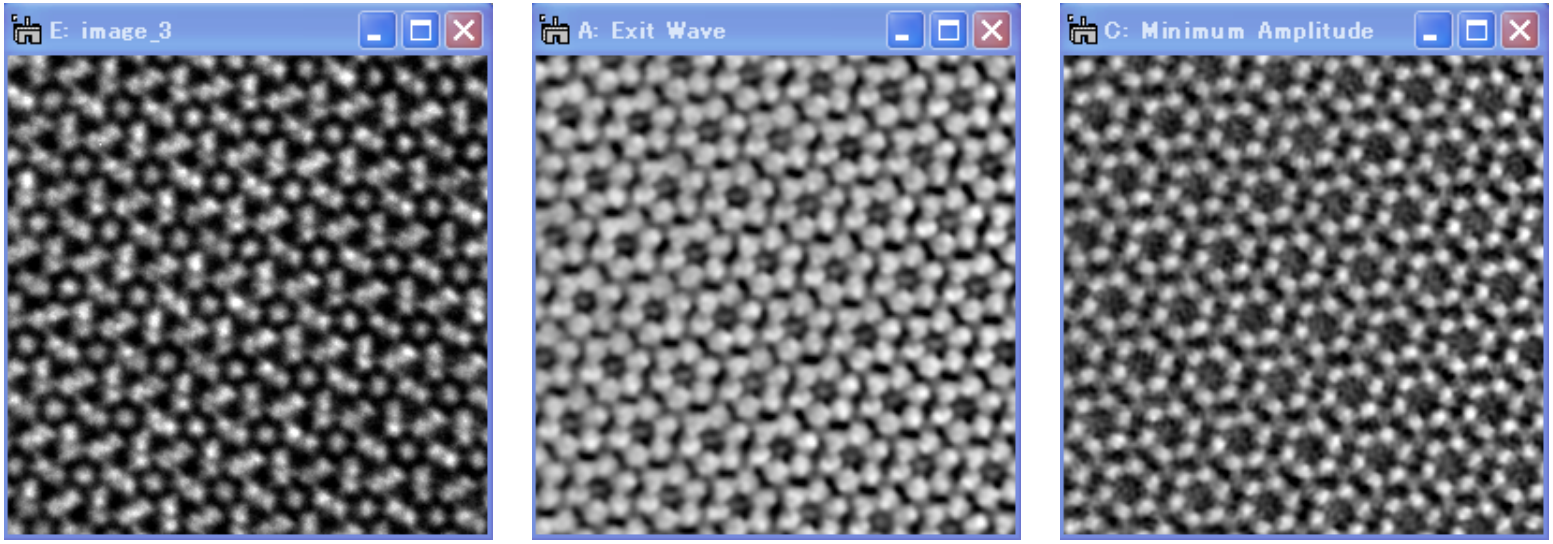
IWFR

DigitalMicrograph Plug-in

Iterative Wave Function Reconstruction

Exit Wave Reconstruction and Cs-Correction Software



(Left) Center image in a set of through-focal images of silicon nitride. (Middle) Phase of the exit wave obtained from only five images. (Right) Phase of the wave at the plane where amplitude contrast gives the minimum variation.

IWFR works with a through focal series of HREM images to reconstruct a wave function at the specimen exit surface.

IWFR employs *Gerchberg-Saxton-type* iteration developed by Les Allen et al. using only image intensities [1].

Key Features

- ◆Works with as few as *five* images.
- ◆Compensates for spherical aberration as well as other aberrations.

Reference: [1] L.J. Allen, W. McBride, N.L. O'Leary, M.P. Oxley, Ultramicroscopy 100 (2004) 91-104: Exit wave reconstruction at atomic resolution;

Credits: Silicon Nitride Images were taken with a Philips CM300/FEG/UT at NCEM using a Gatan GIF (Courtesy of Christian Kisielowski)