

Summary of Nanonics products

Nanonics 产品概要

Nanonics offers a wide variety of customized, flexible, optically integrated scanning probe microscopes (SPM) in the follow capability areas:

Nanonics 在下列功能范围中提供各种定制的，灵活的光学集成扫描探针显微镜 (SPM) .

Near-field scanning optical microscope (NSOM). A line of instruments that provides the highest resolution optical information simultaneously with high resolution SPM topography. A tapered optical fiber probe functions as the main probe in the SPM through which light can be either transmitted or collected so that a variety of NSOM modes can be operated including collection, reflection, and transmission modes. Nanonics provides systems with different feedback mechanisms and is customizable to any probe shape and geometry, depending on the customer needs.



近场扫描光学显微镜(NSOM).系列产品在提供高分辨率光学信息的同时，也能测量到高分辨率的表面形貌。在扫描探针显微镜中锥形光纤探针作为主要的探头可以传送或收集光学信号，可以实现多种近场工作模式，包括收集，反射和透射模式。Nanonics 根据客户的需求提供不同的反馈机制系统和定制任何形状和几何尺寸的探头。

AFM-Raman/Tip enhanced Raman spectroscopy (TERS). Technology that provides high resolution *chemical* information through Raman spectra on your material simultaneously with high resolution topographic information. These measurements can either be done through a combined AFM/confocal Raman microscopy system, or for higher resolution, through a dedicated tip enhanced Raman spectroscopy (TERS) system which takes advantage of the SPM tip as an antenna to focus the light right beneath the tip and collect highly localized Raman spectra.



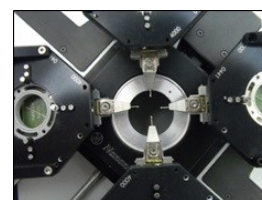
原子力显微镜拉曼光谱联用/针尖增强拉曼光谱 (TERS) . 此项技术能通过拉曼光谱提供样品高分辨率的化学成分信息，同时具有高分辨率的表面形貌。这些测试可以通过 AFM/共焦显微拉曼系统，或高分辨率的特制针尖增强拉曼光谱 (TERS) 系统实现。TERS 功能利用 SPM 针尖作为天线将光聚焦到针尖的正下方并收集高定位区域的拉曼光谱。

Low temperature SPM. A system that performs all of our standard SPM/optical measurements but now at temperatures down to 10K with very fast cooling that does not require an immersion cryostat. This system is essential for studying dynamics, photoconductivity, and electrical conductivity of a variety of materials including 2D materials such as MoS2 and graphene.



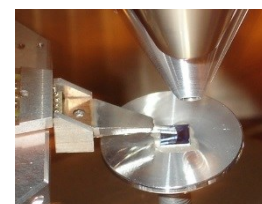
低温扫描探针显微镜. 此系统执行所有标准扫描探针显微镜测试以及光学测试，但现在温度下降到 10K，冷却速度非常快且不需要浸泡低温恒温器。这个系统对各种材料包括二维材料如二硫化钼和石墨的力学，光电导性和电子传导性的研究是必不可少的。

Multiprobe SPM. A revolutionary technology that refers to the ability to simultaneously and independently operate **two** or even **four probes** to provide maximum flexibility and sophistication in your characterization needs. These probes can be any combination of scanning probe, near field optical, thermal, electrical and nanolithography probes. Multiprobe technology enables unique experiments that take advantage of one probe manipulating or pumping a sample optically, electrically or thermally, while the other probe(s) interrogate the sample in various modes simultaneously.



多探头扫描探针显微镜. 一个革命性的技术，根据你的特性描述需要，同时和独立操作两个甚至四个探头提供最大的灵活性和复杂性。这些探头可以任意组合各种扫描探针，如近场光，热，电和纳米探针。多探针技术能够实现独特的实验设计，一个探针操纵样品或提供光、电或者热学信号激发，而其他探针同时以各种各样的方式收集信号。

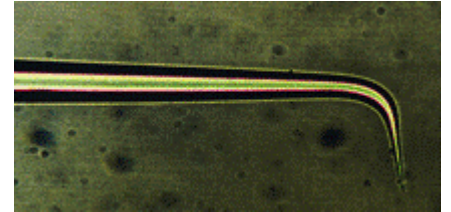
Combined AFM/SEM/FIB. The first triple beam AFM, SEM & FIB with the ability to integrate AFM/NSOM with SEM and FIB technology to provide the ultimate 3D nanoscale characterization capability. The revolutionary innovation in this instrument and AFM probe design is an open architecture that provides open access to the SEM/FIB beams without any obstruction or interference to the injectors, detectors, or beam lines.



原子力显微镜/扫描电子显微镜/聚焦离子束联用. 市面上首台三光束原子力显微镜/扫描电子显微镜/聚焦离子束系统，能合并原子力显微镜/近场扫描光学显微镜、扫描电子显微镜/聚焦离子束技术

能力提供极限 3D 纳米性能表征。此系统采用的革命性创新是一个开放的体系结构，提供开放的扫描电子显微镜/聚焦离子束光束接入，而不会对喷油器，探测器，或束线产生任何阻碍或干扰。

Nanolithography. Nanonics Fountain Pen Nanolithography (FPN) MultiProbesystem is the first SPM platform capable of both chemical liquid and gas nanolithography and online imaging with multiple probes. Fountain pen lithography is a technique that uses very fine pipettes with apertures on the order of 100nm attached to an AFM cantilever arm and allowing the molecules to flow out through the tip in a manner very similar to a fountain pen.



纳米光刻. Nanonics 钢笔式纳米光刻 (FPN) 多探针系统是第一台能够将化学溶液、气体纳米光刻与在线成像结合的多探头扫描探针显微镜。钢笔光刻技术使用 100nm 开孔的 极细的吸管固定到原子力显微镜的悬臂上，让分子通过针尖流出，与钢笔方式非常相似。