

The iNano™ nanoindenter is made easy and affordable by offering repeatability, accuracy and precision at a price that puts nanoindentation capability into reach for any lab's budget, from leading universities to high tech companies.

By offering the highest performing and most capable mechanical characterization microprobe on the market, at an affordable price, we offer our customers the capability to perform accurate testing on a wide range of materials, while remaining true to the principle of getting more for less.

iNano by Nanomechanics, Inc. brings cutting edge technology to research labs across the world in a user-friendly, small footprint, dynamic package that can have you running precise experiments with highly accurate data in less than 2 hours.

**InQuest Controller** 





Automatic Tip Calibration A









# iNano Capabilities

## Ease of Use

Every element of the iNano is designed to provide lab technicians and researchers with an easy-to-use tool for characterizing their materials and products. From its innovative magnetic sample loading system to its industry leading software, iNano makes experiments simple and allows for mistake-free, high throughput mechanical testing that is required by today's leading labs.

By eliminating the need for advanced test setup and complicated software exchanges, iNano is perfect for the first time user looking to prove their product or the seasoned scientist trying to unlock the best results for their research all while offering the best quality data available on the market. iNano was built with the sole purpose of keeping world-class nanoindention simple.

### **Great Return on Investment**

For users in industry, the important questions is always "how will my lab tools make me money?" iNano answers the call by providing a device for characterizing both materials and products to give researchers the capability to control the quality, characteristics and performance of their products. Its cost effective design allows labs to stretch their budgets by eliminating the need to use third party contract laboratories to get the data they need, and allows for an unlimited number of test to be done in-house. This also eliminates the lengthy time delays of shipping samples and waiting for results.

## **High Performance**

Researchers worried that an easy-to-use, affordable nanoindenter is a de-tuned tool can rest assured that iNano is anything but. iNano uses leading edge technology developed by the inventors of the nanoindenter and provides for world-class specifications and best-in-industry performance. With available data acquisition speeds of 100 kHz and industry leading 20 micro second time constants, iNano not only gives you the best data but also the most data points per dynamic experiment. With 50 mN of force and 50 microns of displacement, iNano also offers the best possible range of experiments and applications.

## Flexible Applications

**InForce 50 Actuator** 

Optical Microscope

Whether you are a scientist in an industrial laboratory or a researcher in an academic environment, iNano provides a wide range of applications including:

- Thin films, coatings and surface treatments
- Metals, ceramics and polymers
- Composites
- Biomaterials
- MEMS and Nanostructures

### Multi-Purpose Instrument

With flexibility in mind, iNano allows for a wide range of tests including, but not limited to:

- Modulus and Hardness (Oliver and Pharr Model)
- Dynamic Mechanical Analysis (DMA Properties)
- Storage and Loss Modulus
- Constant Strain Rate and Constant Loading Rate

### **Robust Design**

Downtime is a killer and iNano helps you avoid it. Built to be robust and dependable, iNano's design will hold up for test after test, giving you the confidence to run your system like you run your lab — at

maximum capacity. With an industrial aluminum gantry, capable high force actuator and reliable software, iNano won't let you down when your research needs require high accuracy experiments or long-term repeatability.

ACTUATOR SPECIFICATIONS	
Displacement measurement	Capacitive Gauge
Displacement range	50 microns
Displacement resolution (electronic)	0.02 nm
Typical noise	< 0.1 nm
Load application	Electromagnetic
Maximum load	50 mN
Load resolution	3 nN
CONTROLLER SPECIFICATIONS	

100 kHz Data Acquisition Rate Closed Loop CPU Control Rate 500 Hz 0.1 Hz - 1 kHz Dynamic Excitation Frequencies

Contact Nanomechanics, Inc. today to find out how you can add the capabilities of nanoindentation to your lab in as little as 3 days.

