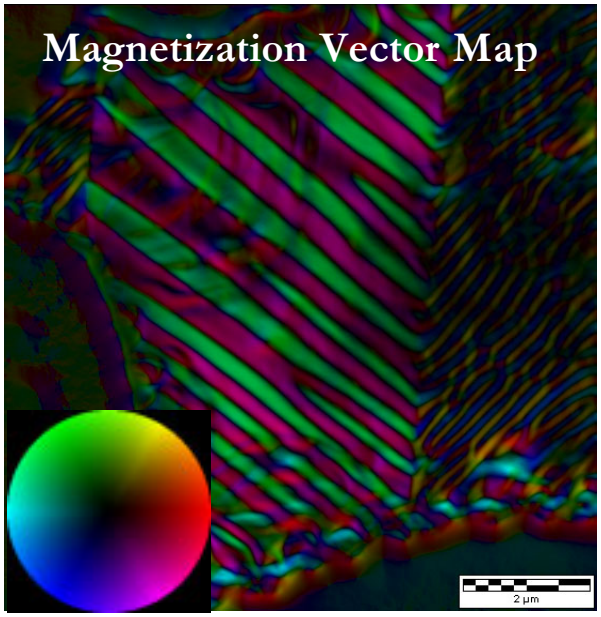
Materials Science

QPt for DigitalMicrograph™

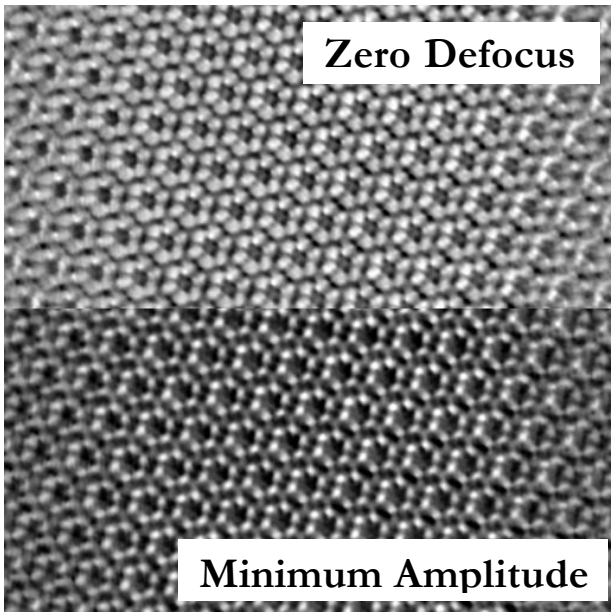
powered by QPI

DigitalMicrograph Plug-in for Quantitative Phase Imaging (QPI) Technology



$(PrCaSr)MnO_3$ (Data: M. Uchida)

Si_3N_4 (Original data: C. Kisielowski)



QPt for DigitalMicrograph provides a digital solution to phase contrast electron microscopy. QPt is based on IATIA's QPI technology, which only requires three ordinary bright-field images to obtain a quantitative phase image. Since QPt is fully integrated into DigitalMicrograph (Gatan Inc.) environment, you can use images taken directly from your electron microscope using Gatan's high-performance CCD camera or images already archived with various formats, and enjoy DigitalMicrograph's image processing capabilities.

Key Features

- Generates a quantitative in-focus phase image and eliminates artifacts generally apparent in a defocused image
- Generates a magnetic field distribution around microscopic magnetic materials from the QPI phase image (As shown in the left example)
- (*Full version only*) Generates various optical phase modalities from one QPI phase image, including: Differential Interference Contrast (DIC), Zernike Phase Contrast (ZPC), Hoffman Modulation Contrast (HMC) and Dark-field images
- (*With additional HREM module*) Reconstructs an exit wave function at atomic resolution and corrects spherical aberration without an expensive Cs corrector (As shown in the right example)

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