

Advanced Manufacturing Technology Utilized Nano- Precision Machining

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What we have been studying for



For Safety

For Security

For Comfort

For Energy saving

High Value Manufacturing

Form



Function



**Energy
Storage!!**

**Safety and
Security!!**

High Value Manufacturing

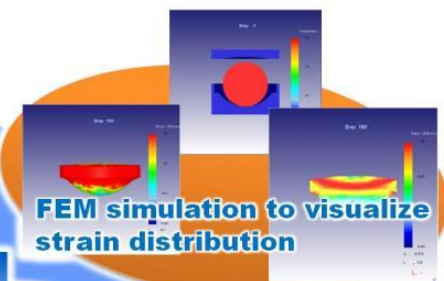
**Energy
Saving!!**

**Comfortable
Life!!**

Glass Mold Press



Development of Aspherical
Glass Mold Press
Equipment



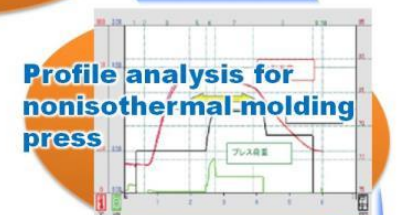
FEM simulation to visualize
strain distribution



Aspherical Molding Die
Fabricated by Precision
Grinding

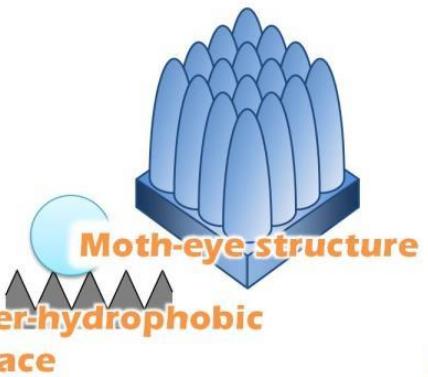


Cameras for safety

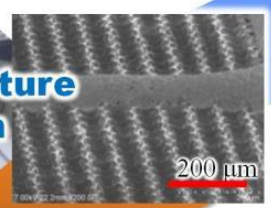


Profile analysis for
nonisothermal molding
press

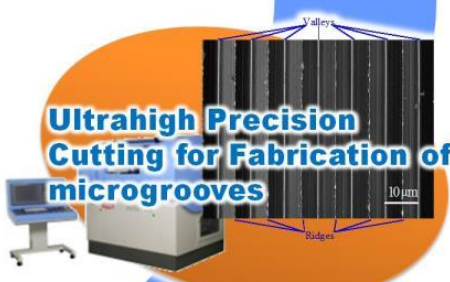
Ultraprecision Machining



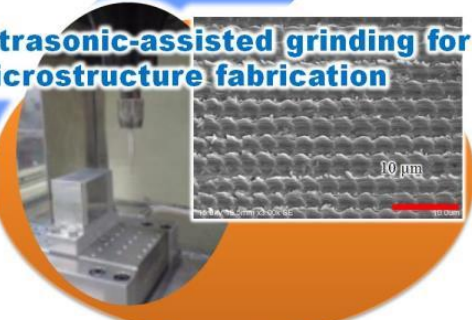
Moth-eye structure
Super-hydrophobic surface



Laser Microstructure Fabrication
200 μm



Ultrahigh Precision Cutting for Fabrication of microgrooves
Valleys
Ridges
10 μm



Ultrasonic-assisted grinding for microstructure fabrication
10 μm

Ultrasonic-assisted Machining



World first
3-dimensional ultrasonic-assisted machining



Ultrasonic Electrolytic grinding
電解電源
チャック
ワーク
エッチング
超音波振動発生器

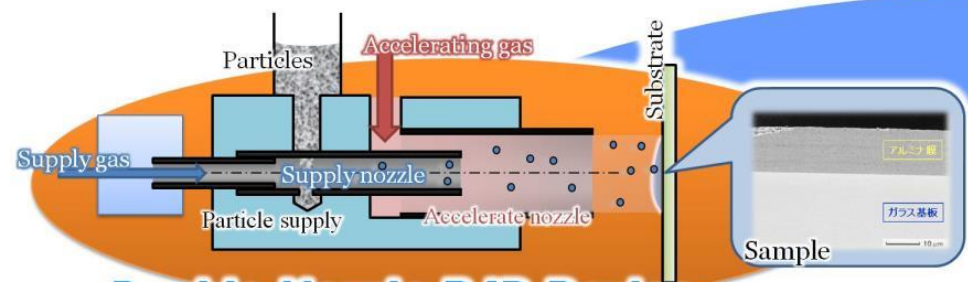


Superhigh-pressure fuel injector

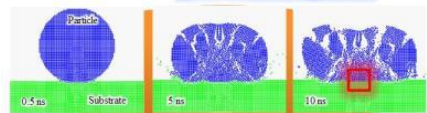


FEM simulation
Third Wave Advantage
Project Name: Lankling
Temperature (°C)
Cutting force (N)

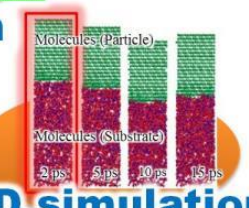
Powder Jet Machining




Double Nozzle PJD Device
Supply gas
Particle supply
Accelerating gas
Supply nozzle
Accelerate nozzle
Substrate
Sample



SPH Simulation
0.5 ns
5 ns
10 ns




MD simulation
Molecules (Particle)
Molecules (Substrate)
2 ps
5 ps
10 ps
15 ps




Large storage batteries


Realizing New Generation Vehicles




Cameras for safety




Large storage batteries



Superhigh-pressure fuel injector



Moth-eye structure



Super-hydrophobic surface