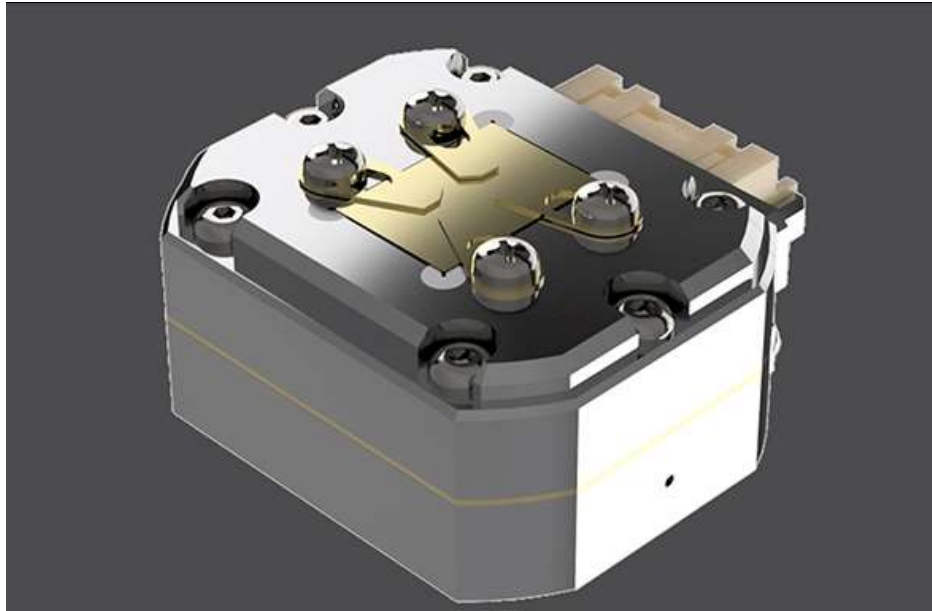


# Application Notes

## Peltier Cooling SEM Stage 90

# Peltier Cooling SEM Stage 90



## Basic Item(Recommended package)

Lab Chiller



Feed Through Flange



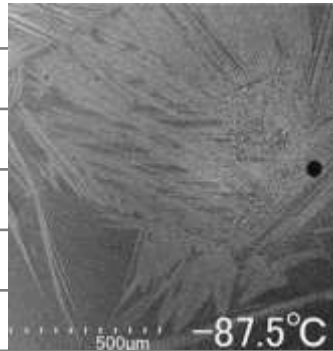
Temp. Controller



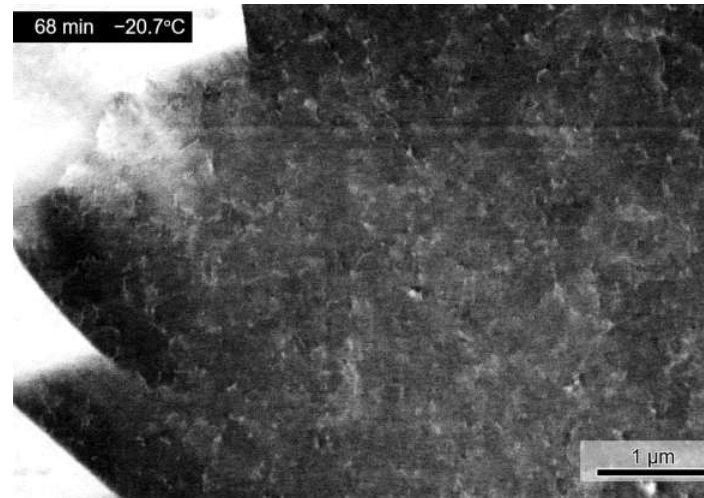
Feed Through Flanges are used for energizing cables, temperature measuring cables.  
The flange shape fits to each FIB-SEM makers.

## Specification

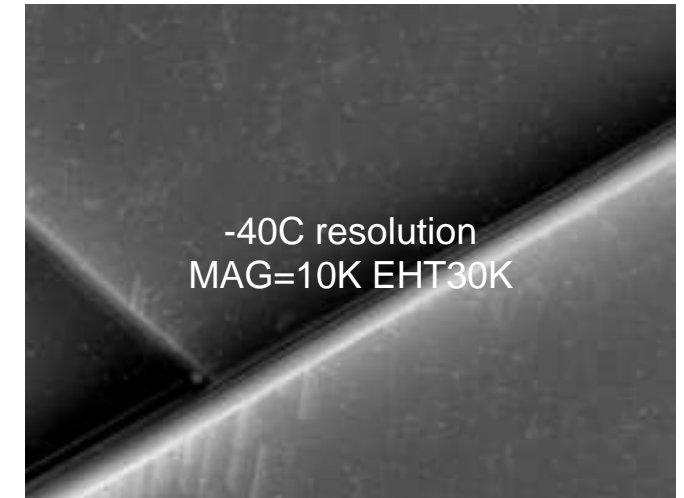
- Mechanism : Peltier / Chiller
- Temp. range : -90°C ~ + 80°C
- Temp. Stability : ±0.01°C
- Size : φ42 mm
- Weight : 125g
- Application : EBSD
- Chiller spec. : -20°C \*Low vibration



The material was finally observed at temp. below -50°C.



Good resolution

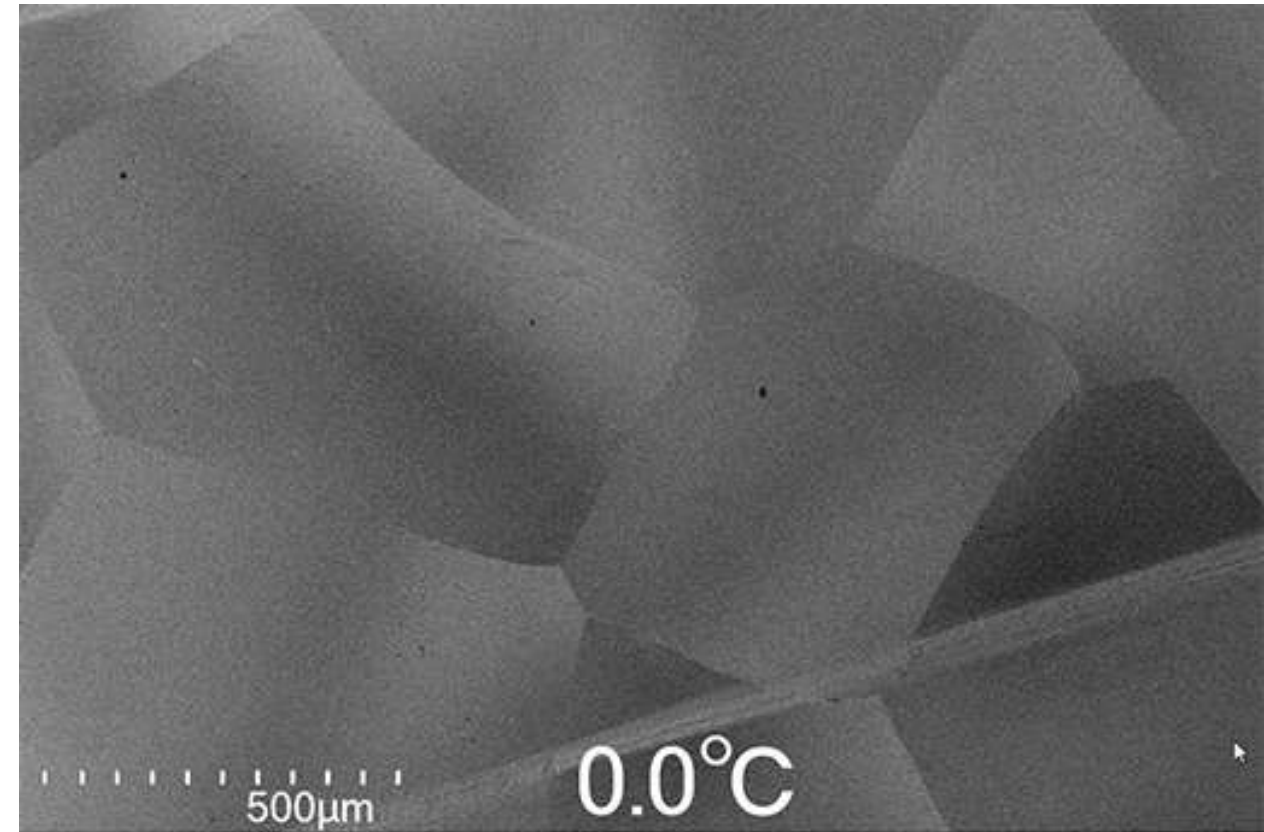
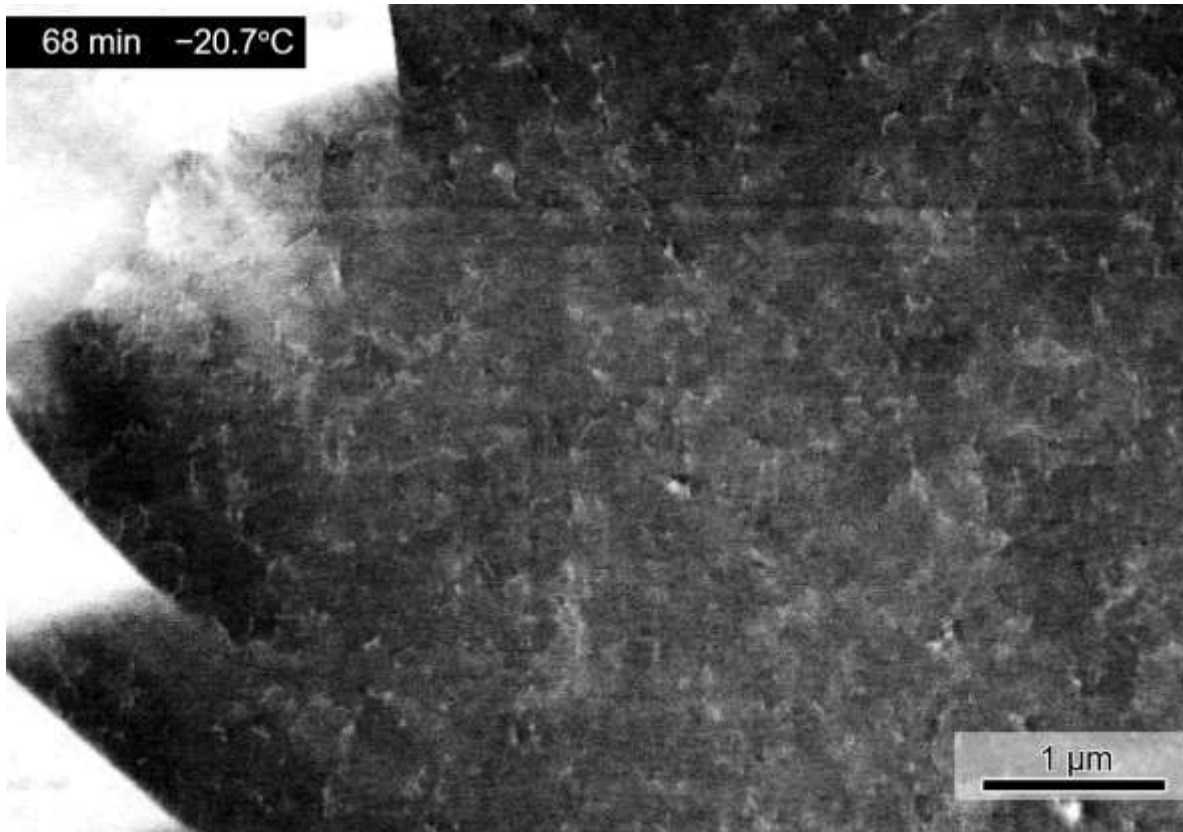


\*To be published in *Microscopy*



## In situ observation of phenomena occurred from under-50°C

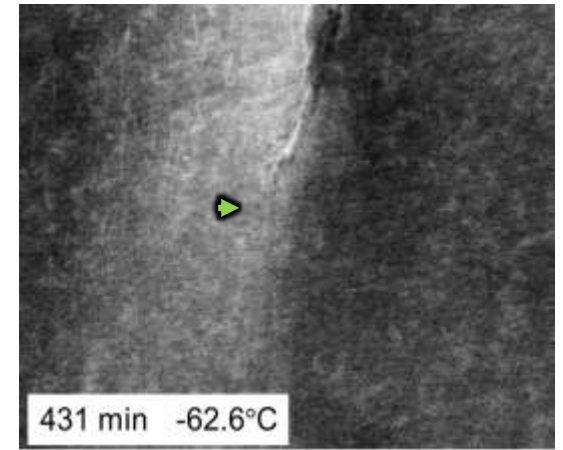
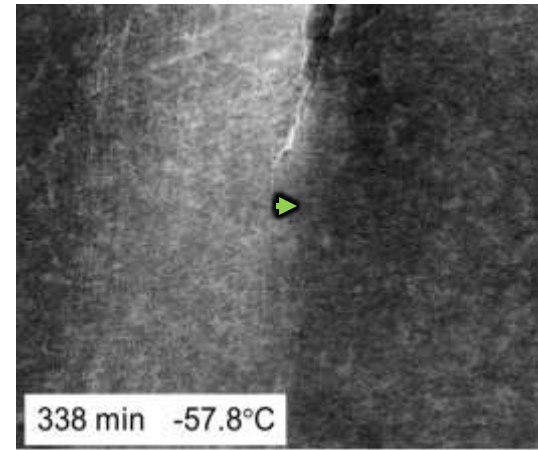
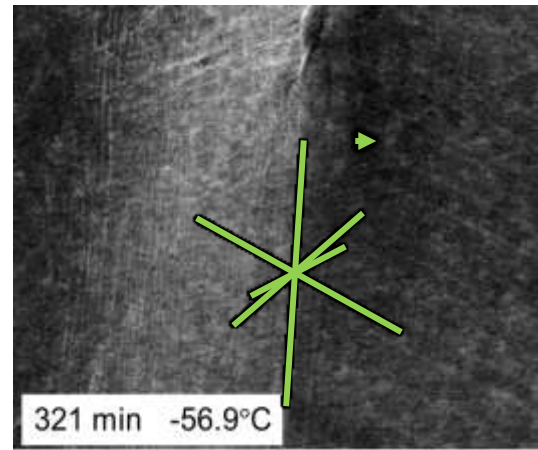
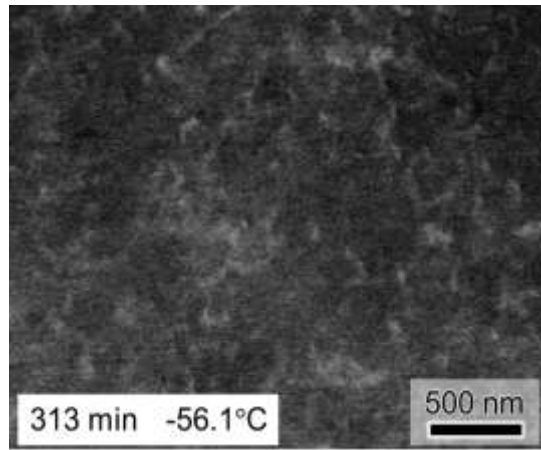
The material was not observed up to -50°C, but gradually became observable under -50°C, the temperature below -50°C is very important in experiments.





# Martensite transformation

{111} Surface tracing



- Dislocations were introduced due to uniform plastic deformation in the vicinity of martensite.
- Dislocations almost exactly match the traces on the plane
- The model of helical dislocations introduced in the strain field relaxation of G.B. Olson et al.

