

A50.7009

Micro In-situ Heating & Tensile Stage



Application

Normal stretching of crystalline materials

- Formation of slide-zone/
- Compatible deformation between grains/
- Crack initiation and propagation under loading

High temperature stretching of crystalline materials

- Grain boundary sliding/
- The dynamic recovery and recrystallization/
- Creep

Stretching of other materials

- Stretching of film, fiber, polymer flexible materials, etc.

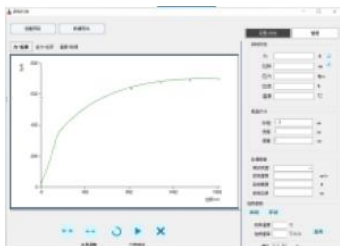


► Controller

1. Integrate heating control, tensioning control and PC functions
2. Equippe with vacuum storage box, effectively solve the problems of moisture absorption and dust attachment
3. Cart design, move with use

► Tensile Stage

1. With a pair of bi-directional trapezoid leadscrew, symmetrical loading
2. The fixture has a 45 ° chimeric groove design, preventing sample slippage, and the load center self adjustment
3. Equippe with a quantitative deformation analysis software for EBSD data
4. Support tensile, compression, bending, shear and other mechanical testing functions



► Control Software

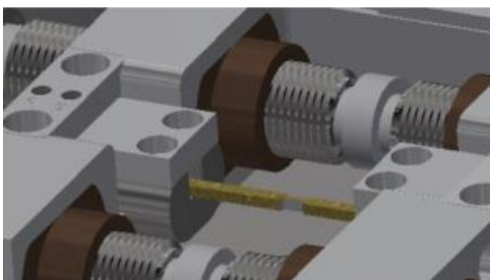
1. Integrate heating control and tensioning control
2. Generate a real-time output stress-strain curve
3. Support clicking the button to return to the initial position

► Heating Stage

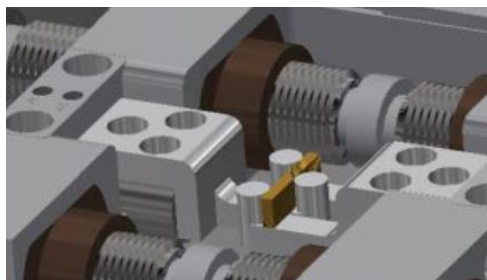
1. High imaging quality: unique degaussing design and anti thermal electronic interference design
2. High heating efficiency: temperature rise from room temperature to 1000 °C can be completed within 30 minutes



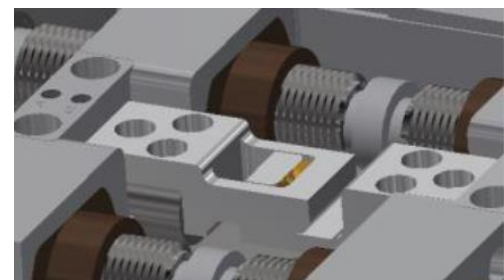
► Three Types Of Fixture



Tensile Testing Fixture



Bending Testing Fixture



Compression Testing Fixture

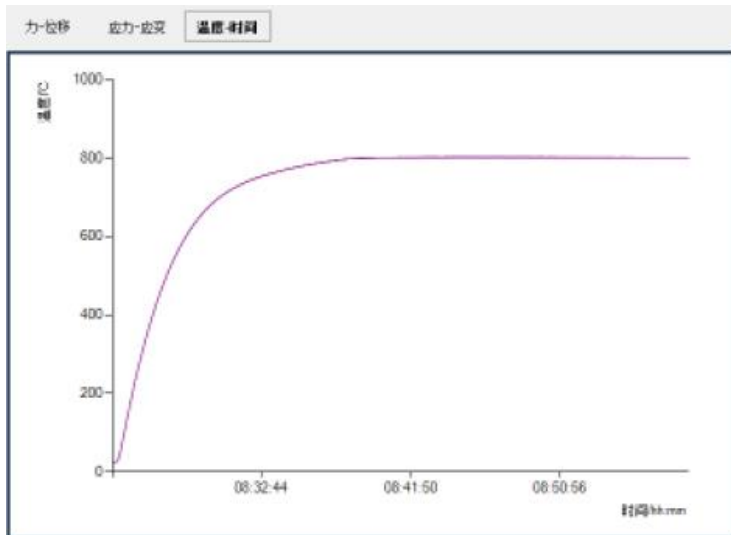
The micro in-situ heating tensile stage for testing the microstructures' and properties' revolutions of materials.

Used in scanning electron microscope; and developed algorithms for EBSD and X-ray diffraction analysis.

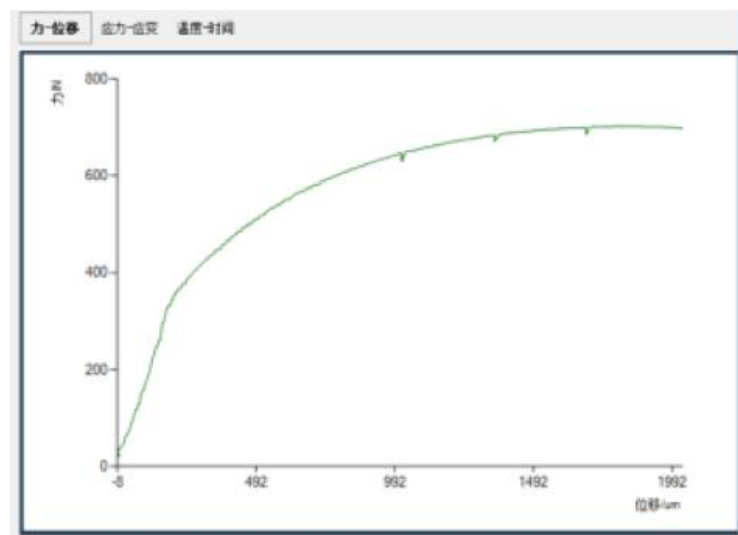


A50.7009 Micro In-situ Heating & Tensile Stage Specification

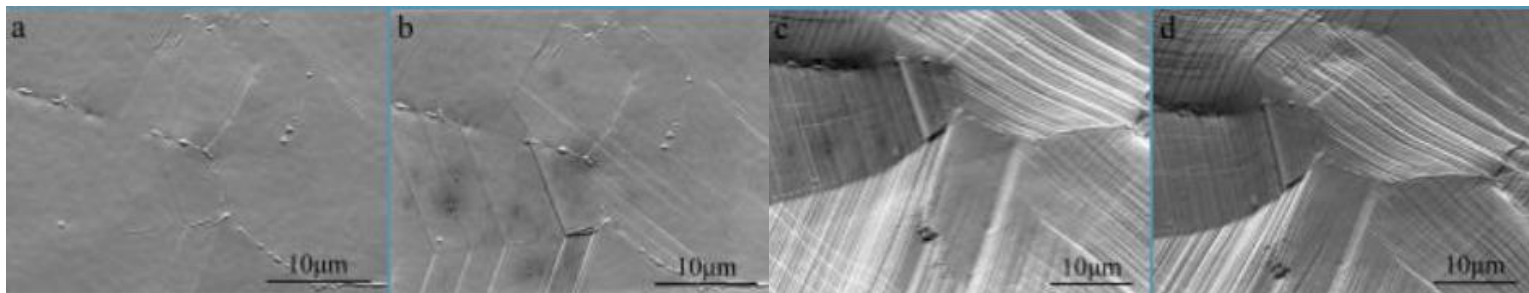
Tensile Stage	
Load	Optional Range: 20N、100N、200N、500N、1000N、2000N Full-scale Accuracy: $\pm 0.1\%$ Load Resolution: 0.01N
Displacement	Maximum Displacement: 30mm Full-scale Accuracy: $\pm 0.1\%$ Displacement Resolution: 100nm
Loading Mode	Constant Deformation Rate Tensile Test
Loading Rate	Continuously Adjustable
Power	110/220V, 50~60Hz, 48W
Instrument Size	148.5 mmx133mmx44.5mm
Instrument Weight	≈ 2.0 kg Size Range: $l=16-60\text{mm}$, $w_{\max}=12\text{mm}$, $t_{\max}=4\text{mm}$ Typical Size: $l=48\text{mm}$, $w=6\text{mm}$, $t=1.5\text{mm}$
Sample Size	In Situ Observation Area: $l=2\text{mm}$, $w=1.5\text{mm}$, $t=1.2\text{mm}$
Heating Stage(Optional)	
Heating Temperature	$T_{\max}=1000^{\circ}\text{C}$, $\pm 1^{\circ}\text{C}$, Heating Area: $\phi 6\text{mm}$
Power	DC, 24W
Instrument Size	24mmx32mmx40mm
Heating Rate	0~50 $^{\circ}\text{C}/\text{min}$
Control Software	
Operating System	Windows 7
Sampling Frequency	0~10Hz
Real Time Curve	Load-displacement, Stress-strain, Temperature-time
Real Time Parameters	Load, Displacement, Stress, Strain, Temperature
Output Report	(Load, Displacement, Stress, Strain, Temperature)-Time
Report Type	Excel



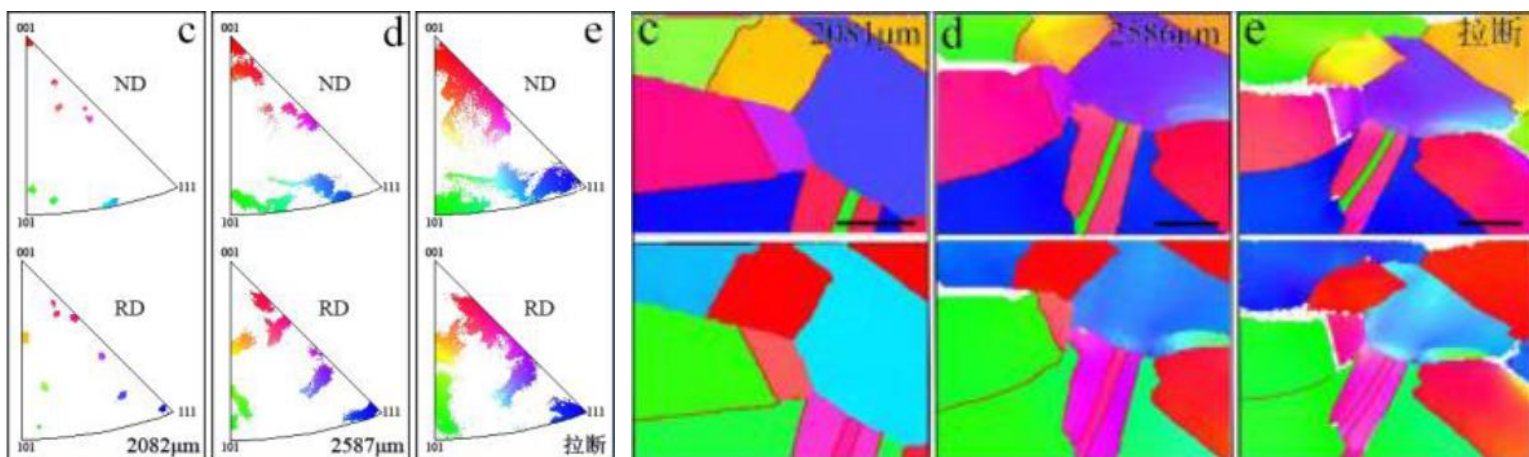
Temperature-time Curve



Stress-strain Curve



Structure Morphology



Orientation Imaging

MICROSCOPE IS OUR FOCUS

The Key To Micro World

Opto-Edu is one of the most professional supplier for microscope & educational instruments from China. We have been focusing in this field for more than 25 years, has a professional sales team who can assist our customer to find the BEST SELECTED microscope with competitive price and 3 YEARS Warranty.

25+ Year professional experience we know Microscopes the best!

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200+ Hot sale microscopes & Newest Models Updated Every Month

750+ Customer from all over the world & keep rising every day

1500+ Microscope products create your one-stop purchase platform

3000+ Educational Instruments For School, College And University Teaching

The Most Professional Microscope Manufacturer in China!



MICRO
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