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Nano-Positioning for Microscopy & Imaging



Piezo stages & positioners are essential tools for high-resolution microscopy, such as Super Resolution Microscopy or AFM. Their sub-atomic resolution and extremely fast response allow researchers to create higher-quality images faster. PI provides a large variety of fast positioning stages and piezo objective nano-positioners for 3D imaging (Z-stack acquisition), fast-focusing applications, and light sheet microscopy.



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Fine detail of flower petal structure easily observable.

NanoSuit®

AQUEOUS SOLUTION

SEM imaging of biological objects in their natural state

What is NanoSuit?

NanoSuit is a novel technology which enables the observation of cells, microorganisms, etc. in a living state using SEM.

NanoSuit is an aqueous solution of a bio-compatible polymer that forms a very thin barrier layer on the surface of an object which holds moisture in the object under vacuum condition in electron microscopy. The barrier layer is electrically conductive.

Therefore, NanoSuit makes it possible to observe biological objects with their natural image texture.

Quick and easy to use...

Simply drop the NanoSuit solution onto the specimen, then observe using SEM. **You don't need any other fixation procedures.**

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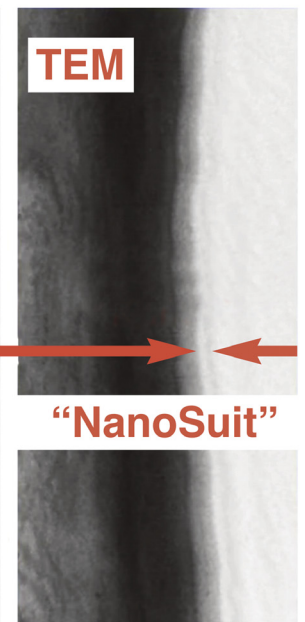
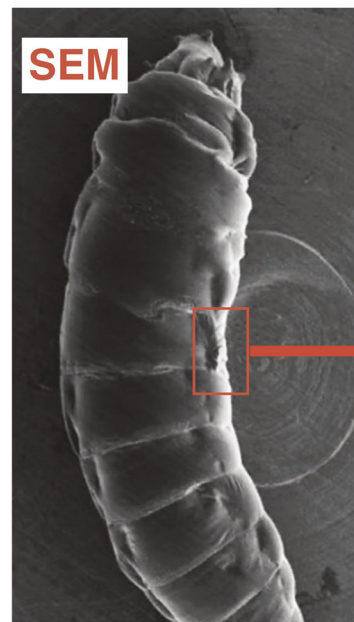
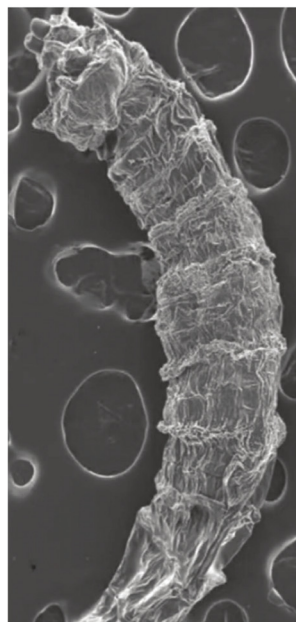
Electron Microscopy Sciences

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Hatfield, Pa 19440

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email: info@emsdiasum.com

or stacie@ems-secure.com



Fixed Drying Process

Currently used by many researchers, this process results in dehydration and deformation of biological specimens caused by the vacuum condition inherent to EM.

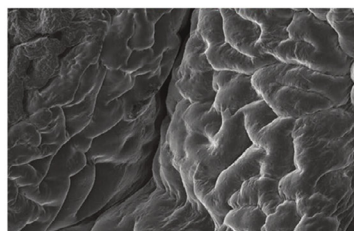
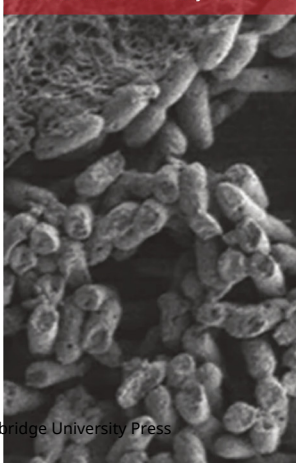
Origin of NanoSuit

NanoSuit was created to mimic the mucus layer of larva of *Drosophila*, which showed the ability to insulate specimens from the effects of vacuum when irradiated by plasma.

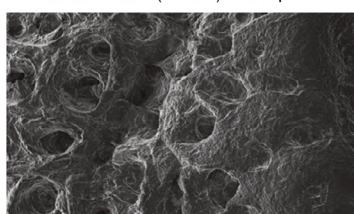
Molecularly Bonded Protective Layer

TEM observation shows the self-supportive layer. Tissues and cultured cells can also be observed in a natural state using this innovative solution.

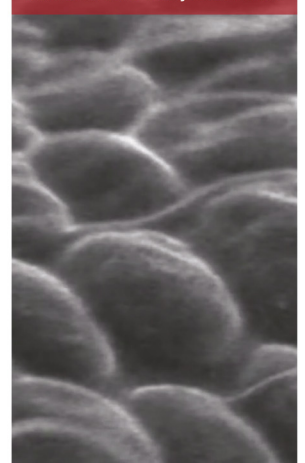
Individual Bacillus easily observable.



Distinguishing normal tissue (top) from cancerous tissue (bottom) at 500µm.

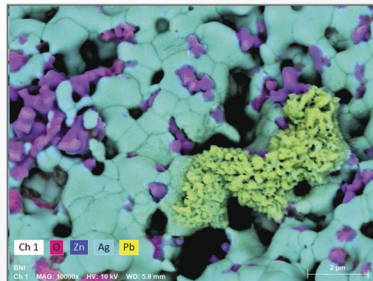
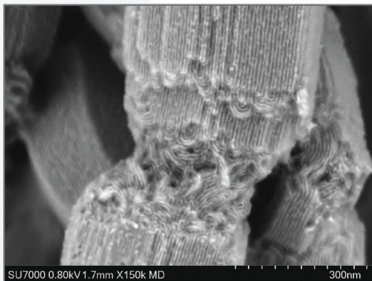


Individual cells easily observable.

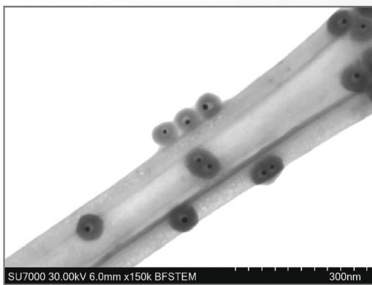


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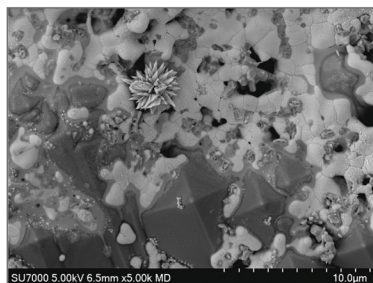


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