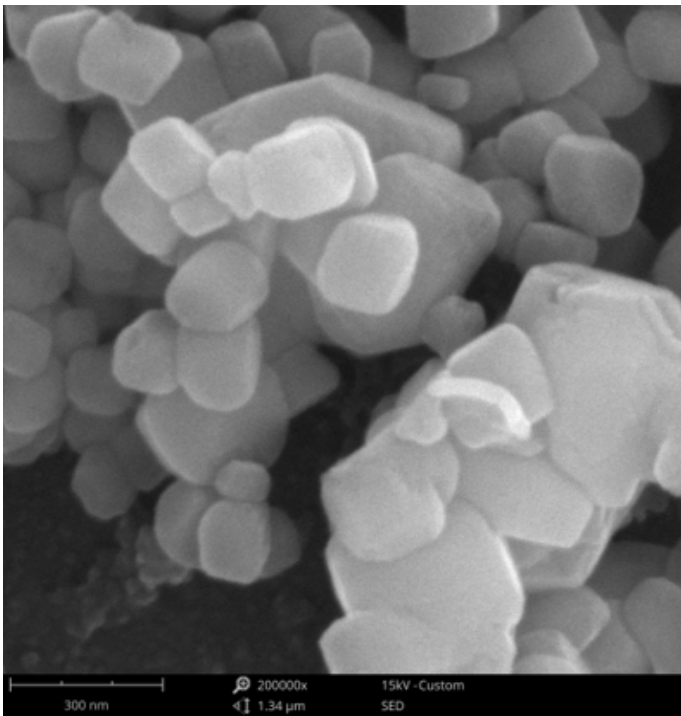


Phenom Pharos Desktop SEM

The faster, higher-resolution desktop SEM



Phenom Pharos vs floor model Tungsten



Phenom Pharos

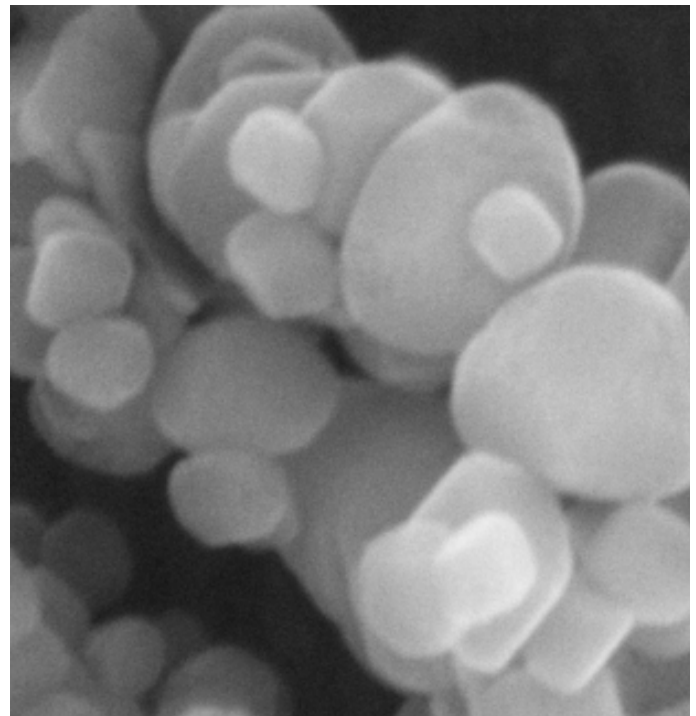
CaCO₃ (Pd coated)

15 kV SE image @ 200.000x

The Phenom Pharos is a desktop SEM with a FEG source that makes crisp, high-brightness images and the benefits of FEG accessible to everyone. It is also easy to operate, from the initial installation to the actual usage, thanks to its intuitive design. The advanced hardware design and detectors enable a fast time to image and easy, foolproof handling.

High brightness images

The Phenom Pharos scanning electron microscope (SEM) is designed in such a way that the power of a FEG source, like crispy, high brightness images, can be accessed by all. Every interaction is easy and intuitive, starting with the ordering process: one code provides a fully-functional FEG SEM with a backscattered electron detector (BSD). Options include a secondary electron detector (SED) and/or energy-dispersive X-ray detector (EDX), along with sophisticated analytical software.



Floor model Tungsten

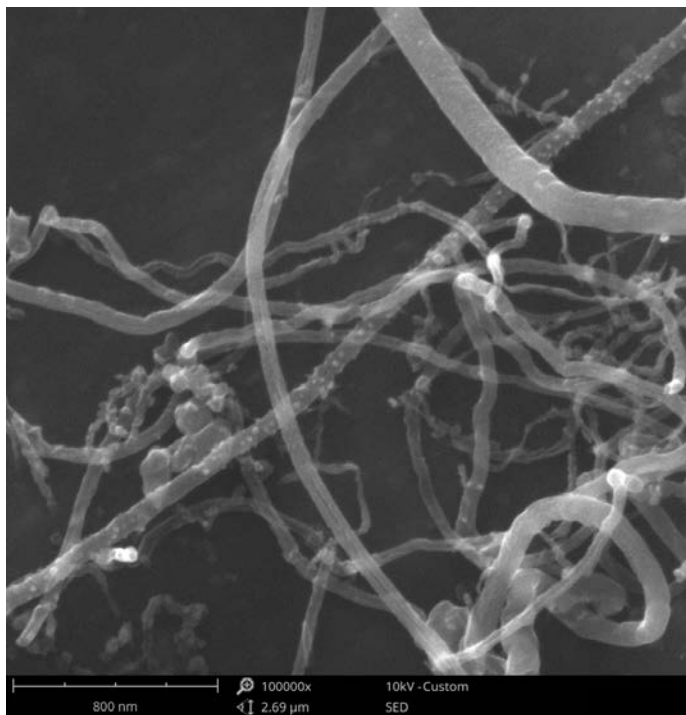
CaCO₃ (Pd coated)

15 kV SE image @ 200.000x

Easy and fast

The installation process is also straightforward. A (solid) table is required to place the Phenom Pharos on and, after connecting the cables, the initialization process starts automatically when you switch on the power. Once ready, a sample can be loaded easily into the SEM where an image is created with the standard navigation camera. Via the intuitive user interface (UI), you can go to SEM image mode in less than 25 seconds. Thanks to the column design, high-resolution imaging (<3 nm) is done at the same working distance as analytical work. And with the advanced detectors, image acquisition time only takes seven seconds or less. This easy operation and intuitive UI enable a very high throughput on a FEG SEM, making the benefits of FEG accessible to everyone.

Phenom Pharos vs floor model Tungsten



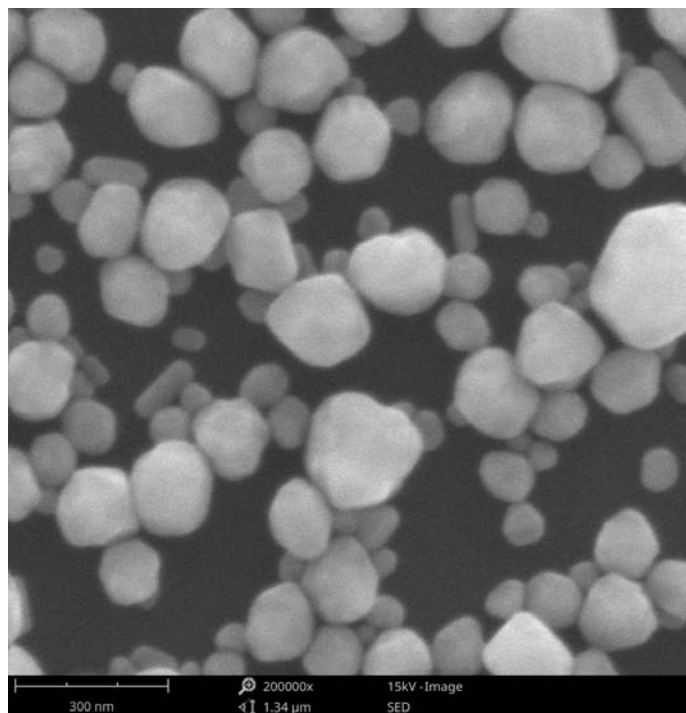
Phenom Pharos

Multiwall Carbon nanotubes
10 kV SE image @ 100.000x



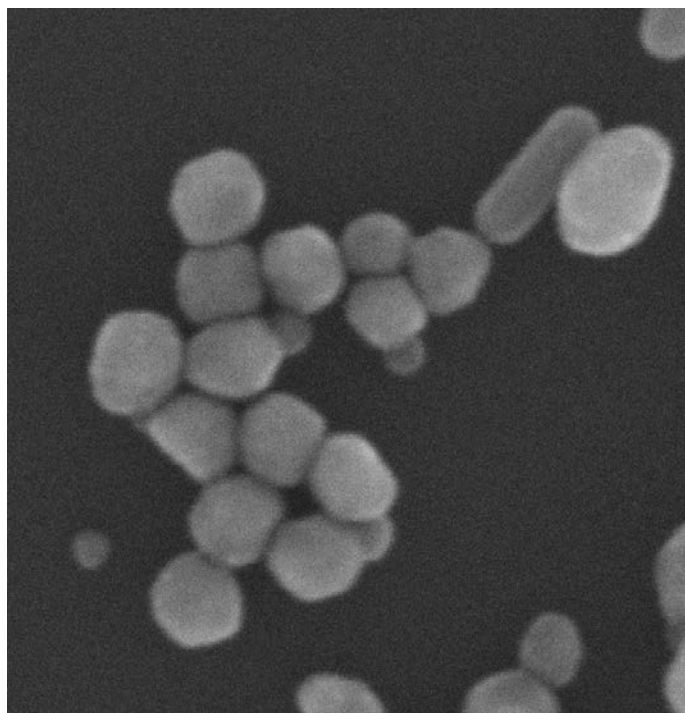
Floor model Tungsten

Multiwall Carbon nanotubes
10 kV SE image @ 100.000x



Phenom Pharos

Ag nanoparticles
15 kV SE image @ 200.000x



Floor model Tungsten

Ag nanoparticles
30 kV SE image @ 200.000x

Imaging Specifications

Maximum SEM magnification

1.000.000x

Acceleration voltage range

2 kV - 15 kV

SEM resolution

- <3 nm at 15 kV
- 10 nm at 3 kV

Sample size

- Up to 25 mm (Ø)
- Up to 100 mm (h)

Stage

Standard motorized X-Y stage

Max. stage travel (X:Y)

18 mm x 18 mm

Detector

Standard	Backscattered electron detector
Optional	Secondary electron detector EDX detector

Electron source

FEG

Vacuum observation mode

High Vac	1 Pa
Mid Vac	10 Pa
Low Vac	60 Pa

System Specifications

Dimensions & Weight

Imaging module	286(w) x 566(d) x 545(h) mm, 53 kg
Diaphragm vacuum pump	145(w) x 220(d) x 213(h) mm, 4.5 kg
Power supply (2x)	156(w) x 300(d) x 74(h) mm, 3 kg
Monitor	375(w) x 203(d) x 395(h) mm, 7.9 kg
ProSuite	Optional ProSuite System including: 19" monitor with PC and network router mounted 375(w) x 250(d) x 395(h) mm, 9 kg

Requirements

Ambient conditions

Temperature	15°C ~ 30°C (59°F ~ 86°F)
Humidity	Between 20% - 80% RH
Power	Single phase AC 110 - 240 Volt, 50/60 Hz, 400 W (max.)

Recommended table size

150 x 75 cm, load rating of 100 kg

Find out more at thermofisher.com/phenomworld

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