

HITACHI

Analytical Services with NB5000 FIB-SEM

Hitachi's high performance FIB-SEM provides unparalleled nano-analyses of devices and functional materials !!

Legendary Hitachi reliability and performance in an integrated system

(Ultra-high performance FIB and high resolution FE-SEM)

enabling high-throughput specimen preparation,

high resolution imaging and analysis and precision nanofabrication.

New low-damage fabrication techniques have been developed for materials sensitive to electron irradiation. Innovations in sample loading, sample navigation, and Micro-sampling increase analysis efficiency*¹.



Scan to request
more information
about our
analytical services

Hitachi High-Tech America, Inc.

Features

Ultra-high performance FIB

Low Cs FIB optics*2 deliver 50nA or more of beam current (@40kV) in an about 1 μ m spot-size. The high current enables unconventional large-area milling, hard material fabrication and high throughput multiple specimen preparation.

New Micro-sampling*2

Hitachi's patented Micro-sampling technology provides smooth probe motion. Also, the probe can be used for newly developed absorbed current imaging*1 to aid fault isolation.

High precision end-point detection

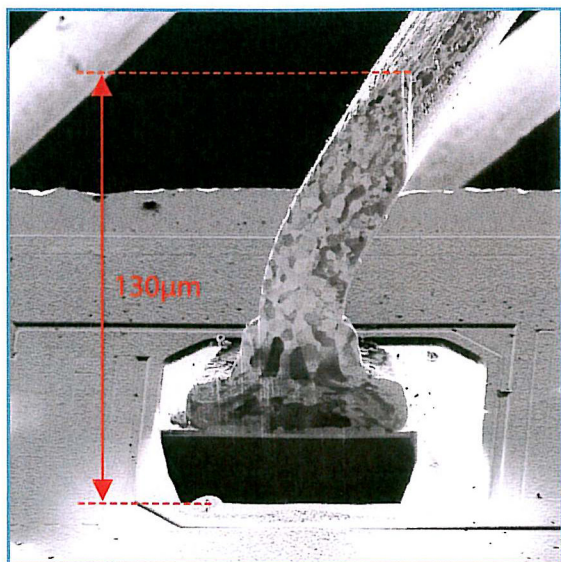
High resolution SEM allows high precision end-point detection. Section-view function, which displays an outline of the cross-section utilizing the real-time FIB image, is ideal for preparing electron irradiation sensitive specimens like Low-K material.

High resolution SEM

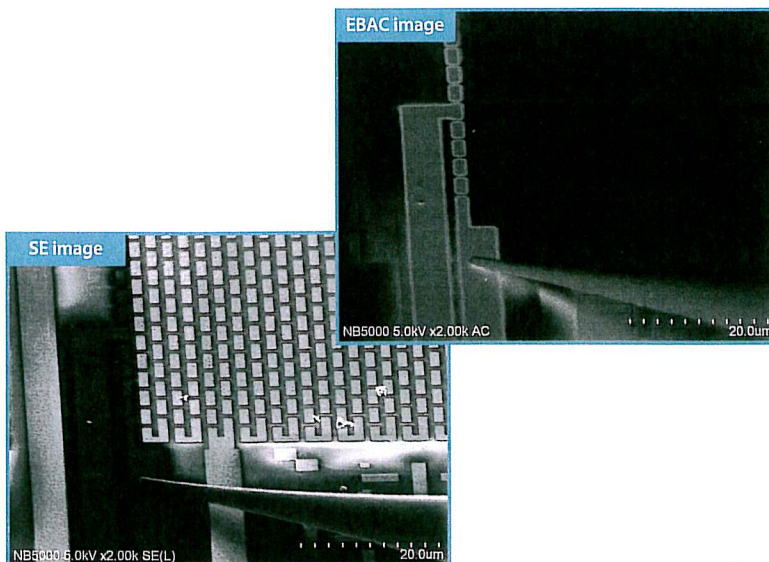
Hitachi's unparalleled SEM column and detector design*2 enables high resolution SEM imaging during and after FIB fabrication.

Holder compatibility with TEM/STEM*1,*2

A side entry STEM/TEM-type stage*1 allows the use of the same specimen holder (compatible with NB5000 and Hitachi TEM/STEM). No tweezer handling of specimen during transfer results in higher throughput TEM/STEM analysis.



Large-area milling of wire bonding
(milled area : 75 (w) × 130 (h) μ m, milling time : 19min.)



EBAC (Electron Beam Absorbed Current) imaging*1
with new Micro-sampling system

*1 Optional accessory

*2 Hitachi patent Low Cs FIB optics : patent pending, Micro-sampling : JP2774884/US5270552, Section-view function : patent pending, SEM column and detector design : JP3081393,US5387793, Holder compatibility : JP2842083



Scan to request
more information
about our
analytical services

Hitachi High-Tech America, Inc.

Email: DL-AM-HTA-SALES@hitachi-hightech.com
<https://www.hitachi-hightech.com/us>