machine, the MultiPrep™ Polishing System, TechCut™ Sectioning Saws and Zeiss microscopes.
www.alliedhightech.com

Angstrom Scientific, Inc.
Booth # 509
Angstrom Scientific Inc. represents leading manufacturers supporting materials characterization. Specifically: Hitachi Tabletop SEMs, Imina Nano-probing systems, Point Electronics EBIC/EBAC, Leica Sample prep equipment, NenoVision and Alemnis In-Situ AFM, & Nano-Indenters, EMSIS TEM Cameras, ConnectomX ' Katana Microtome, VacuumFab motion control and Noble Dome Air-Free Transfer System.
www.angstrom.us

Bruker Corporation
Booth # 501
Bruker is a performance leader in analytical systems, providing a range of technological solutions for testing and failure analysis. Trusted solutions include Optical and X-Ray Spectroscopy and Microanalysis and Atomic Force Microscopy in key applications: elemental defect analysis, nanoelectrical characterization, and more.
www.bruker.com/nano

BSET EQ
SPONSOR
Booth # 523
BSET EQ provides solutions for your FA needs through GAS PLASMA and LASER technologies. On display is our PLASER™ plasma DECAP system. BSET EQ is the leader of this DECAP technology with continued development and prior art since 1999. Recently we have proven to be by far the best with exposure of SILVER architectures. Also highlighted is our popular FA2000 tabletop / FA3000 RIE/ICP etchers. These systems provide functional delayering for your packaged devices or wafers.
www.bsetplasmas.com

Checkpoint Technologies
Booth # 707
Checkpoint Technologies develops and manufactures innovative optical failure analysis tools used by semiconductor manufacturers to improve the speed and reliability of integrated circuits. Our products, which range from OEM components to fully-integrated, end-user solutions, reflect our fundamental commitment to maximizing value by adapting technology to meet specific market needs.
www.checkpointtechnologies.com

Comet Industrial X-ray Modules
Booth # 308
www.xray.comet.tech

Comet Yxlon
Booth # 304
Building on decades of experience and an unfailing passion for technology, Comet Yxlon is a globally leading company for industrial X-ray and CT system solutions. Manufacturers in the aerospace, automotive, electronics, and semiconductor industries rely on Comet Yxlon to maximize their product quality and the efficiency of their production. From cutting-edge inspection systems to the award-winning user interface Geminy – at Comet Yxlon, we support our customers with innovative products and services that help them shape future markets.
www. yxlon.comet.tech

Contech Solutions Inc.
Booth # 301
Contech Solutions Inc is a leader in design and manufacturing of Semi-conductor test interface products. At Contech Solutions we are committed to quality, customer satisfaction and delivery of superior products
www.contechsolutions.com

Covalent Metrology
Booth # 422
Covalent Metrology is a disruptive analytical services laboratory and digital platform based in'Sunnyvale, California. Its mission is to empower technological innovation with superior data and insights. Covalent now has over 500 customers in 30+ industries.'Learn more at: https://covalentmetrology.com
www. covalentmetrology.com

DC - Digit Concept
Booth # 411
DC-Digit Concept Manufactures the 4 ways for IC DCapsulation tools
www.digit-concept.com

Deben UK Limited
Booth # 310
www.deben.co.uk

COMPANY DESCRIPTIONS

Denton Vacuum
Booth # 309
Denton Vacuum provides innovative deposition and etch equipment solutions built on standard platforms for any production level, from pilot production to high volume manufacturing. With a long history of innovation in thin film deposition and etch technologies, we provide production proven systems in diverse applications including delayering, laser and IR detectors, AR/VR and flexible displays, precision optics, and superconductors to match customer needs.
www.dentonvacuum.com

Eurofins EAG Laboratories
Booth # 624
www.eag.com

Ebatco
Booth # 408
Ebatco is a leading service lab with ISO/IEC 17025 accreditation in chemical, mechanical, thermodynamic and metallurgical fields. Ebatco provides failure analysis and other comprehensive material and device testing and analysis for microelectronics, IC,and semiconductor industrial customers. Contact us for nanoscale analyses, material characterization, surface contamination issues, quality control, failure mode and root cause determination, and other unmet analytical and testing needs.
www.ebatco.com

Eurofins | MASER
Booth # 626
Eurofins MASER is an independent service provider. Since 1993 we have offered Reliability Test and Failure Analysis Services to the semiconductor industry. We offer a wide range of qualification procedures (AEC Q100/JEDEC/etc) to qualify your products according to the latest international standards. Our state-of-the-art Failure Analysis laboratory will fulfill all F/A needs for you. We can support you with your daily Reliability Test or Failure Analysis challenges.
www.maser.nl

European Synchrotron Radiation Facility(PAC-G)
Booth # 610
Platform for advanced characterisation - Grenoble (PAC-G) is a single entry point for Industries to access Large scale Infrastructures to address challenges in advanced characterisation, failure analysis and metrology in Micro- and Nano-electronics.
www.irtnanoelec.fr/pac-g

Excillum
Booth # 725
Excillum is the global source for X-ray innovation. We develop, manufacture, and service the world’s brightest and most advanced industrial and laboratory X-ray sources. In close collaboration with best-in-class scientific, industrial and system integration partners we enable new science, improve medicine and enhance manufacturing. Headquartered in Stockholm, Sweden, Excillum is pushing the limits of X-ray source technologies since 2007.
www.excillum.com

Fischione Instruments
Booth # 612
Fischione Instruments is a leading provider of high-quality microscopy and nanotechnology solutions for businesses. With over 50 years of experience, they offer a wide range of products and services, including sample preparation, imaging, and analysis tools.
www.fischione.com

Hamamatsu Corporation
Booth # 201
Hamamatsu Corporation is the North American subsidiary of Hamamatsu Photonics K.K. (Japan), a leading manufacturer of devices for the generation and measurement of infrared, visible, UV light, and x-rays. We offer specialized systems for semiconductor failure analysis and other applications. We also offer photomultiplier tubes, photodiodes, image sensors, cameras, and light sources.
www.hamamatsu.com

Herzan LLC
Booth # 513
Herzan's mission is to help researchers maximize the quality of data collected by their instrumentation. To achieve this goal, Herzan designs research-grade environmental solutions to remove acoustic, vibration, and EMI noise under any ambient lab conditions.
www.herzan.com

Hi-Rel Laboratories
Booth # 608
Located in Spokane, Washington, Hi-Rel Laboratories is an independently owned and operated corporation, whose main concentration of activity is in the materials evaluation of the micro-electronic oriented phases of commercial, aerospace and defense industries.
www.hrlabs.com

Hitachi High-Tech America, Inc.
Booth # 500
Hitachi High-Tech America, Inc. ("HTA"') is a privately-owned global affiliate company that operates within the Hitachi Group Companies. HTA sells and services semiconductor manufacturing equipment, analytical instrumentation, scientific instruments, and bio-related products as well as industrial equipment and materials, systems products, and IoT solutions.
www.hitachi-hightech.com/us/en/


REVEAL what matters
ENABLE what’s critical
INNOVATE what’s next

COMPANY DESCRIPTIONS

Hitachi Power Solutions Co., Ltd.
Booth # 219
Hitachi Power Solutions develops and provides our original Scanning Acoustic Tomographs and their transducers used for non-destructive testing of semiconductor and electronic devices. We have very abundant experiences in this field for more than 40 years. We have very wide products' lineup consisting of FineSAT series, FSLine series, WaferLine and ES-5100.
www.hitachi-power-solutions.com/en/index.html

ibss Group
Booth # 611
The GV10x Downstream Asher and Mobile Cubic Asher reduce carbon & hydrocarbon contamination 10 to 20 times more effectively than traditional methods at vacuum pressures. Artifacts in SEM images are gone; the microscope maintains high resolution and beam stability. Black scan squares are eliminated in SEM images. Carbon contamination in FIB and TEM systems can be controlled as well.
www.ibssgroup.com

Imina Technologies SA
Booth # 507
Imina Technologies SA is a Swiss manufacturer of robotic solutions for electrical nanoprobing and failure analysis. With 15 years on the market and over 250 systems installed worldwide, we are one of the leaders in semiconductor test equipment. We also offer turnkey nanoprobing and electrical failure analysis services.
www.imina.ch

InfraTec infrared LLC
Booth # 515
Dresden based InfraTec GmbH Infrarotsensorik und Messtechnik was founded in 1991 and employs more than 230 employees and has its own design, manufacturing and distribution capabilities.
InfraTec's Infrared Measurement division is one of the leading suppliers of commercial thermal imaging technology. Beside high-end camera series ImageIR® the VarioCAM® High Definition and TarisIR® product family, the company offers turnkey thermographic solutions, for instance to observe solar thermal absorbers.
www.InfraTec-infrared.com

Intlvac Thin Film
Booth # 502
Intlvac's Ion Beam Etch & Milling platforms deliver precision etching using a broad-beam ion source in high vacuum. The Nanoquest series (I–IV) supports up to 300mm substrates in single or batch configs, ideal for metals, dielectrics, and semiconductors. Adjustable beam parameters enable finely tunable profiles with minimal damage—ideal for IC delayering, planarization, failure analysis, and nanofabrication

(iST) Integrated Service Technology Inc.
Booth # 405
Founded in 1994, iST began its business from IC circuit debugging and modification and gradually expanded its scope of operations, including Failure Analysis, Reliability Assurance, Material Analysis and so on. iST has offered full-scope verification and analysis services to the IC engineering industry, its customers cover the whole spectrum of the electronics industry from IC design to end products.
www.istgroup.com

JEOL USA
Booth # 614
JEOL is the global leader in ultra-high resolution electron microscopes and tools for failure analysis, quality control, product inspection and semiconductor/nanotech R&D. SEMs and TEMs providing high throughput analysis, nanoscale/atomic imaging, and high-speed mapping are available. Learn about our new solutions including correlative microscopy, surface analyzers, specimen prep and analytical equipment to support your requirements.
www.jeolusa.com

JIACO Instruments
Booth # 715
Since 2016, JIACO Instruments' MIP decapsulation system has set the standard for complex semiconductor package decapsulation. Now vital for precision failure analysis and reliability testing, MIP was recognized in the 2022 JEDEC JESD22-B120 revision andis supported by 30+ papers solving key decap challenges. In 2024, we launched the MIP+ etching system to address emerging challenges in advanced package and die etching.
www.jiaco-instruments.com

Keysight Technologies
Booth # 508
Keysight Technologies is a Fortune 500 company and a leading supplier of test and measurement solutions throughout the world. At ISTFA we will be showing (along with our partner Newark Electronics) our economical essential bench products, which includes oscilloscopes, power supplies, function generators, and digital multimeters.
www.keysight.com

KLA Corporation
Booth # 311
www.kla.com

COMPANY DESCRIPTIONS

Kleindiek Inc.
Booth # 710
Technological advances in various fields require highly precise positioning techniques with exceedingly high stability, extraordinarily low drift, and a high degree of maneuverability. Especially the recent advances in the semiconductor industry but also in the materials and life sciences, require high-precision tools for standard tasks such as nano-probing for device & in situ materials characterisation, as well as TEM sample lift-out for root-cause analyses or structure elucidation.
www.kleindiek.us

Laser Thermal Analysis
Booth # 209
Laser Thermal is a precision instrumentation company. Our thermal analysis tools (TOPS and FASTR) address longstanding gaps in the market: accurate, high-throughput, and user-friendly measurements of thermal conductivity, thermal resistance, and volumetric heat capacity. We've eliminated the technical and operational barriers of legacy techniques, providing precise measurements over a wide range of length scales. We also offer contract testing laboratory services.
www.laserthermal.com

Materials Analysis Technology Inc. (MA-tek)
Booth # 629
www.ma-tek.com/home

Mesoscope Technology Co. Ltd.
Booth # 623
MESOSCOPE is a global leader in nano probe design and manufacturing, serving the world’s leading foundries and semiconductor companies. As the only provider of probes engineered for sub-5nm electrical measurements, we play a critical role in enabling next-generation semiconductor innovation. With proprietary probe technology and proven expertise in electrical fault analysis, MESOSCOPE delivers precise, reliable, and scalable solutions—indispensable for today.
www.mesoscope.com.tw

Microsanj
Booth # 714
Microsanj manufactures high-sensitivity, high-spatial, fast-transient thermal imaging analysis systems for materials research, chip characterization and validation, and failure analysis.
www.microsanj.com

MSS USA Corp.
Booth # 628
en.msscorps.com/

Nanoscience Instruments
Booth # 418
Visit booth #418 and join our microscopy specialists as we delve into the smallest defect analyses using the innovatory features of the top-selling Phenom desktop scanning electron microscope. Explore many Phenom features such as elemental identification with EDS, low kV imaging, and automated acquisitions. Further leverage cross-section preparation by ion milling and crystal defect density with cathodoluminescence to achieve meticulous and complete failure analysis.
www.nanoscience.com

NenoVision
Booth # 412
NenoVision is dynamic manufacturer of in-situ correlative microscopy, developing LiteScope', unique Atomic Force Microscope designed for 'plug & play' integration into the Scanning Electron Microscopes (SEMs). The connection of AFM and SEM merges the strengths of both techniques and excels in a variety of modes, such as topography, mechanical, electrical, magnetic or piezoelectric properties, resulting in effective workflow and complex sample analysis.
www.nenovision.com

Neocera Magma LLC
Booth # 413
Neocera Magma LLC is a technology company that serves the semiconductor failure analysis community. The Magma-Magnetic Microscope detects shorts, opens, resistive opens and leakages in ICs with sub threshold power, and eliminates the need for de-processing. It can non-destructively streamline fault isolation, significantly reducing time-to-market for your devices.
www.neoceramagma.com

Nippon Scientific Co., Ltd.
Booth # 504
www.nscnet.co.jp/index.html

Nisene Technology Group, Inc.
Booth # 615
Nisene Technology has been a leader in Failure Analysis and Test equipment for the semiconductor industry for over 40 years. including the well known JetEtch line of Wet Chemical Etching Decapsulation systems. Nisene has recently announced a new Plasma IC Decap tool, PlasmaEtch MIP 4761, microwave induced plasma utilizing Oxygen and other non-fluorine based gases to decapsulate the most challenging IC devices with complete preservation of all bonding wire materials. New LaserEtch available!
www.nisene.com

COMPANY DESCRIPTIONS

Nordson Test & Inspection
Booth # 211
Nordson SONOSCAN is a leader and innovator in Acoustic Microscopy (AM) technology. Nordson SONOSCAN manufactures acoustic microscopy instruments to nondestructively inspect and analyze materials, devices, components and products. Nordson SONOSCAN's C-SAM systems provide unmatched accuracy for the inspection of products for hidden internal defects such as delaminations, etc.
www.nordson.com/en/divisions/test-and-inspection

Oxford Instruments
Booth # 420
Oxford Instruments is a leading provider of high-technology tools and systems for research and industry, enabling the acceleration of breakthroughs that create a brighter future for our world. With a global presence, we are committed to innovation and excellence, offering cutting-edge solutions that permit researchers and industry professionals to achieve innovations in their fields.
www.oxinst.com

Park Systems Inc.
Booth # 205
Park Systems is a world-leading manufacturer of atomic force microscopy (AFM) systems with a complete range of products for researchers and industry engineers in the biology, materials research, semiconductor and data storage industries. Park's AFM provides the highest data accuracy at nanoscale resolution, superior productivity, and the lowest operating cost, thanks to its unique technology and innovative engineering.
www.parksystems.com

Photothermal Spectroscopy Corp
Booth # 410
Photothermal Spectroscopy Corp (PSC) pioneered the breakthrough technique of Optical Photothermal Infrared (O-PTIR) technology eliminating key limitations of traditional IR Spectroscopy providing submicron spatial resolution for IR and transmission-like FTIR quality spectra in non-contact reflection mode. PSC has developed the world's first simultaneous Infrared and Raman microscope and imaging system, providing IR and Raman data from the same spot, same time, same submicron spatial resolution.
www.photothermal.com

Physical Electronics
Booth # 403
www.phi.com

PVA TePla OKOS
Booth # 726
www.okos.com

Quantum Design
Booth # 424
www.qdusa.com

Quantum Focus Instruments Corporation
Booth # 400
www.quantumfocus.com

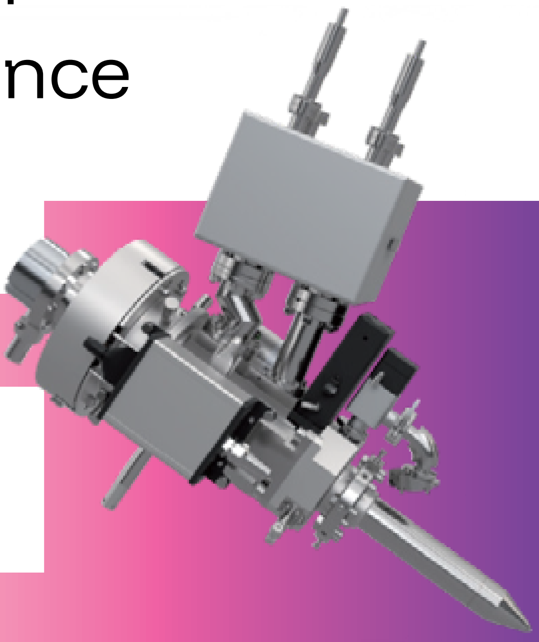
Quartz Imaging
Booth # 605
Quartz Imaging is a leading provider of advanced imaging software solutions for microscopy laboratories. With decades of experience, we specialize in software that simplify microscopy image measurement, and laboratory management. Our products are trusted by laboratories, research institutions, and quality control departments around the world for their accuracy, reliability, and ease of use. At Quartz Imaging, we're committed to helping our customers work smarter and see more.
www.quartzimaging.com

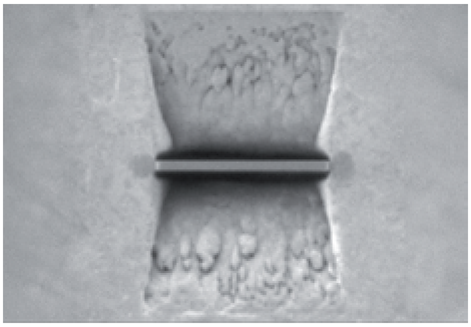
QZabre
Booth # 505
We use a single atomic defect in diamond to image current densities with sub 30 nm spatial resolution via the magnetic field they produce. This is quantum sensing with single nitrogen vacancies. We offer both the specialized diamond scanning probes and the full microscopes.
Our company is an ETH Spin-off based in Zurich founded in 2018. We have more than 15 microscopes in operation all over the world and are increasing our focus on providing solutions for the semiconductor industry.
www.qzabre.com

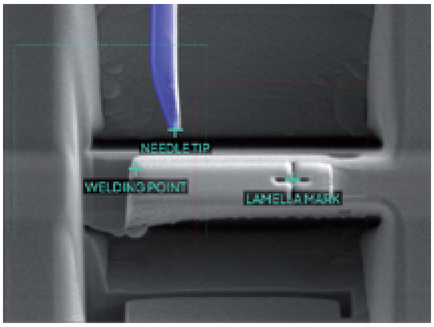
Raith America, Inc.
Booth # 510
RAITH leads in maskless nanofabrication and characterization systems, serving global industrial and scientific customers. Our technologies drive innovation in connectivity, mobility, green energy, and healthcare. With extensive experience, we offer high-precision writing and imaging tools for efficient research and industrial solutions. RAITH's advanced systems enable customers to develop and produce cutting-edge devices, contributing to key applications in the digital future.
www.raith.com

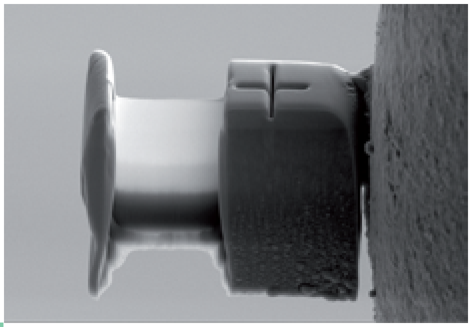
RKD Engineering
Booth # 622
RKD Engineering Corp, Inc. offers the full range of mixed acid and solutions decapsulators for gold, copper, aluminum and silver wire bonded packages.
www.rkdengineering.com

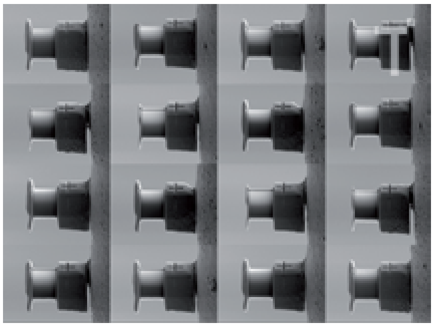
RKD Systems
Booth # 303
High Precision, high speed milling systems to remove IC packages from either a PC board or a chip onFlex while keeping the ball bonds intact. High precision die thinning and polishing down to less than a micron. The ability to measure remaining silicon thickness to 0.5 microns






NEEDLE TIP
WELDING POINT
LAMELLA MARK





COMPANY DESCRIPTIONS

Robson Technologies, Inc. (RTI)
Booth # 315
Manufacturer of custom designed FA test interface solutions, including test sockets/pin blocks, test fixtures/presses, Automated Curve Tracer test systems, and PCB DUT/Adapter boards. All RTI solutions are designed, machined and built by RTI in California, USA, shipped worldwide.
www.testfixtures.com

Seiwa Optical of America
Booth # 511
For over 50 years, Seiwa Optical has been a provider of optical solutions. Our vision systems, such as cameras and microscopes, can be customized for the user's unique application requirements such as wafer inspection and biological inspection
www.seiwaamerica.com

SELA USA Inc.
Booth # 604
Full range of cleaving solutions. For over 30 years SELA develops and delivers advanced cleaving solutions for failure analysis and yield management in the semiconductor industry and analytical purposes in research laboratories and universities around the world. SELA's patented Nano Cleaving, Micro Cleaving and Perfect Cleaving technologies address emerging and challenging requirements of the cross-section for a wide variety of structures, materials and substrates.
www.sela.com

SEMICAPS
Booth # 512
SEMICAPS is the world's leading company in high-resolution infra-red laser scanning microscopes for the semiconductor field.
We are currently debugging mature and advanced nodes in the 3nm space using our highest resolution >3.3NA Aplanatic RSIL.
These microscopes are used by advanced semiconductor companies for:
a) design-debug analysis of new integrated circuits (ICs),
b) yield improvement analysis for early semiconductor wafers, and
c) failure analysis of customer returns.
www.semicaps.com

Siemens
Booth # 708
Market-leading IC test solutions from Siemens EDA target the most critical defect mechanisms to improve quality and reliability across the silicon lifecycle and help accelerate yield ramp. Tessent yield learning efforts reduce the time and cost of failure analysis. When unlocked at product ramp and volume production, time to root cause can be reduced by 70%.
www.eda.sw.siemens.com/en-US/ic/tessent

Sigray, Inc.
Booth # 402
Sigray is a San Francisco Bay Area based company founded with the aim to accelerate scientific progress by providing powerful, synchrotron-grade research capabilities in its laboratory x-ray systems. Our state-of-the-art Apex XCT system provides the highest image clarity and fastest throughput of any 3D X-ray system on the market, with pixel sizes down to 0.2 microns (200 nm) and large PCB & full 300 mm wafer handling capabilities.
www.sigray.com

SmarAct Inc
Booth # 404
SmarAct Metrology develops sophisticated equipment to serve high-accuracy positioning and metrology applications in research and industry in optics, semiconductors and life sciences. Our broad portfolio includes miniaturized interferometers, optical encoders for displacement measurements and powerful electrical nanoprobers for the characterization of the smallest semiconductor technology nodes.
www.smaract.com

Ted Pella, Inc.
Booth # 711
For over 50 years, Ted Pella, Inc. has served the microscopy community globally across a broad range of applied sciences and applications. Our product line for use in R&D and F.A. labs in semiconductor / optoelectronics was expanded in 2017 with the addition of the former South Bay Technology products. Then expanded again more recently with the acquisition of the former LatticeGear® line of scribing and cleaving solutions.
www.tedpella.com

TeraView LTD
Booth # 613
Provider of Electro Optical Terahertz Pulse Reflectometry (EOTPR) technology.
www.teraview.com

Tescan
SPONSOR
Booth # 415
TESCAN is a trusted source of innovative and disruptive technologies for science and industries such as SEM, FIB-SEM, 4D-STEM, and micro-CT systems. Our mission is to enable scientists and engineers to address global and sustainability challenges with innovative instrumentation that discovers the secrets of matter at the micro and nanoscale.
www.tescan.com

COMPANY DESCRIPTIONS

Thermo Fisher Scientific
CORPORATE SPONSOR
Booth # 601
Thermo Fisher Scientific provides workflows for semiconductor failure analysis, characterization, metrology and research labs to meet the needs of logic, memory, packaging, analog, MEMS, foundry and display applications. Our solutions include automated, high-productivity TEM/TEM sample prep that provides low kV for sensitive samples, low-z imaging and characterization; innovative chemical, electrical and physical failure analysis, and compliance testing systems to localize subtle electrical issues that affect yield, performance and reliability.
www.thermofisher.com/EM

Tiptek, LLC
606
Tiptek: North America's Largest Nanoprobe Provider
www.tiptek.com

Trion Technology
Booth # 401
Original equipment manufacturer of plasma etch, photoresist strip, and plasma deposition systems for the failure analysis, photovoltaic, optoelectronic, compound semiconductor, MEMS, and research markets. Small-footprint, reliable, and low-cost systems customized for either laboratory or full-scale production environments.
www.triontech.com

ULTRA TEC
SPONSOR
Booth # 519
ULTRA TEC is a designer, manufacturer and supplier of surface and sample preparation equipment for the world's failure analysis and related high tech fields. Our ASAP-1 product line has become the de-facto standard for selected area preparation, backside thinning and mechanical decap applications. Our ULTRAPOL line of polishers provides key advantages for cross-section, parallel polishing and backside thinning. We provide microscopy tools and a wide range of consumables to support our products.
www.ultratecusa.com

Varioscale Inc.
Booth # 414
Varioscale is a leading provider of advanced sample preparation solutions for semiconductor failure analysis and hardware cybersecurity. Our cutting edge products and technical knowledge help the leading semiconductor and US government laboratories achieve success with ultra-thinning silicon, increasing circuit edit throughput, and physical delayering of semiconductors.
http://varioscale.com

Waygate Technologies
Booth # 727
www.bakerhughes.com/waygate-technologies

XEI Scientific
Booth # 300
Evactron® De-Contaminators by XEI Scientific are world leaders in remote RF plasma cleaning of carbon contamination. A unique, energy-efficient hollow cathode plasma source generates oxygen or hydrogen radicals plus UV for dual-action removal of adventitious carbon at turbo pump pressures. The new Evactron E16, E50, and U50 De-Contaminators outperform other remote plasma cleaners and are easy to use, powerful, compact, and low cost.
www.evactron.com

ZEISS Microscopy
SPONSOR
Booth # 619
ZEISS has the most comprehensive portfolio of light, X-ray and electron/ion beam imaging technologies in the industry.'Solutions span from wafer fab through packaging and assembly. ZEISS materials characterization and non-destructive FA solutions deliver actionable information to meet industry challenges for next-generation devices.
www.zeiss.com/microscopy

Zurich Instruments USA, Inc.
Booth # 712
Zurich Instruments is a test and measurement company based in Zurich, Switzerland, developing and selling measurement instruments and delivering customer support in key markets around the world, either directly or with carefully selected partners. We make cutting-edge instrumentation for scientists and technologists in advanced labs who are passionate about phenomena that are often notoriously difficult to measure.
www.zhinst.com