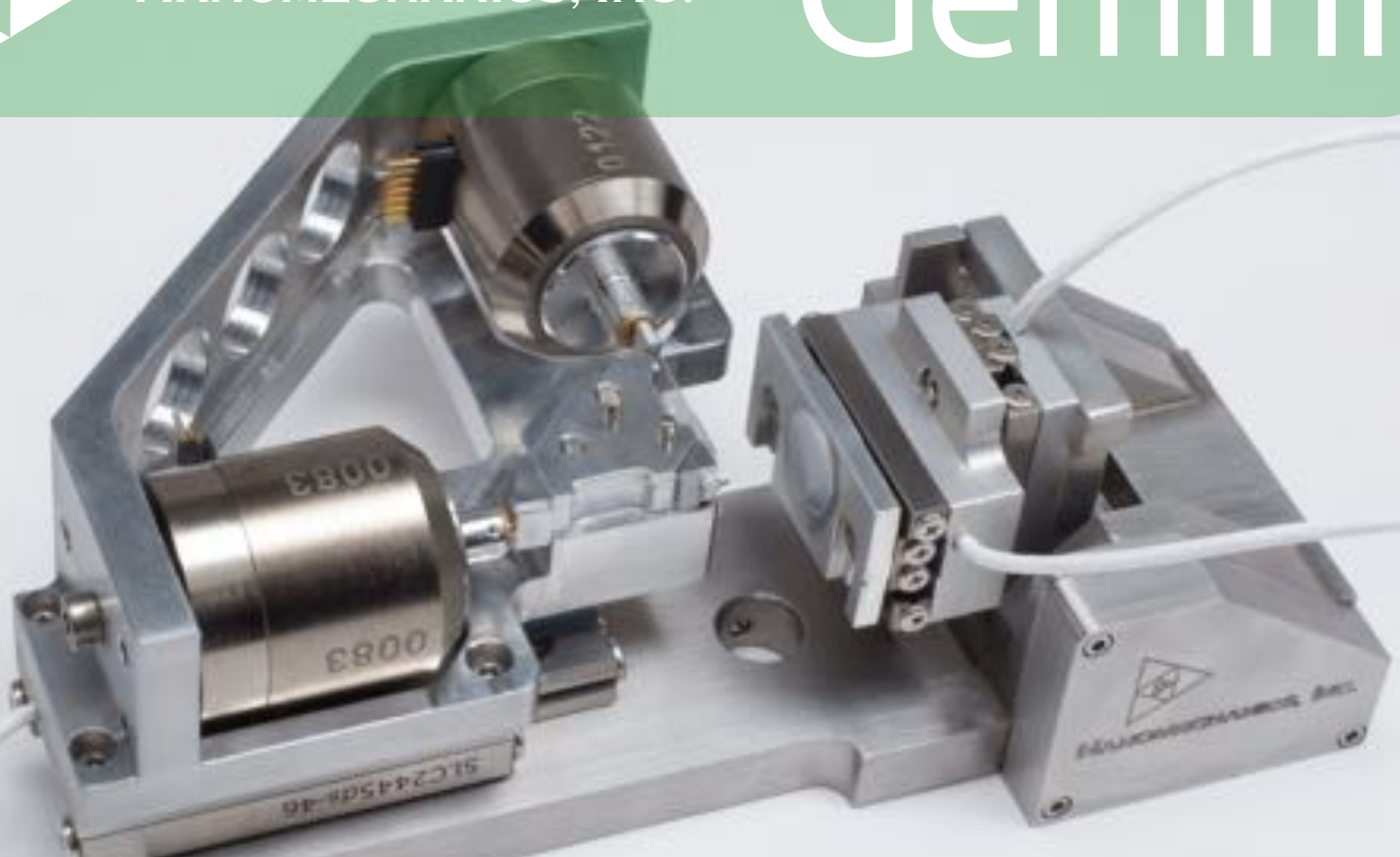




NANOMECHANICS, INC.

# Gemini



## Revolutionizing Tribology with Correct Answers. Every Time.

*Discover accuracy, precision, and control of a new order with the Gemini system from Nanomechanics, Inc., the world's first multi-dimensional instrument for studying the dynamics of tribology and mechanical testing at the Nano-scale.*

**Accuracy** - Gemini provides unmatched freedom to explore contact mechanics in multiple dimensions and because it's from Nanomechanics inc., the powerful confidence in the correct answer, every time.

**Precision** - Unmatched resolution, force range, and dynamic performance made possible by Gemini's isometric axes means both normal and lateral axes deliver the renowned exactness expected from Nanomechanics, Inc.

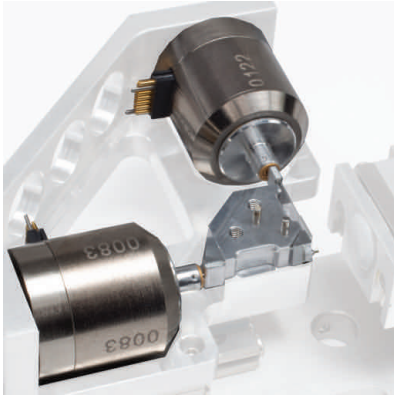
**Control** - Hardness, wear and adhesion questions are efficiently solved with the multi-axis capability of a Gemini system, the indispensable tool for accurately investigating tribology questions at a resolution never before possible.

### TRIBOLOGY +

- Single Asperity Characterization
- Stick Slip Sliding
- Ultra-Thin Film
- Lubrication
- Damping
- Anisotropy
- Poisson's Ratio
- Modulus
- Scratch Resistance
- Topography
- Nanofretting
- MEMS Testing
- Adhesion

## Accurate Multi-Dimensional Measurement

The first tool supplying isometric force displacement measurement for the study of hardness, tribology, wear, and adhesion.

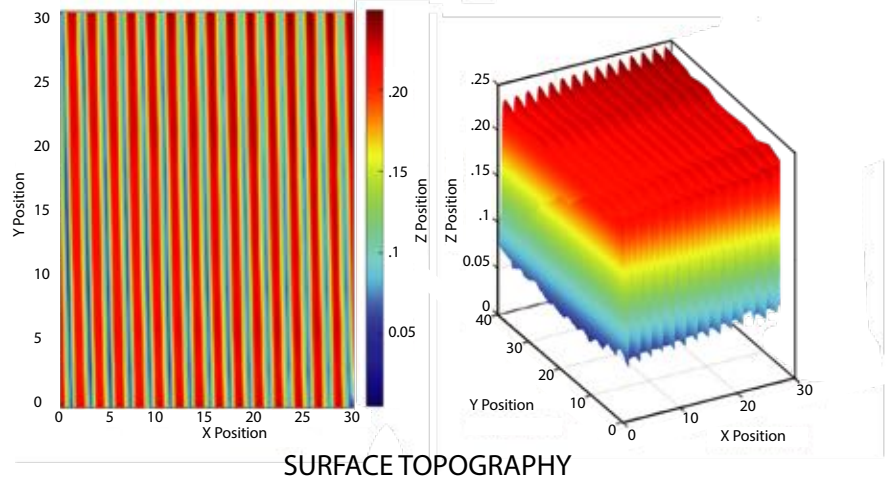


## SUPERIOR SPECIFICATIONS

- Multi-dimensional dynamic performance: 120 Hz resonant frequency
- Wide load and displacement ranges: 50 mN and 50  $\mu\text{m}$
- Tension or compression: no transition
- Fast time constant: 20  $\mu\text{s}$  with sub-nanometer noise
- Electromagnetic activation: low drift and dynamic accuracy
- High load frame stiffness: 1e6 N/m

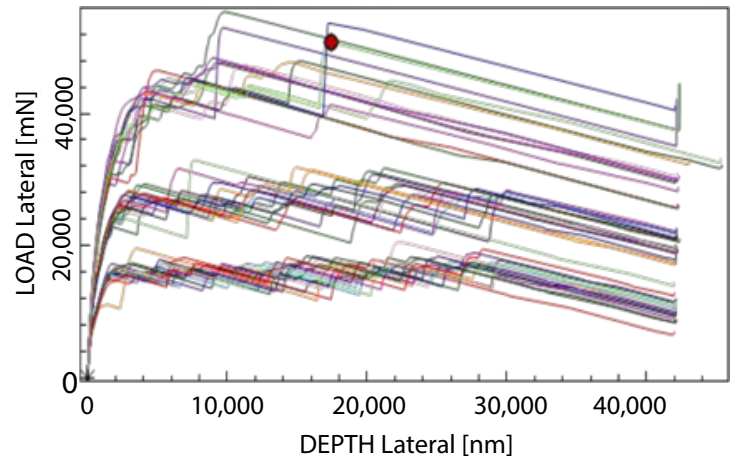
## Precise Properties Measurement

A sample stage of sub-nanometer resolution complements the actuators to produce highly precise targeting and indentation measurements.



## Control Lateral Forces

Measure forces and displacements in both quasi-static and dynamic modes, with sub-nanometer and nano-Newton resolutions.



Stick Slip-Sliding on Quartz