HoloDark – holography for strain

Lattice Deformation and Strain Analysis using Dark-Field Holography

HoloDark generates quantitative deformation and strain maps over wide fields of view from a pair of dark-field electron holograms [1,2].

HoloDark is based on the patented technique and routines developed by Martin Hütch et al [3].

Key Features

- Determines geometric phases from dark-field electron holograms, and corresponding deformation maps
- Generates full 2D deformation tensor from pairs of dark-field holograms of differing diffraction vectors
- Displays color maps and contours of strains
- Aligns multiple holograms by correcting drift, rotation and magnification changes
- Corrects for Fresnel fringes and optical distortions due to the projector lens system and CCD camera [4]

References: