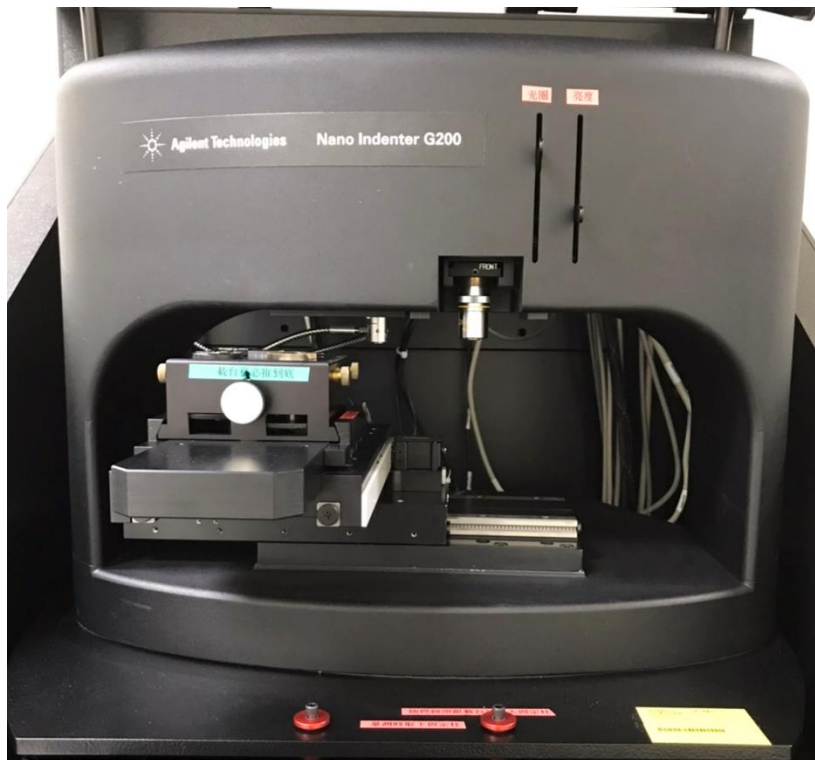


Nanoindenter

I. System Specifications and Model:

1. Model: Keysight Nano Indenter G200
2. Indenter Displacement Resolution: $< 0.01\text{nm}$
3. Total Indenter Travel: 1.5mm
4. Maximum Indentation Depth: $500\mu\text{m}$
5. Maximum Load: 500mN
6. Indenter-Thin Film Contact Force: $< 1\mu\text{N}$
7. Load Frame Stiffness: $5 \times 10^6\text{N/m}$

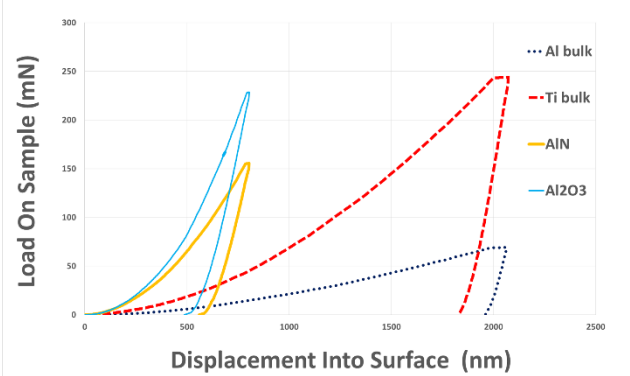
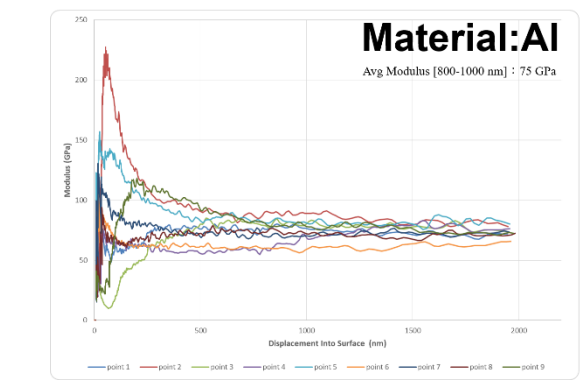
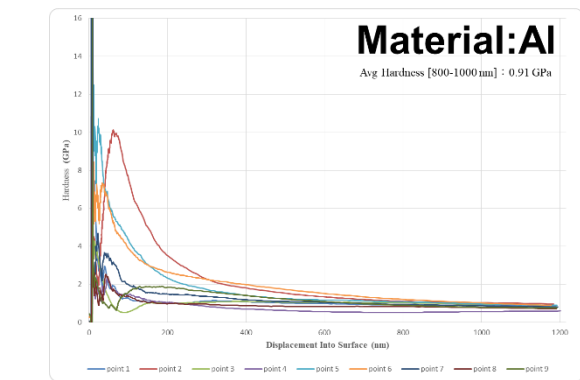
II. System Appearance: (The structure is depicted in the following image)



III. Function Description:

The nanoindentation mode features XP and continuous stiffness measurement (CSM) systems. Both of them can be used to measure force-related curves (load-unload curves), hardness, and modulus.

Analysis Item	Test Description	Example
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Force-related Curves (Load-unload Curves)	Observation of the displacement of sample indentation for loading and unloading changes	
Hardness	Sample hardness testing	
Modulus	Sample modulus testing	

Analysis Technology Characteristics:

1. Test samples must be smooth on the surface and free of stains.
2. The size of specimens to observe must be smaller than 1.5cm*1.5cm in size. Specimen bottom must be smooth so that it can be fixed. Height should be less than 0.3cm. Hardness must be under 40GPa.
3. To avoid damaging the indentation or scratching tip, thin film specimens must have good adhesion (non-adhesive or easy to remove). To mitigate the substrate effect, it is recommended that the film thickness should be more than 1000nm.

✓ Contact Information:

Contact	Ext.	Email	Location
Ms. Hsu	7751/7488	sct@narlabs.org.tw	R230

✓ Price list:

No.	Equipment	User Self-service (NTD/sec)	OEM Service (NTD/hr)	Note
NM-019	Nanoindenter	0.72	3,600	
Note: If the operation time is less than half an hour (30 minutes), it is counted as half an hour.				

✓ Application Procedure:

For **User Self-service reservations**, please proceed to the [User Self-service Procedure](#) website for detailed instructions.

For **applications for OEM Service**, please access the [OEM Service Procedure](#) website for detailed guidance.