Automated particle analysis at the nanoscale
Accelerate your product optimization through precise, statistically relevant data

Better statistics, faster
Perform large-area, high-resolution imaging and data acquisition. The Thermo Scientific™ Automated Particle Workflow (APW) streamlines the workflow from sample to particle analysis by automating data acquisition, particle segmentation, and statistical analysis of morphological and chemical parameters.

From sample to particle statistics, automated and unattended

Benefits
✓ Get statistics on more than 500 particles per hour
✓ Rapidly screen new products and processes
✓ Significantly improve repeatability
✓ Run the TEM 24/7, unattended

Interpretation
Avizo2D Visualization Software allows you to analyze the segmented data to generate statistics such as size, surface area, perimeter, distribution, and chemical composition.

1 Acquisition
Thermo Scientific Maps™ and Velox™ Software enable the acquisition of large-area, high-resolution scanning transmission electron microscopy (STEM) images and energy dispersive X-ray spectroscopy (EDXS) maps in a fully automated and unattended way.

2 Segmentation
During automated, unattended acquisition of STEM images and EDS maps, Maps Software and Thermo Scientific Avizo2D Software use the image and chemical information from the STEM and EDS maps to find and classify nanoparticles based on morphology and chemical composition.

3 Interpretation
Avizo2D Visualization Software allows you to analyze the segmented data to generate statistics such as size, surface area, perimeter, distribution, and chemical composition.

自动化粒子分析的纳米尺度
加速产品优化，通过精确和统计相关数据

更好的统计，更快
执行大型区域，高分辨率成像和数据采集。Thermo Scientific™自动粒子工作流程（APW）通过自动化数据采集、粒子分割和统计分析简化了从样品到粒子分析的流程

从样本到粒子统计，自动化和无人值守

好处
✓ 获得超过500个粒子的统计信息
✓ 快速筛选新产品和过程
✓ 显著提高重复性
✓ 24/7运行TEM，无人值守

解释
Avizo2D可视化软件允许您分析分割的数据来生成大小、表面积、周长、分布和化学组成等统计信息。

1 获取
Thermo Scientific Maps™和Velox™软件使您可以大范围，高分辨率的扫描透射电子显微镜（STEM）图像和能量分散X射线光谱（EDXS）映射自动和无人值守方式。

2 分割
在自动无人值守的STEM图像和EDS映射采集期间，Maps软件和Thermo Scientific Avizo2D软件使用图像和化学信息来自STEM和EDS映射来找到并分类基于形态和化学构成的纳米颗粒。

自动化工作流程

自动化流程

自动化流程