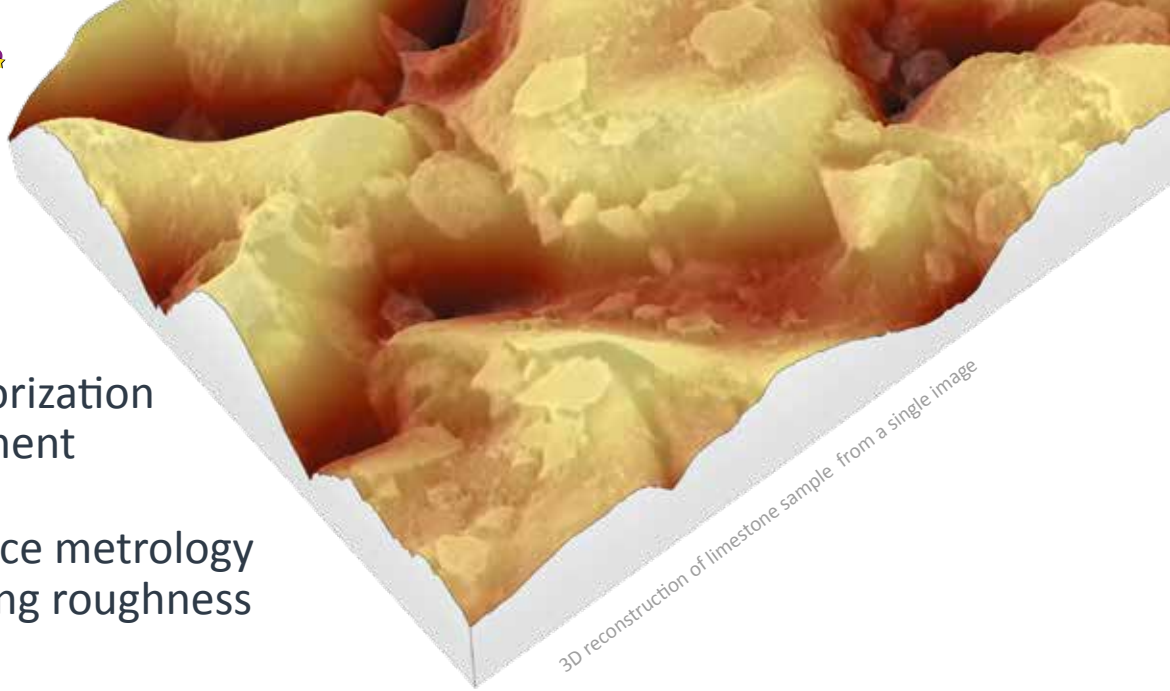


Surface Imaging, Analysis and Metrology Software  
**for Scanning Electron Microscopes**

> Superfast 3D reconstruction

> Image colorization & enhancement

> Surface metrology including roughness

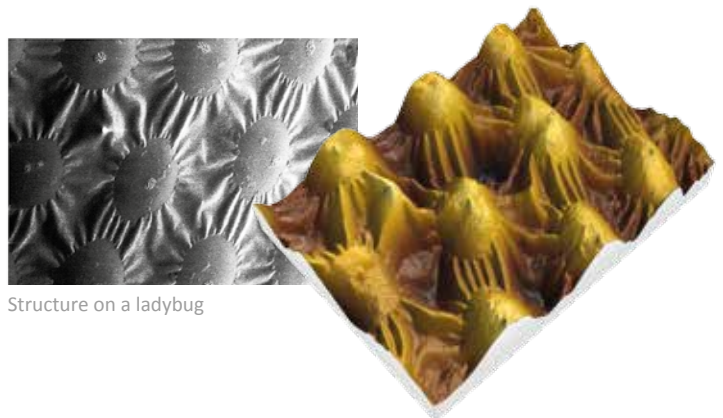


## 3D imaging with your SEM

Instant 3D enhancement of single SEM images

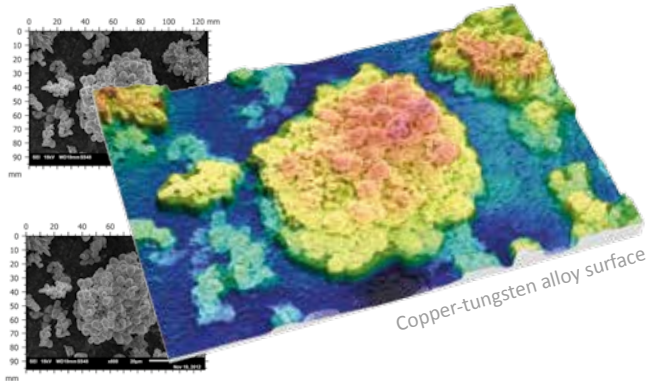
Open up a new dimension in SEM image analysis!

Turn gray scale SEM images obtained using an oblique electron beam into 3D color images - all in one click.

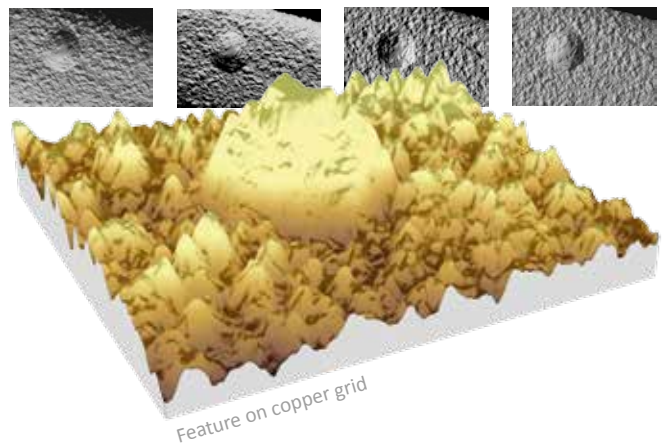


3D reconstruction from two or four SEM images in seconds

**Quickly reconstruct 3D surfaces (X, Y and Z in length units)** from two SEM images obtained at different tilt angles or from a single anaglyph image...



...or from four images obtained using a four quadrant detector.



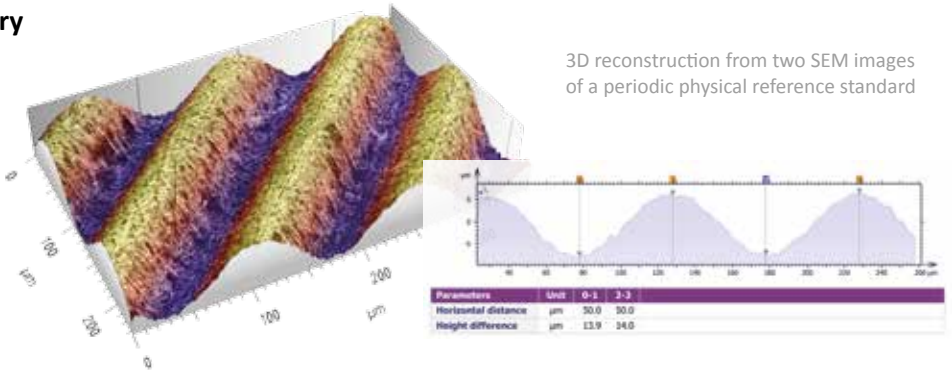
### The Mountains® 3D experience



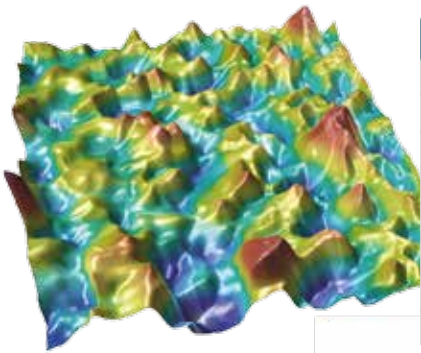
- See surfaces in 3D and color in real-time
- Zoom in on any feature and view it from any angle
- Enhance 3D views with rendering and lighting effects
- Overlay images on 3D color topography
- Create animated views of 3D images
- View images in real 3D with anaglyph glasses

## Fast, accurate surface geometry analysis

- **Analyze lateral or topographical geometry**
  - profile contours, cross-sections
  - distances, angles, areas, volumes and step heights
- **Compare reconstructed surfaces with nominal form**
  - sphere, cylinder, plane or polynomial
- **Assess ISO form deviation**
  - flatness, straightness, roundness



## Built-in tools for measuring surface roughness



Roughness separated from surface after 3D reconstruction

ISO 25178	
Height Parameters	
Sq	0.632 µm
Ssk	0.428
Sku	5.06
Sp	3.41 µm
Sv	2.58 µm
Sz	5.99 µm
Sa	0.470 µm

- **Analyze surface roughness and waviness**
  - apply the latest ISO 16610 filtering techniques
- **Calculate 2D and 3D surface texture parameters**
  - from average roughness (Ra) to ISO 25178 and ASME B46.1
- **Carry out functional studies**
  - bearing ratio curve, depth distribution histogram, material/void ratios within a surface slice, wear and more.

Mountains® can also combine SEM images with surface data obtained by other instruments

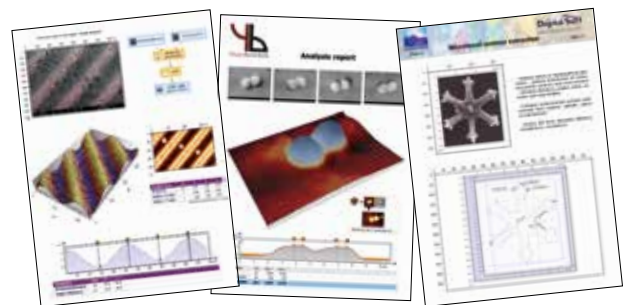
## Work efficiently in a smart user environment

- **Powerful report generator & data export**

Turn your measured data into visual analysis reports. Export results to Excel, Word and as a wide variety of formats (BMP, JPEG, PNG, PDF).

- **Automation**

Analysis steps in the workflow can be modified at any time. All dependent steps are recalculated automatically. Workflows can be saved as templates and applied to similar data sets.



**Mountains®**

The most complete software range for surface analysis

Designed for instrument manufacturers, research laboratories and industry, Mountains® provides dedicated imaging and metrology software packages for a wide range of instrument families, including: electron microscopes, spectrometers, scanning probe microscopes, 3D optical profilers, digital microscopes and scanning profilometers.

Digital Surf - from surface metrology pioneer to software technology leader

With a worldwide installed base of **10,000+ users**, Mountains® has become an industry standard and the tool of choice for studying micro and nano surfaces.

## UNLIMITED APPLICATIONS

- ▶ MEMS
- ▶ Nano-optics
- ▶ Electronics
- ▶ Materials science
- ▶ Biological sciences
- ▶ Fiber optics
- ▶ Nanotechnology
- ▶ Medical sciences
- ▶ Particle & pore analysis
- ▶ Forensic sciences
- ▶ Soil & rock samples and more

### ▶ MountainsMap®-SEM

#### Software for Scanning Electron Microscopes

MountainsMap® SEM image analysis and metrology software is designed to meet the specific needs of electron microscope users.



### ▶ MountainsMap® Premium

All-in-one surface imaging, analysis and metrology software superset for all types of surface imaging and measuring instruments.

### ▶ Optional modules

Our optional modules allow you to tailor MountainsMap® to your specific needs.

MountainsMap® offers a wide range of optional modules for advanced and specialized applications. For example the **Grains & Particles** module includes multiple complementary methods for analyzing grains, particles, islands and surface morphology.

### ▶ Work in your own language

MountainsMap® is available in ten languages



## Mountains® software resources & references

- Media library  
[www.digitalsurf.com/medialibrary](http://www.digitalsurf.com/medialibrary)
- Printed user manual  
[www.digitalsurf.com/usermanual](http://www.digitalsurf.com/usermanual)
- Conferences & exhibitions  
[www.digitalsurf.com/events](http://www.digitalsurf.com/events)

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Surface Intelligence

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