

Atomic Resolution Analytical Electron Microscope

JEM-ARM200F

NEOARM

Ad-hoc Auto Tuning

Auto Tuning for HR-STEM for crystalline sample.



Ad-hoc Auto Tuning

Auto Tuning for HR-STEM for crystalline sample.
(focus and 2-fold astigmatism correction)



Acquired image

Feedback to the main unit

Calculation of feedback parameters

Focus amount

2-fold astigmatism

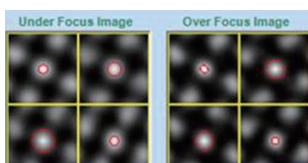
OLF

(Objective lens)

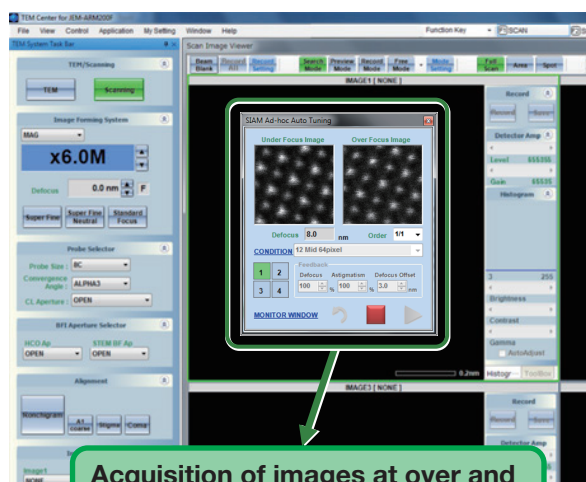
CL Stig

Calculated aberrations

Calculation of aberration



Calculation of auto correlation image for segmental images



Acquisition of images at over and under focus

Over defocus

Under defocus

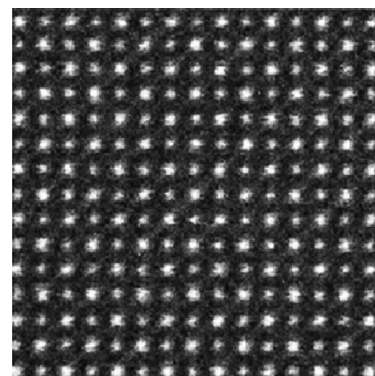
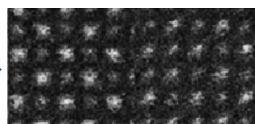
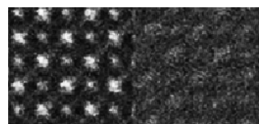
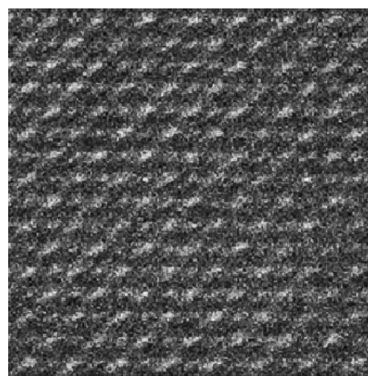
TEM Center

(a)

(b)

(c)

(d)



(a) : Before auto tuning

(b),(c) : during auto tuning

(d) : after auto tuning

Example of auto tuning (sample : SrTiO₃)

0.5nm

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