



Issue 1

Company Product

ATOMIC SOLUTIONS SDN. BHD.

Your Instant Service Solutions Partner

We solve your microscopy imaging and analysis issues

Introduction

Atomic Solutions Sdn. Bhd. is established in year 2012. HQ located at Johor Bahru. We focus on the Microscope products and specializing in Quality Assurance, Failure Analysis, Microscopy Imaging and X-Ray Imaging solutions for the manufacturing and R&D sector. We focus on the industrial market such as Hard disk, Semiconductors, Electronics, PCBA, Laboratory, General Industrial and University (Education). Our direction is clear, to promote the solution for our customers and provide value proposition, continuous service & support and maintain long-term commitment to our customers and suppliers. We always ensure our customers continuously grow with our supplier products & expertise providing practical innovation and beneficial results and expectation.

Our Vision

Atomic Solutions Sdn. Bhd. is established with a group of technical and experienced engineers well versed in the industrial expectation and requirements. We create the culture of Mutual Cooperation, Trust & Capabilities for Lasting Success, Progress & Achievement between Atomic Solutions Sdn. Bhd, Customers & Suppliers.

Our Mission

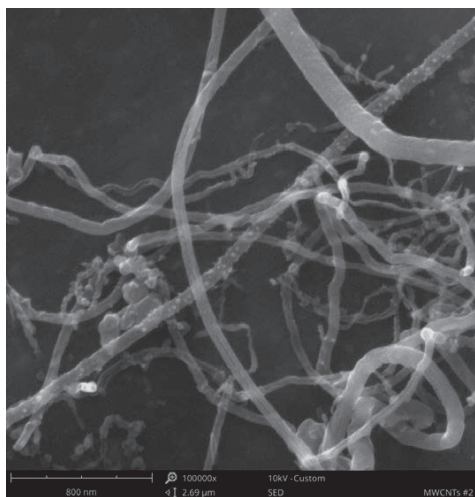
To be the instant solutions provider that continue to grow in knowledge, excel in innovative technology and application hence providing our best possible solutions.

We focus on 3 things:

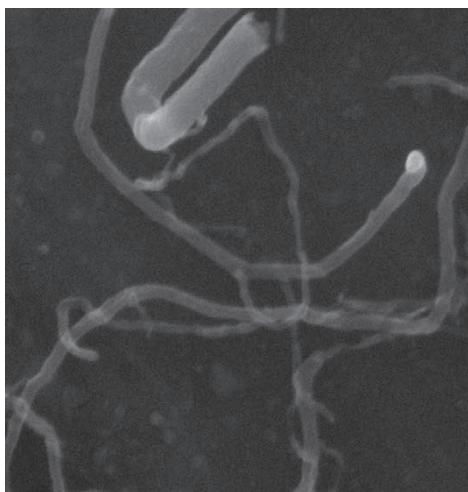
- 1) Our customer's requirements
- 2) Our innovative solutions & completeness
- 3) Our supplier's support & expertise



The Phenom Pharos is a desktop SEM with a FEG source that makes crisp, high-brightness images



Phenom Pharos
Multiwall Carbon nanotubes
10 kV SE image @ 100,000x



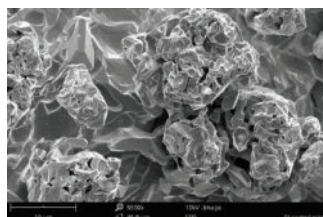
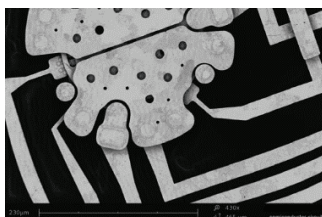
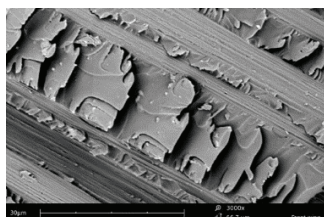
Floor model Tungsten
Multiwall Carbon nanotubes
10 kV SE image @ 100,000x

ThermoScientific Desktop SEM

Phenom Desktop SEM provides high-resolution imaging, best imaging results in its class, offers the market's fastest loading and imaging time. The very reliable autofocus and automated source alignments make this the most user-friendly system on the market. Fast identification of different chemical elements can be done through integrated Energy Dispersive Spectrometer (EDS).



	Pure	XL Gen2	Pro/ProX	Pharos
Color Image	27x	3 - 16x	20 - 134x	20 - 134x
Magnify Range	160 - 175,000x	160 - 200,000x	160 - 350,000x	200 - 1,000,000x
Acc.Voltage	5, 10 kV	5, 10, 15, 20.5 kV		
Resolution	< 15 nm	< 10 nm	< 6 nm	< 2.5 nm
Electron Source	CeB6 (1500h+)			FEG (10,000h+)
Common	Friendly User Interface, Fast Sample Loading			



Phenom Software Application

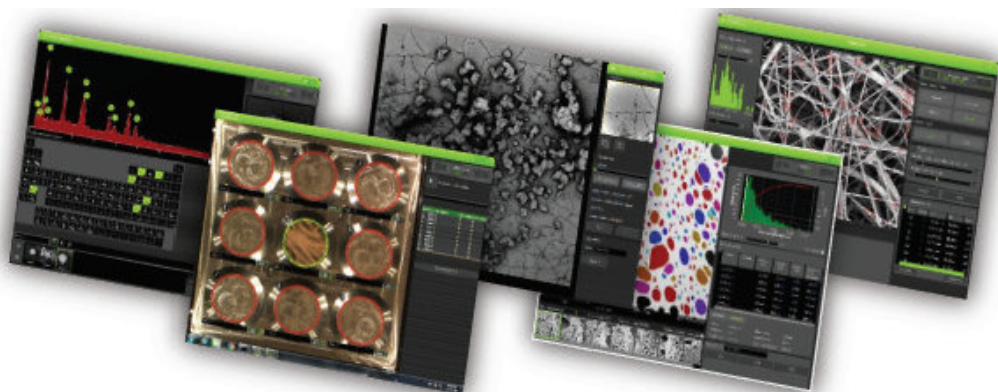
Phenom users able to extract maximum information from images made with the Phenom SEM. It extends the capabilities of the Phenom, a high-resolution imaging tool, to satisfy specific application needs.

FibreMetric

- Export all collected data
- Automated measurements
- Fast collection of all statistical data
- View and measure micro and nanofibers

ParticleMetric

- Creating image datasets
- Correlating features of particle
- Can be online or offline analysis



PoroMetric

- Correlate features of pore
- Fast and convenient operation
- Statistical data with high-quality images

Element Identification (EID)

- Fast and reliable information of elements
- Easily exported and reported results

AsbestoMetric

- Automated image acquisition and fiber detection
- Higher accuracy and repeatability
- Increased throughput
- Fast and easy to use

3D Roughness Reconstruction

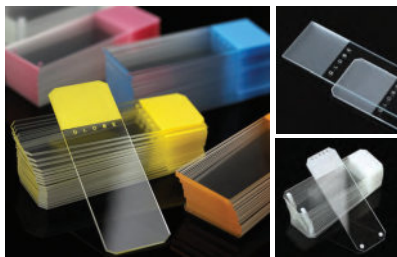
- Intuitive fully automated & user interface
- No stage tilt required
- Fast reconstruction

TedPella supply accessories and consumables to serve laboratories with variety types of microscopy: Transmission and Scanning Electron Microscopy, Light Microscopy, Electron Microprobe Analysis, Atomic Force Microscopy, Confocal Laser Microscopy and many more.



Epoxy Mount Kits

Optical Clarity, High Hardness, Low Viscosity, Good Adhesion 2-Hour Epoxy Mount Kit. The Epoxy Mount Kit uses a cold embedding material designed for metallography, geology, ceramography and petrology samples. Used for light microscopy, scanning electron microscopy and microprobe analysis. It is low viscosity, low exotherm reaction and low shrinkage.



Microscope Slides

Slides are produce from the highest optical quality water white glass sheets of Soda Lime Glass. Ideal for all routine applications, automated instruments, long-term storage, and fluorescence studies where the highest optical quality is required. The glass is specially formulated for minimal oxidation during long-term storage.



PELCO Silicon Nitride Support Films for TEM

Hydrophilic / Hydrophobic SiN Support Films

PELCO Holey Silicon Nitride Support Films for TEM



PELCO Silicon Dioxide Support Films for TEM



Silicon Aperture Frames (without support films)



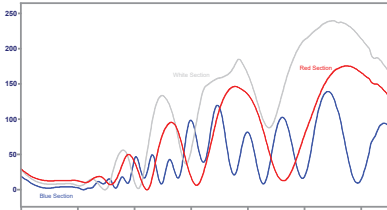
Silicon Nitride Coated & Blank 3mm Si Discs

Silicon Nitride Support Films for TEM (Si_3N_4 TEM membranes) have been developed as an addition to extensive range of TEM support films to further enable nanotechnology applications and extend molecular biology research. Desirable and useful silicon nitride support films in the current marketplace.

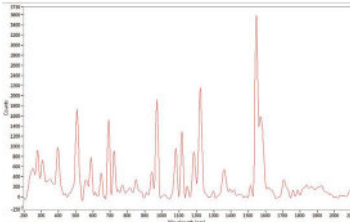


Carbon Conductive Tabs are a significant improvement compared to many of the other common adhesives that have been used in SEM mounting. Both tab sides have a thick conductive adhesive with a liner on both sides, a transparent liner and white liner respectively. They are ready for immediate use. The top protective liner does not have to be removed until the sample is ready to be mounted. This reduces possible contamination. Outgassing is negligible.

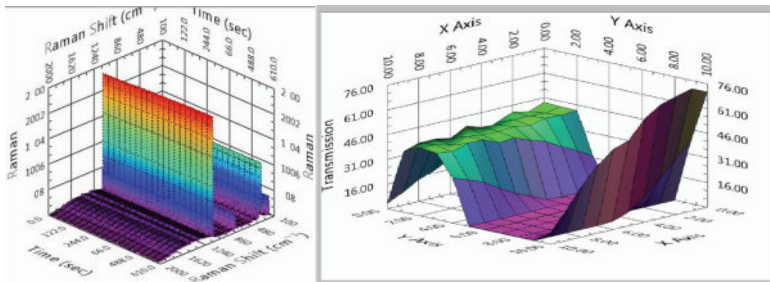
Craic Technology brings UV-visible-NIR microspectrophotometer that meet ASTM, ISO and SWGMAT guideline for instrument usage. With Craic microspectrophotometer, automated full report printed out at completion of the test.



Determine thickness of film with reflectance or transmittance micro spectral data



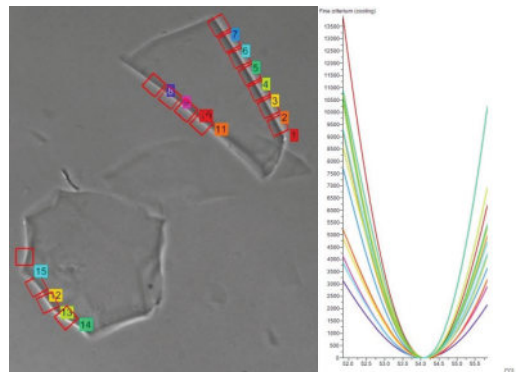
Raman spectra of active pharmaceutical ingredients of an aspirin tablet



3D Spectral Analysis of Microscopic samples



Automatically generates statistics of refractive index measurements

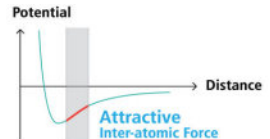
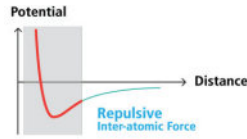


riQ™ by CRAIC shows an illustrative interactive graphs of heating and cooling phase for each probe with zoom capability enabling a fast visual evaluation results

Multiple glass fragments can be analyzed and graphed simultaneously with the ability to place 20+ probes on a single fragment



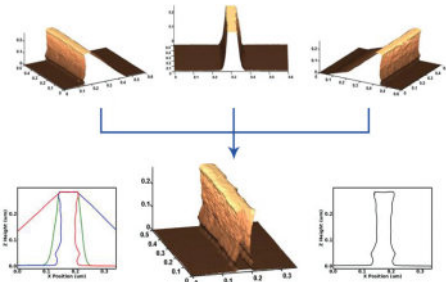
- Accurate XY Scan by Crosstalk Elimination
- Best Tip Life, Resolution and Sample Preservation
- Accurate AFM Topography with Low Noise Z Detector
- User Experience-Driven Software and Hardware Features



Tapping Imaging



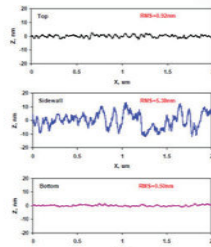
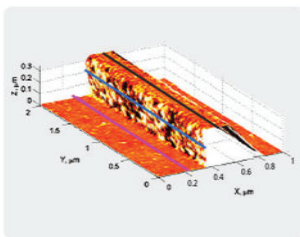
True Non-Contact™ Mode



Images taken at three different tilting angles can be stitched to combined together automatically to form a complete 3D image



- Innovative head design for undercut and overhang structures
- A Reliable, Seamless Measurement Tool for 3D materials
- An innovative 3D metrology solution



3D AFM image provide high resolution profiles for bottom, sidewall, and top of the photoresist line, which can be used for LER/sidewall roughness analysis of the structure



Freiberg Instruments

Freiberg Instruments cover with analytical instrumentation products. Applications in fields like Semiconductor, Microelectronics, Photovoltaic, Dosimetry, Medical Research, Luminescence Dating, X-ray diffraction, Material Research and Electron Spin Resonance.

X-ray Diffractometer (XRD)

Production & Quality Control of Ingots/Wafers

Single Crystal Orientation | Transfer Technology

Rocking Curve Measurement | Stereographic Projection and more

Highest Precision

Typical angular accuracy of 0.003°

Measurement Speed

< 5 second per sample

Versatility

Orientation and polytype determination of crystals

Patented Ingot Stacking Unit

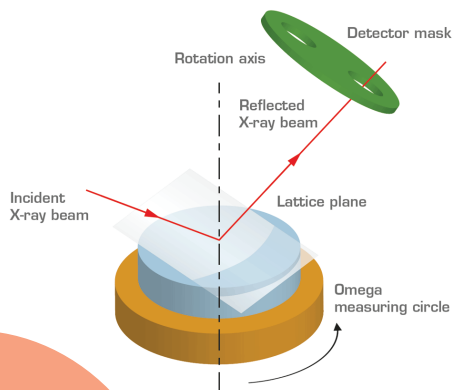
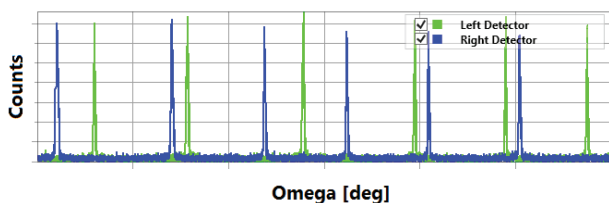
Orientation of up to 12 ingots for simultaneous and efficient sawing

Cost Efficient

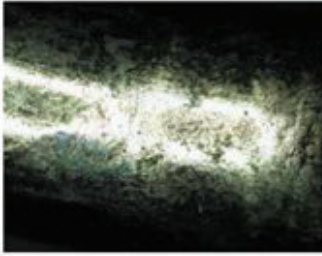
Request minimal floor space, cooling and utilities

XRDStudio

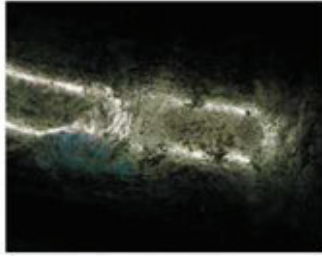
Easy to use software suite



Xoptron involve sample preparation machine in SEM and also analysis software uses in optical microscope. By using the software, it able to extract and analyze meaningful information from photomicrographs captured using digital microscope camera



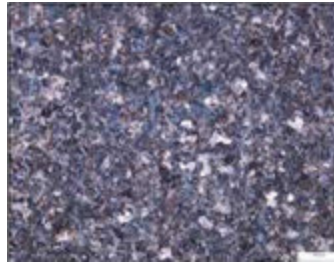
Before



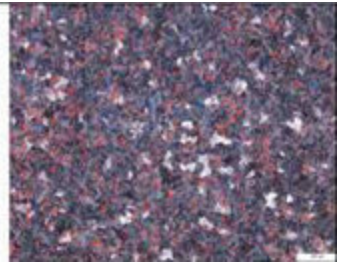
After Correction by 2 Images



After Correction by 5 Images



Original Image

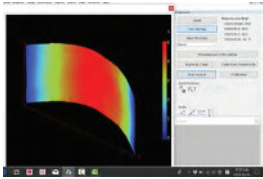


Ferrite Overlays Image

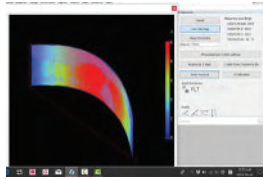


Xoptron IMT 3D provide 3D measurement and surface roughness metrology by Areal Surface Texture Analysis (Areal). Applications for nodularity, Ferrite, filter contamination, NMI, Grain and image stitching can be realized with motorized stage control.

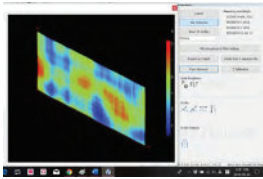
Form removal



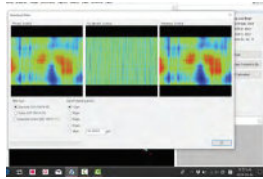
Source



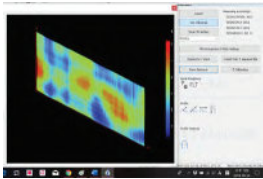
Source + Form



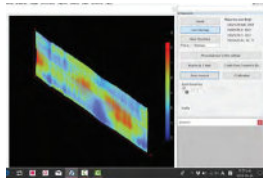
Primary



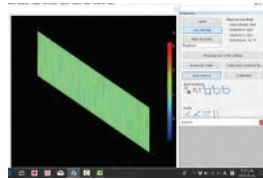
Waviness removal



Waviness



Primary + Waviness

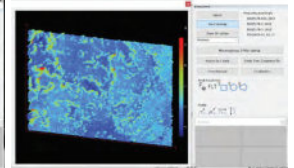
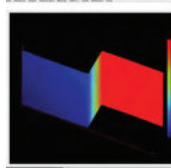
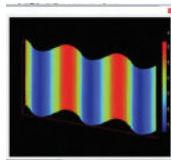
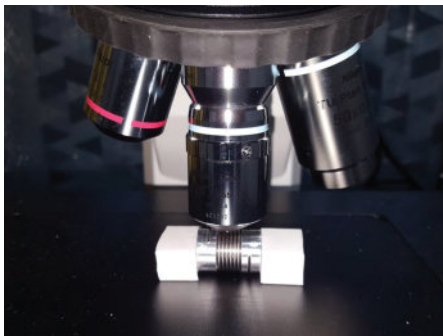


Roughness

Measuring accordingly

ISO 4287
 ISO 16610-61
 ISO 16610-62
 ISO 16610-71
 ISO 25178-2 : 2012
 ISO 25178-3 : 2012
 ISO 25178-606 : 2015

Analysis for a specimen





Skyray Instrument innovating in exploring the depths of the analytical industry. Inductively Coupled Plasma Spectrometry(ICP), Mass Spectrometry(MS), Gas Chromatography(GC), X-ray Fluorescence Spectrometry(XRF), and many others.



Desktop XRF

- Rapid, Accurate, Non-destructive
- Resolution $160 \pm 5\text{eV}$
- Atomic number from 16 (S) until 92 (U)
- Analyze for RoHS, Mining, Plating Thickness, Precious Metal



Handheld XRF

- Resolution 128eV
- Rapid, Accurate, Non-destructive
- Analyze for RoHS, Alloy, Mineral Ore
- Atomic number from 12 (Mg) until 92 (U)

Result	Test Completed	18.00K
Element	Result	
Na	2.04%	
Cu	4.03%	
Zn	3.99%	
Ag	14.85%	
Au	75.00%	

18k precious metal detection

Result	Test Completed	Low Alloy Steel
Element	Result	
Si	0.26%	
P	0.02%	
S	0.02%	
Cr	0.00%	
Mn	0.50%	
Fe	98.80%	
Ni	0.02%	
Cu	0.28%	

Low alloy steel test

Result	Test Completed	SUS316
Element	Result	
Ti	0.23%	
V	0.14%	
Cr	17.28%	
Mn	1.85%	
Fe	64.93%	
Cu	0.14%	
Ni	10.54%	
Cu	1.01%	
Nb	0.09%	
Mg	2.13%	
W	0.06%	

Allot test



Liquid Chromatograph

- Analytical tool for organism analysis lab, drug and food laboratory, production process control, quality control department, etc.
- Quick (max.10000 amu/s, bar chart)
- Wide scan range (10-1100amu)
- High detection sensitivity (10 pg reserpine, S/N \geq 50:1)



Gas Chromatograph

- Apply in industry, food safety, environment protection, pharmaceutical, petrochemical, public security organ
- High efficient EI filament provides high electron emission efficiency
- High energy dynode electron multiplier ensures good sensibility
- Full scale vacuum gauge monitors vacuum state in real time
- Target compound in NIST2011 spectrum database

ASLI

ASLI Test Equipment specialized in variety of quality inspection instruments.



Acceleration
Mechanical Impact



Xenon / UV Aging



Pressure Aging



Temperature Humidity
Vibration Test Chamber



Thermal Shock
Environmental Chambers



Rapid Temperature
Change



Walk-in Climate Chamber



High Frequency Dynamic
Vibration Shaker

BIOBASE

BIOBASE focusing on development, production and management of the laboratory items and scientific analytical equipment.

BIOBASE consist of 8 product areas include medical diagnosis, biosafety protection, disinfection and sterilization, water purification system, infant care products, cold chain products, software products, clean room project products, clean room project



AS Optic

AS Optic brings you various type of microscope accessories and spare parts. Work smarter with precision microscope stages, micromanipulators, camera, illuminators, high resolution visual inspection systems, stereo microscope and high-power microscope systems.

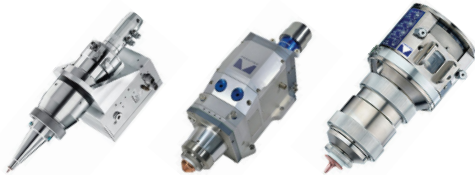




Precitec is the specialist for laser material processing and optical measuring technology. Application for both laser cutting and welding offers various benefits over conventional processes. Optical benefit with Coaxial measurements avoiding shadowing effect and it may measurement on any kind of material

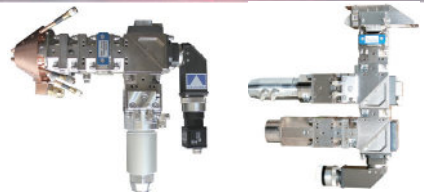
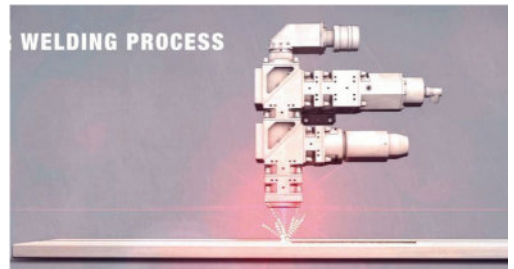
Laser Cutting

Processing head has integrated temperature-stable, fast and completely drift-free distance sensors



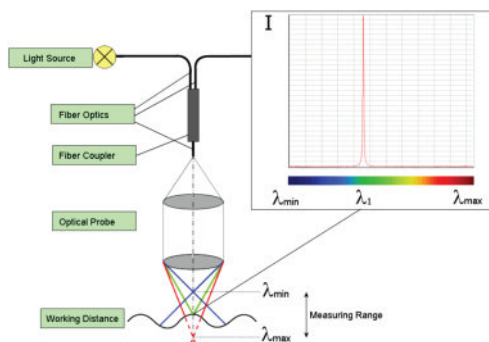
Laser Welding

Welding seams at high production speeds with no post treatment

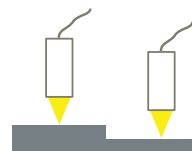


Optical

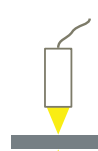
Precise design with non-contact technique, offer in distance and thickness measurements



Confocal Principle for Distance Measurements
Close up to few nanometers; resolution reach for micrometers



step height
measurement



two-sided
thickness
measurement

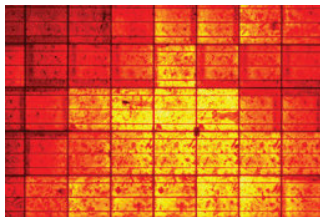


PCO is pioneer in cameras and optoelectronics with over 30 years in experience developing high-end camera systems. PCO are one of the three inventors of the sCMOS sensor technology. sCMOS on the other hand provides the highest resolution, dynamic range, quantum efficiency and frame rates with the lowest readout noise.

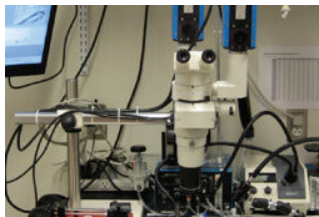


A bald eagle catches its prey - original resolution 1920 x 1080 @ 500 frames/s (color version)

quality control in solar panels

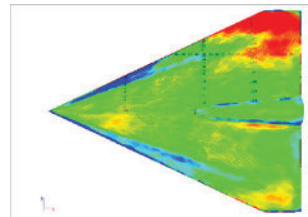


stereo microscopy



Stereo microscopic imaging set-up with two pco.1600 cameras to characterize the 3D geometry of a mouse aortic arch. Courtesy of Department of Biomedical Engineering, Duke University, Durham, Dr. M. H. Friedman

pressure sensitive paint



Results of the pressure sensitive paint (PSP) measured partial pressure distribution on a 60° delta wing model in a low speed channel (measured by 2 pco.4000). Courtesy of DLR Göttingen

quality control



View of a row of an empty bottle inspection system, which uses pixelfly cameras for the improved resolution inspection (IRIS), courtesy of Krones AG, Neutraubling, Germany

crash test



Full scale crash test of a car hitting the rear end of a truck for deformation analysis in order to develop safer vehicles.

material testing

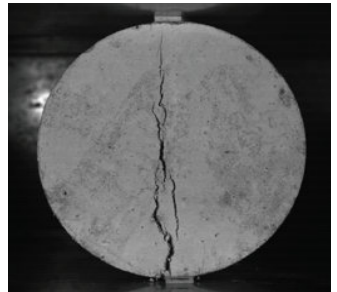


Image of a tensile splitting strength test to characterize the tensile strength of ultra-high performance concrete. Courtesy of TU Braunschweig, iBMB, Division of Concrete Construction.



We give you three easy ways to find us:

Call us

Visit us on the Web

Mail us : info@atomic-solutions.net

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