A Smarter Way

The capabilities of this small box is beyond your imagination

The Best
Tabletop SEM
CUBE II

⊙ **Product Highlights**

Faster Easier Operation

Compact & Light

Hi Res. x200K Image @30kV

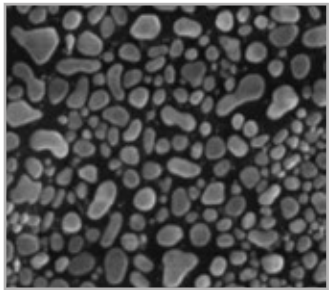More Accessories

High Reliability & Safety

EMCRAFTS
Gateway to the Undiscovered

"Awesome, Amazing, Fantastic"

"すごい, すばらしい"

Global applauses from all round the world

Faster, smaller and high performance

High-Res. (x200K @30kV) as good as conventional SEM

High space efficiency and portability

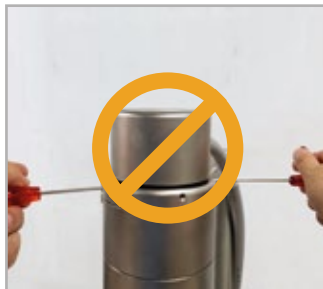Easy to port. Installable anywhere

No more waiting

Pumping: 90 sec / Venting: 10 sec

Highly reliable HV component

High reliability and safety by adapting world best HV component from Spellman HV

No gun alignment required

3 minutes required for filament replacement
(US patent pending 16/287,820)

CE Certificate

Specifications

CUBE Ⅱ	
Ⅰ. Electron	
Resolution	5nm (SE Image at 30kV)
Electron Gun	Tungsten(W) Filament
Accelerating Voltage	1 to 30kV
Magnifications	10x to 300,000x
Detector	secondary electron detector(SE) / Backscattered electron detector(BSE)
Ⅱ. Stage	
Navigation mode	Sample holder Map
Stage System	X,Y: 42mm, Z: 5~43mm, T: -90 ~ 90°(manual), R: 360° X,Y,Z motorized
Working Distance	5 to 53㎜
Maximum Sample Size	80㎜(D) x 53㎜(H)
Ⅲ. Image	
Operation PC	Windows 10-based All-in-One 24" Workstation
Display mode	Focus mode: 320x240 pixel, Resizable Preview mode: 800x600 pixel Slow mode: Applicable to both preview and focus mode Photo mode: Up to 3200x2400 pixel
Beam Shift	100㎛
Format	BMP,JPEG,PNG,TIFF
Ⅳ. Vacuum	
Vacuum times	Vacuum : 90sec, Vent : 10sec
Vacuum mode	High Vacuum Mode (< 9x10⁻³ Pa) Low Vacuum Mode (Chrage-up reduction)
Vacuum System	Full Automated Evacuation System - Turbo molecular & Rotary vane pump
Ⅴ. Dimensions & Power	
SEM	410(W) x 440(D) x 520(H)㎜ / 65kg
Power supply	Single Phase : 100 ~ 240VAC, 50/60Hz, 1kVA

Control Pad? Joystick? Only Mouse!

20 miniutes is enough to train beginners. Request a Webinar.

Virtuoso : SEM operation software from EmCrafts
Most straightforward and convenient SEM software in the world.
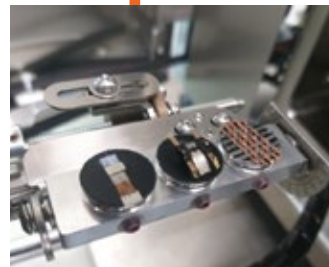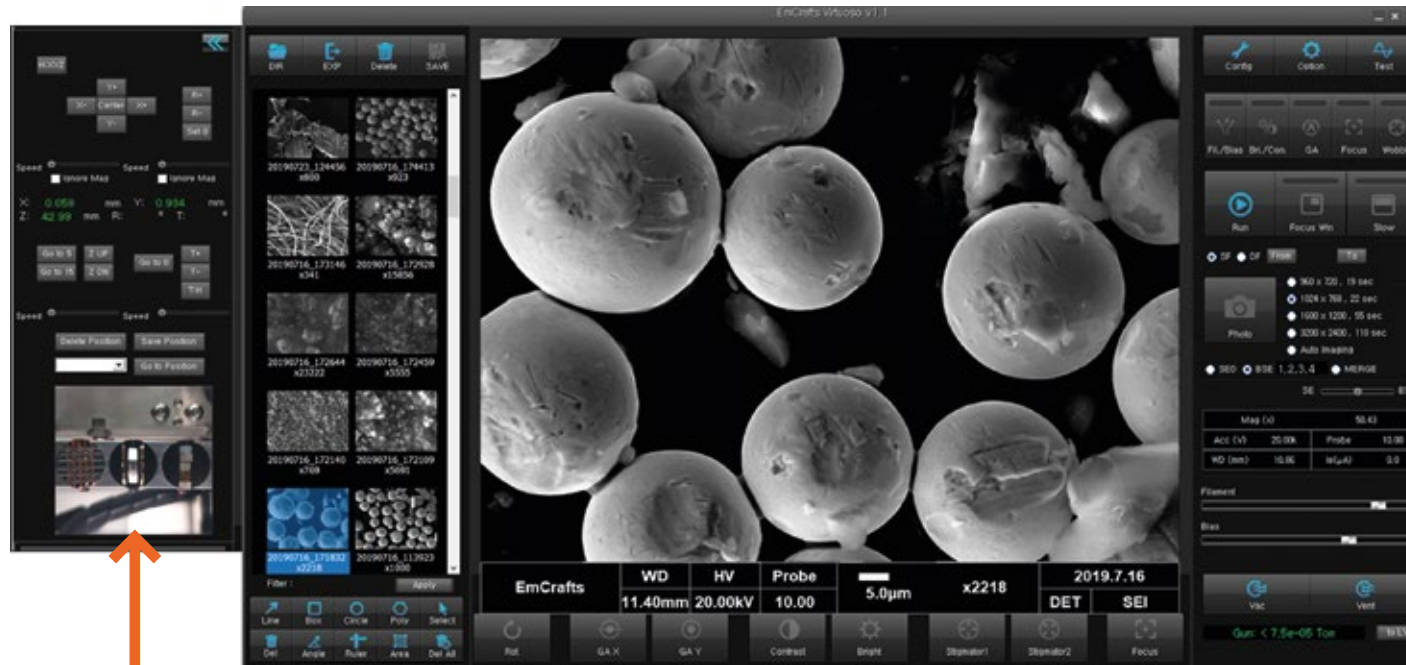
✓ **100% motorized stage**
All you need for basic operation is the mouse

✓ **Click and Go**
Move the stage by double click.
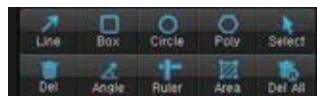Navigate inside samples like a Google map

✓ **Position saving**
Save up to 100 analysis positions and restore one of them immediately

✓ **Map(Navigation) Mode**
Multiple stub is provided as a standard Easy illustration about the sample position.
Optical image can be overlayed(optional)

✓ **Start/Stop just like a camcorder**
- Convenient switching among imaging modes (TV, Focus, Slow, Photo)
- Easy resolution selection from radio buttons

✓ **SE / BSE / Merge**
- SE-BSE selection from radio buttons
- 4CH BSE imaging is provided as a standard.
- Both compositional and topographical imaging are possible
- SE+BSE Mergible

✓ **Auto Imaging function**
- Automated operation for wanted magnifications listed in a file or edit boxes
- high-resolution images can be acquired from N x N automated tile images.

✓ **No jig is required to mount your specimens**
Just place your sample on one of three positions

✓ **Drawing tools**
- Length, area, angle measurement
- Circle, line, polygon annotation

✓ **Remote Control**
Remote operation through Teamviewer sessions enables remote research and diagnostics
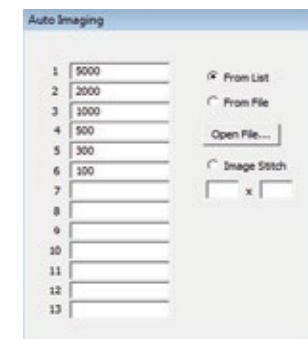
Elemental Analysis (Any EDS)

Every EDS from every maker

Select your preferred EDS.
One of all EDS brands(BRUKER, OXFORD, EDAX, THERMO, IXRF) can be installed inside the chassis and its interface was 100% proven already.
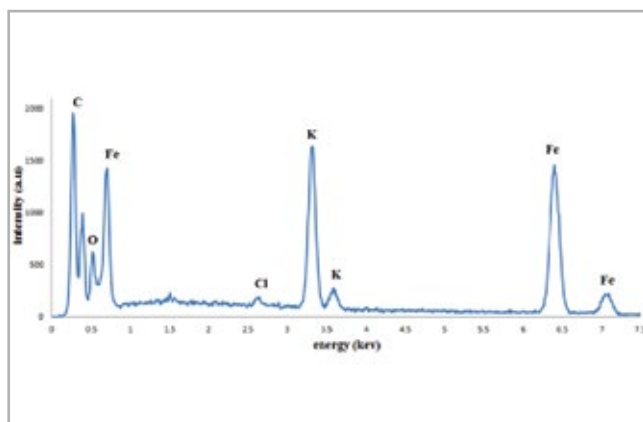
Ion Sputtering Coater (EGC101)

Coat Gold and Platinum fast on your sample

Enhance your image contrast and brightness by increasing conductivity.
Ion sputter coater creates thin metal coat on a specimen for better conductivity

✓ Modern metallic design that fits every place

✓ Wide 7" screen

✓ Easy and hassle-free touch screen operation

Model	EGC101
Degree of Vacuum	2.0×10^{-1} Tor
Ion Current	1 to 10mA (1mA/step)
Target Material	Au or Pt
Chamber Size	Φ140mm(D)x100mm(H)
Sample Stage	Φ50mm(D)x30mm(H)
Target Size	Φ50mm(D)
Sputter Time	1 to 600sec (1sec/step)
Vacuum Pump	100L/min, Rotary Pump
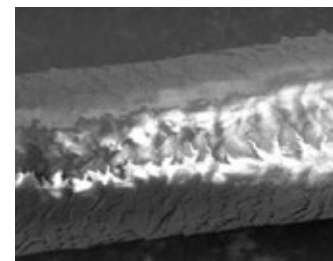
Non Coating   Plasma Sputtering   Au Coating
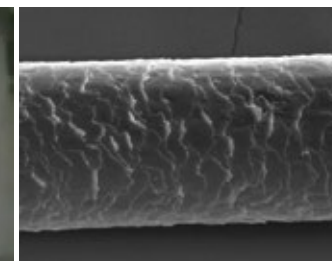
World Class BSE Detector

Provided as a standard

EmCrafts' leading signal sensing technology enabled superior low-noise performance and high contrast.

SE
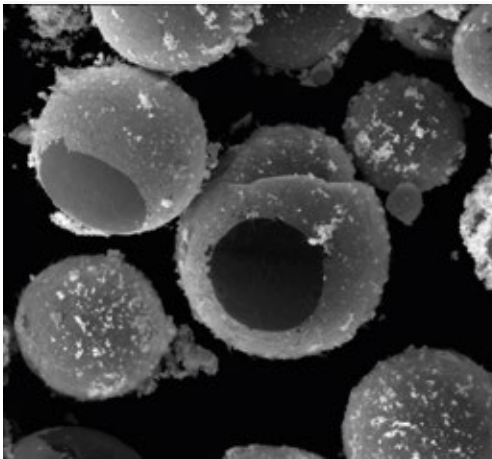
BSE
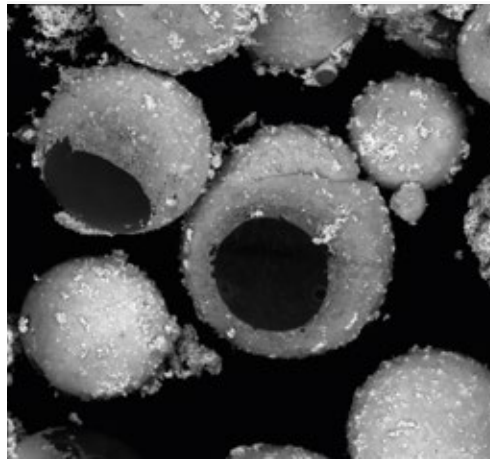
Each channel works as (+) or (–) to make 2^4 imaging combinations for BSE
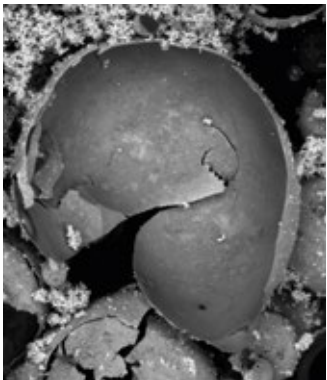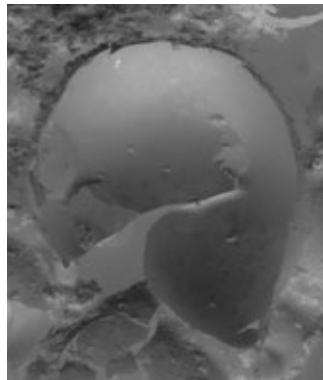
COMPO   TOPO1   TOPO2
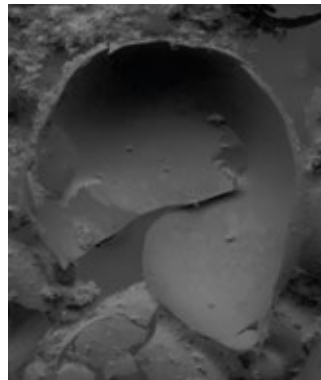
Best Quality Cooling Stage(IGLOO-I)

Liquid Sample? You can do it with Cube II

Freeze wet samples up to -25°C and analyze them in low vacuum mode.
Not only frozen specimen but also normal one can be mounted on a same cooling stage.
(US patent pending 16/287,770)
Easy Installation and compact design for space efficiency.
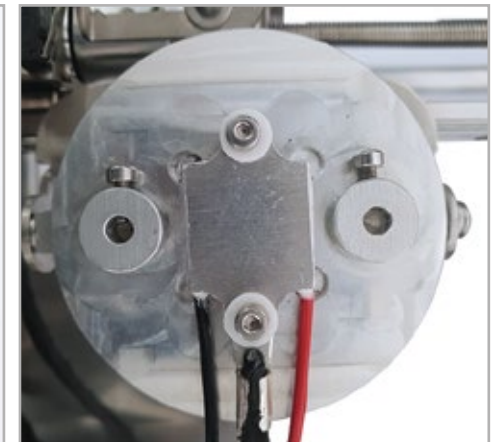
Size : 30 x 20 x 23(H)cm, 5kg / Temperature Range : -25°C ~ +50°C / Cooling Rate : 30°C per minute
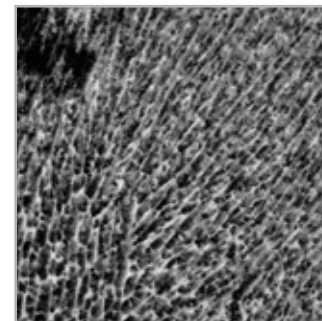
Milk Product   Bacteria   blood
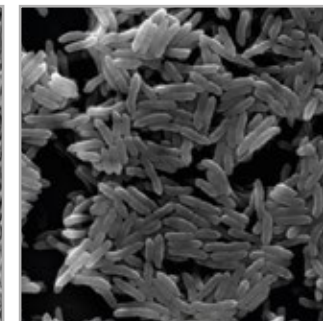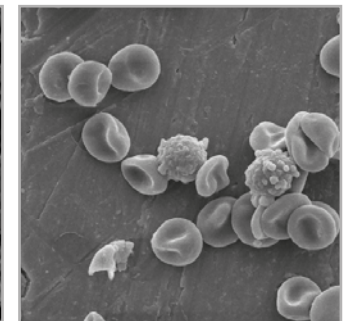
Materials Science
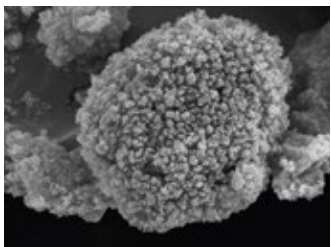
SiC powder
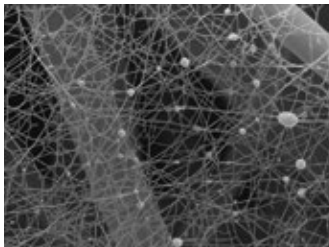
Nano Fiber
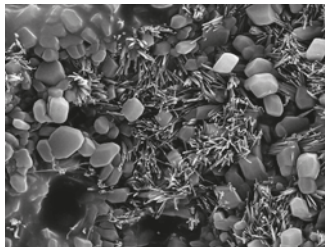
Paper
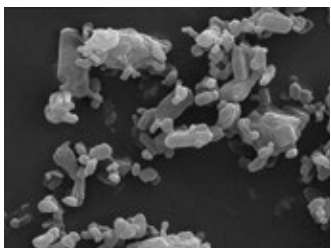
Pill powder
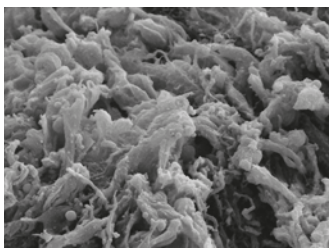
Lymph tissue
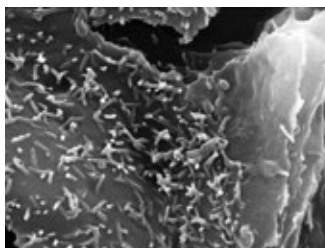
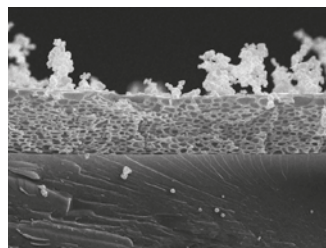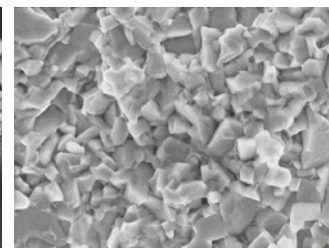Insect skin

Automotive & Metals
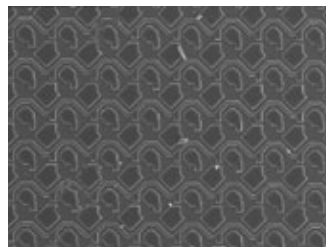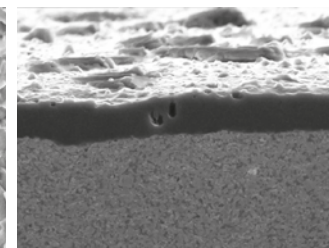

TST on Glass
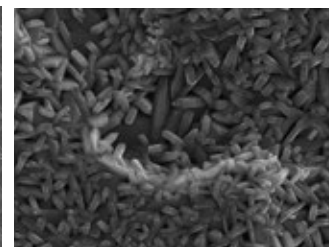
Galvanized Steel Plate
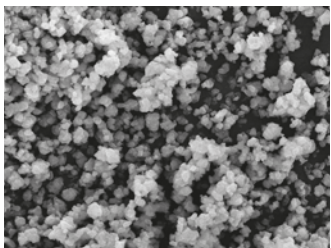

Aluminum Surface

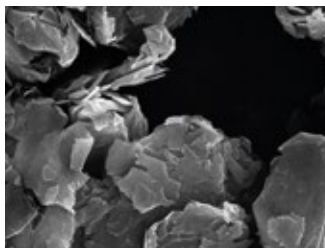Polymer Coating on Glass

Carbide Surface
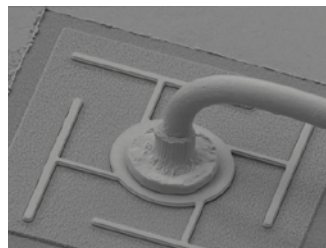

Carbide Intersection

Energy

ZSM-5 catalyst
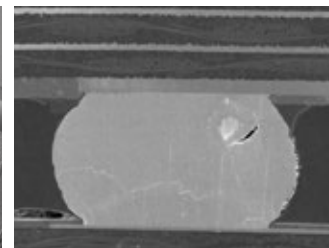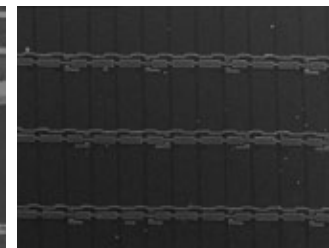

Anode for Secondary cell

Graphene

Semiconductors & Electronics
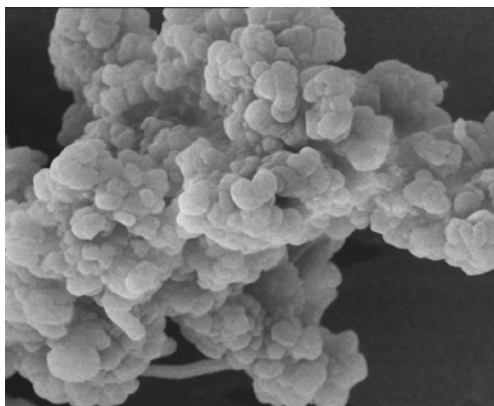

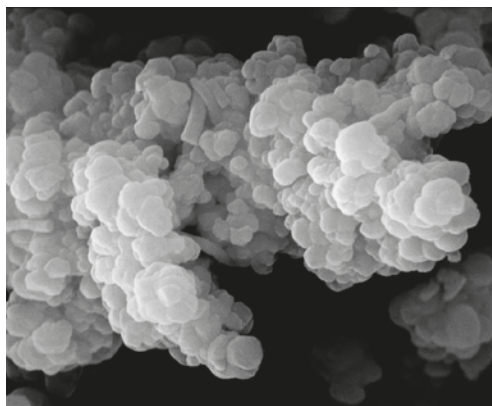LED wire bonding

Semiconductor intersection

TST on Glass
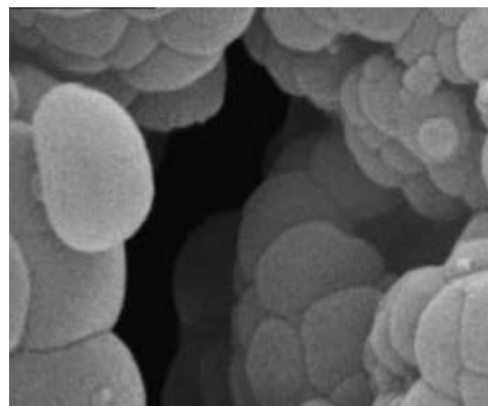
Imaging with different Acceleration Voltages

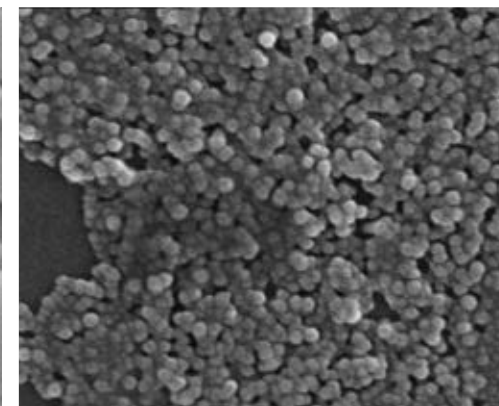Acc Voltage: 10kV
Magnification: 10,000x

Acc Voltage: 20kV
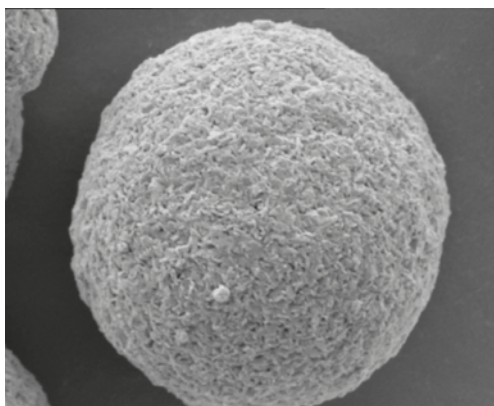Magnification : 10,000x

High Resolution Images

Magnification : 100,000x

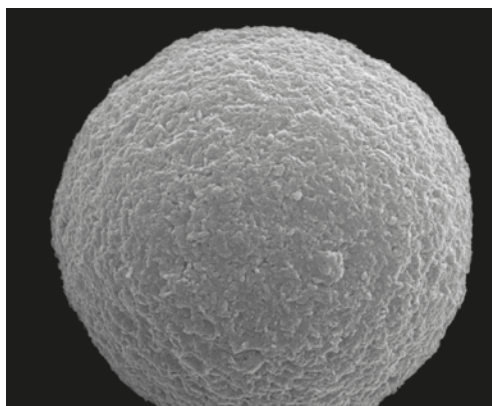Magnification : 100,000x

Acc Voltage: 5kV
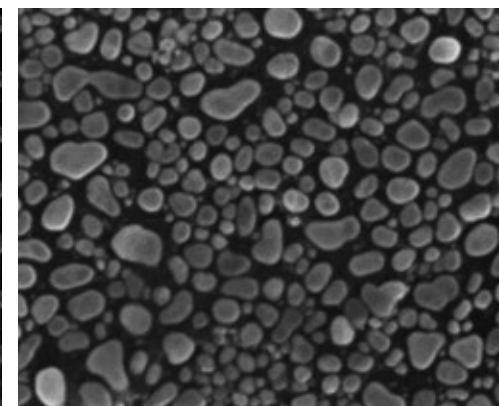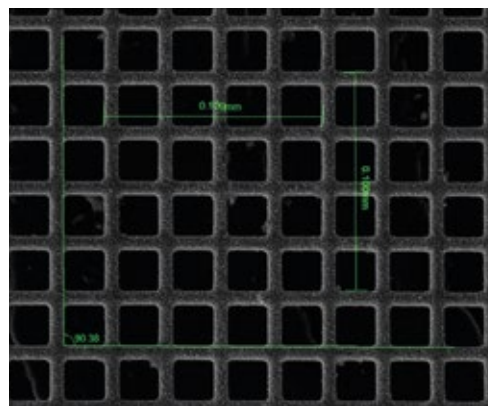Magnification : 20,000x

Acc Voltage: 20kV
Magnification : 20,000x

Calibration & Gold Powder Sample
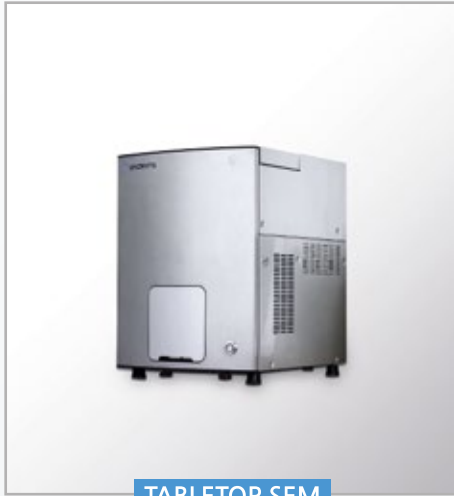
TABLETOP SEM
CUBE Series

COMPACT SEM
GENESIS Series

BIG CHAMBER SEM
VERITAS Series

The Leading SEM Company in Korea Since 2010

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Gateway to the Undiscovered