Henning Friis Poulsen - DTU Orbit (13/12/2017)

Poulsen, Henning Friis
hfpo@fysik.dtu.dk

Department of Physics - Professor
Neutrons and X-rays for Materials Physics

Publications:

HIGH PRECISION COMPUTED TOMOGRAPHY FOR METROLOGY
Gundlach, C. & Poulsen, H. F. 2 Nov 2017
Publication: Research › Patent – Annual report year: 2017

A METHOD OF SECURITY SCANNING OF CARRY-ON ITEMS, AND A CARRY-ON ITEMS SECURITY SCANNING SYSTEM
Publication: Research › Patent – Annual report year: 2017

Determining material parameters using phase-field simulations and experiments
Publication: Research - peer-review › Journal article – Annual report year: 2017

Simulating and optimizing compound refractive lens-based X-ray microscopes
Publication: Research - peer-review › Journal article – Annual report year: 2017

Ultra-low-angle boundary networks within recrystallizing grains
Publication: Research - peer-review › Journal article – Annual report year: 2017

X-ray diffraction microscopy based on refractive optics
Publication: Research - peer-review › Journal article – Annual report year: 2017

Advanced microstructural analysis of cyclically deforming metallic materials towards lifetime improvement
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

A multiple length scale description of the mechanism of elastomer stretching
Publication: Research - peer-review › Journal article – Annual report year: 2016

A Spectral Geometrical Model for Compton Scatter Tomography Based on the SSS Approximation
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

DanMAX - The Danish beamline for in situ materials studies at MAX IV
Publication: Research › Poster – Annual report year: 2016
Full-field hard x-ray microscopy with interdigitated silicon lenses
Publication: Research - peer-review › Journal article – Annual report year: 2016

Multigrain indexing of unknown multiphase materials
Publication: Research - peer-review › Journal article – Annual report year: 2016

Multiscale 3D characterization with dark-field x-ray microscopy
Publication: Research - peer-review › Journal article – Annual report year: 2016

Noise robustness of a combined phase retrieval and reconstruction method for phase-contrast tomography
Publication: Research - peer-review › Journal article – Annual report year: 2016

Quantifying the onset of recrystallization in deformed metals using x-rays
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Dark-field X-ray microscopy for multiscale structural characterization
Publication: Research - peer-review › Journal article – Annual report year: 2015

Dark field X-ray microscopy for studies of recrystallization
Publication: Research - peer-review › Conference article – Annual report year: 2015

Generalized balanced power diagrams for 3D representations of polycrystals
Publication: Research - peer-review › Journal article – Annual report year: 2015

Injection molded polymeric hard X-ray lenses
Publication: Research - peer-review › Journal article – Annual report year: 2015

Microfabrication and testing of refractive hard X-ray optics
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Microfabrication of hard x-ray lenses
Publication: Research › Ph.D. thesis – Annual report year: 2016

Optimizing shape uniformity and increasing structure heights of deep reactive ion etched silicon x-ray lenses: Paper
Publication: Research - peer-review › Journal article – Annual report year: 2015
Polymer injection molding of hard X-ray refractive optics
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Sacrificial structures for deep reactive ion etching of high-aspect ratio kinoform silicon x-ray lenses
Publication: Research - peer-review › Journal article – Annual report year: 2015

Three-dimensional nanometrology of microstructures by replica molding and large-range atomic force microscopy
Publication: Research - peer-review › Journal article – Annual report year: 2015

3D -Ray Diffraction Microscopy
Publication: Research - peer-review › Book chapter – Annual report year: 2015

Efficient Analytical Approaches to the Optics of Compound Refractive Lenses for Use with Synchrotron X-rays
Publication: Research - peer-review › Journal article – Annual report year: 2014

Full 3D characterization of high aspect ratio microstructures
Publication: Research - peer-review › Poster – Annual report year: 2014

High-Resolution Reciprocal Space Mapping for Characterizing Deformation Structures
Publication: Research - peer-review › Book chapter – Annual report year: 2015

Refractive and diffractive neutron optics with reduced chromatic aberration
Publication: Research - peer-review › Journal article – Annual report year: 2014

Three-Dimensional Characterization of X-ray Refractive Optics
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2014

ESS Technical Design Report
Publication: Research - peer-review › Report – Annual report year: 2013

Industriens udnyttelse af de store internationale Røntgen og neutron faciliteter
Poulsen, H. F. 2013
Publication: Research › Sound/Visual production (digital) – Annual report year: 2013
In Situ Observation of the Dislocation Structure Evolution During a Strain Path Change in Copper
Wejdemann, C., Poulsen, H. F., Lienert, U. & Pantleon, W. 2013 In : JO M. 65, 1, p. 35-43
Publication: Research - peer-review › Journal article – Annual report year: 2013

Manufacturing and Characterization of Silicon Compound Refractive Lenses for Focussing of Hard X-Rays
Publication: Research › Conference abstract for conference – Annual report year: 2014

McXtrace: A Monte Carlo software package for simulating X-ray optics, beamlines and experiments
Bergbäck Knudsen, E., Prodi, A., Baltzer, J., Thomesen, M., Willendrup, P. K., Sanchez Del Rio, M., Ferrero, C., Farhi, E.,
2013 In : Journal of Applied Crystallography. 46, 3, p. 679-696
Publication: Research - peer-review › Journal article – Annual report year: 2013

An introduction to three-dimensional X-ray diffraction microscopy
Poulsen, H. F. 2012 In : Journal of Applied Crystallography. 45, 6, p. 1084-1097
Publication: Research - peer-review › Journal article – Annual report year: 2012

Box-scan: A novel 3DXRD method for studies of recrystallization and grain growth
Lyckegaard, A., Poulsen, H. F., Ludwig, W., Fonda, R. W. & Lauridsen, E. M. 2012 In : Materials Science Forum. 715-716,
, p. 518-520
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2012

Measuring the stress field around an evolving crack in tensile deformed Mg AZ31 using three-dimensional X-ray diffraction
In : Acta Materialia. 60, p. 3570-3580
Publication: Research - peer-review › Journal article – Annual report year: 2012

Multigrain crystallography
Sørensen, H. O., Schmidt, S., Wright, J. P., Vaughan, G. B. M., Techert, S., Garman, E. F., Oddershede, J.,
63-78
Publication: Research - peer-review › Journal article – Annual report year: 2012

The three dimensional X-ray diffraction technique
Publication: Research - peer-review › Journal article – Annual report year: 2012

X-ray diffraction contrast tomography (DCT) system, and an X-ray diffraction contrast tomography (DCT) method
Poulsen, H. F. & Lauridsen, E. M. 2012
Publication: Research › Patent – Annual report year: 2012

3D grain orientation mapping in the transmission electron microscope
Publication: Research › Conference abstract for conference – Annual report year: 2011

3D grain orientation mapping of polycrystals on scales from 1 mm to 1 nm using 3D-XRD and TEM
Publication: Research › Conference abstract for conference – Annual report year: 2011
Challenges in materials science and possibilities in 3D and 4D characterization techniques. Proceedings of the 31st Risø International Symposium on Materials Science

DART: a robust algorithm for fast reconstruction of three-dimensional grain maps

Determining grain resolved stresses in polycrystalline materials using three-dimensional X-ray diffraction

Grain resolved stresses in polycrystalline materials from 3DXRD data
Oddershede, J., Schmidt, S., Poulsen, H. F. & Reimers, W. 2010

Measuring type II stresses using 3DXRD

Measuring type-Il stresses using 3XRD
Oddershede, J., Schmidt, S., Poulsen, H. F. & Reimers, W. 2010

Phase retrieval for superposed signals from multiple binary objects
Alpers, A., Herman, G. T., Poulsen, H. F. & Schmidt, S. 2009 In : Inverse Problems. 25, 10, p. 105009

The extension of ID11 for nanoscale and hierarchical characterization

4D studies in materials science
Poulsen, H. F. 2009

A discrete spherical X-ray transform of orientation distribution functions using bounding cubes
A greedy method for reconstructing polycrystals from three-dimensional X-ray diffraction data
Publication: Research - peer-review › Journal article – Annual report year: 2009

Case for studies of bulk materials at XFEL?
Poulsen, H. F. 2009
Publication: Research › Conference abstract for conference – Annual report year: 2009

Closing the gap between single crystal and powder diffraction
Sørensen, H. O., Schmidt, S., Wright, J., Hansen, P. C. & Poulsen, H. F. 2009
Publication: Research › Paper – Annual report year: 2009

Computer simulation of electron nanodiffraction patterns from overlapping grains
Publication: Research - peer-review › Conference article – Annual report year: 2009

Direct non-destructive observation of bulk nucleation in 30% deformed aluminum
Publication: Research - peer-review › Journal article – Annual report year: 2009

Evolution of deformation structures under varying loading conditions followed in situ by high angular resolution 3DXRD
Publication: Research - peer-review › Journal article – Annual report year: 2009

Evolution of Deformation Structures under Varying Loading Conditions Followed In-Situ by High Angular Resolution 3DXRD
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2009

Integrated intensities based on grain orientation distribution functions
Sørensen, H. O., Wright, J., Schmidt, S., Hansen, P. C. & Poulsen, H. F. 2009
Publication: Research › Paper – Annual report year: 2009

Mapping the elastic strains of individual grains in a polycrystalline material using 3DXRD
Oddershede, J., Schmidt, S., Poulsen, H. F., Sørensen, H. O. & Reimers, W. 2009
Publication: Research › Conference abstract for conference – Annual report year: 2009

Mapping the elastic strains of individual grains in a polycrystalline material using 3DXRD
Oddershede, J., Schmidt, S., Poulsen, H. F., Sørensen, H. O. & Reimers, W. 2009
Publication: Research › Conference abstract for conference – Annual report year: 2009

Measuring residual stresses of individual grains in polycrystalline materials using 3DXRD
Oddershede, J., Schmidt, S., Poulsen, H. F. & Reimers, W. 2009
Publication: Research › Conference abstract for conference – Annual report year: 2009

Measuring the elastic strain of individual grains in a polycrystalline material - extending a micro-scale technique to the nano-regime
Publication: Research - peer-review › Conference article – Annual report year: 2009
Measuring the elastic strain of individual grains in polycrystalline materials
Oddershede, J., Schmidt, S., Poulsen, H. F., Sørensen, H. O. & Reimers, W. 2009
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Multigrain crystallography - why bother?
Publication: Research › Conference abstract for conference – Annual report year: 2009

New opportunities for 3D materials science of polycrystalline materials at the micrometre lengthscale by combined use of X-ray diffraction and X-ray imaging
Publication: Research - peer-review › Journal article – Annual report year: 2009

Overview of TotalCryst
Poulsen, H. F. 2009
Publication: Research › Conference abstract for conference – Annual report year: 2009

Reconstruction of Single-Grain Orientation Distribution Functions for Crystalline Materials
Publication: Research - peer-review › Journal article – Annual report year: 2009

Stability of dislocation structures in copper towards stress relaxation investigated by high angular resolution 3D X-ray diffraction
Publication: Research - peer-review › Journal article – Annual report year: 2009

Strip detector for nanoscale resolution
Publication: Research › Sound/Visual production (digital) – Annual report year: 2009

Structured scintillators for X-ray imaging with micrometre resolution
Publication: Research - peer-review › Journal article – Annual report year: 2009

The 3D X-ray microscope
Poulsen, H. F. 2009
Publication: Research › Paper – Annual report year: 2009

The effect of strain path change on subgrain volume fraction determined from in situ X-ray measurements
Publication: Research › Conference article – Annual report year: 2009

X-ray imaging methods for mapping orientations and strains in grains
Poulsen, H. F. 2009
A high-spatial-resolution three-dimensional detector array for 30-200 keV X-rays based on structured scintillators

Direct observation of strain in bulk subgrains and dislocation walls by high angular resolution three-dimensional X-ray diffraction

In-Situ Observations of Subgrain Dynamics by High Energy X-Ray Diffraction

Measuring the elastic strain of individual grains in polycrystalline materials

Novel synchrotron based techniques for characterization of energy materials

Reconstruction of Single-Grain Orientation Distribution Functions for Crystalline Materials

Single Grain Characterization Techniques at the APS 1-ID Beamline

Subgrains observed by high energy X-ray diffraction during in-situ loading
Synchrotron radiation: A powerful tool for probing superconducting/metal composite wires and tapes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Three-dimensional materials science: An intersection of three-dimensional reconstructions and simulations
Thornton, K. & Poulsen, H. F. 2008 In : MRS BULLETIN. 33, 6, p. 587-595
Publication: Research - peer-review › Editorial – Annual report year: 2008

Three-dimensional materials science: An intersection of three-dimensional reconstructions and simulations
Publication: Research - peer-review › Journal article – Annual report year: 2008

Three-dimensional X-ray diffraction
Publication: Research - peer-review › Book chapter – Annual report year: 2008

X-ray diffraction contrast tomography: a novel technique for three-dimensional grain mapping of polycrystals. 1. Direct beam case
Publication: Research - peer-review › Journal article – Annual report year: 2008

3D characterisation of metal structures and their evolution
Poulsen, H. F. 2007
Publication: Research › Paper – Annual report year: 2007

3-dimensional characterization of polycrystalline bulk materials using high-energy synchrotron radiation
Publication: Research - peer-review › Conference article – Annual report year: 2006

4D analysis of metal structures
Poulsen, H. F. 2007
Publication: Research › Paper – Annual report year: 2007

A stochastic algorithm for reconstruction of grain maps of moderately deformed specimens based on X-ray diffraction
Publication: Research - peer-review › Journal article – Annual report year: 2007

Development of a high-efficiency high-resolution imaging detector for 30–80 keV X-rays
Publication: Research - peer-review › Conference article – Annual report year: 2007

Diffraction with high energy X-rays: Synchrotron instrumentation and nano science
Poulsen, H. F. 2007
Publication: Research › Paper – Annual report year: 2007
Direct determination of elastic strains and dislocation densities in individual subgrains in deformation structures
Publication: Research - peer-review › Journal article – Annual report year: 2007

Discrete tomography for generating maps of polycrystals
Publication: Research - peer-review › Book chapter – Annual report year: 2007

Ferrite formation during slow continuous cooling in steel
Publication: Research - peer-review › Conference article – Annual report year: 2007

High-resolution three-dimensional mapping of individual grains in polycrystals by topotomography
Publication: Research - peer-review › Journal article – Annual report year: 2007

Intermittent subgrain dynamics during plastic deformation monitored by high-angular resolution 3DXRD
Publication: Research › Paper – Annual report year: 2007

Internal strains within individual grains of plastically deformed copper
Publication: Research › Conference abstract in proceedings – Annual report year: 2007

Investigation of the deformation structure in an aluminium magnesium alloy by high angular resolution three-dimensional X-ray diffraction
Publication: Research - peer-review › Journal article – Annual report year: 2007

Mapping polycrystals in 3D and studying their evolution
Poulsen, H. F. 2007
Publication: Research › Paper – Annual report year: 2007

Plastic deformation monitored in-situ by high angular resolution 3DXRD: New insights and challenges
Publication: Research › Conference abstract in proceedings – Annual report year: 2007

Properties and dynamics of bulk subgrains probed in-situ using a novel X-ray diffraction method
Publication: Research - peer-review › Conference article – Annual report year: 2007

Revealing deformation microstructures
Publication: Research - peer-review › Journal article – Annual report year: 2007

Strain in amorphous materials
Poulsen, H. F. 2007
Publication: Research › Paper – Annual report year: 2007
Visualizing the dynamics of dislocations structures
Publication: Research › Conference abstract for conference – Annual report year: 2007

A depth-resolved in-situ study of the reduction and oxidation of Ni-based anodes in solid oxide fuel cells
Publication: Research - peer-review › Journal article – Annual report year: 2006

A discrete tomography algorithm for improving the quality of three-dimensional X-ray diffraction grain maps
Publication: Research - peer-review › Journal article – Annual report year: 2006

Asymmetric X-ray peak broadening by individual subgrains (talk)
Publication: Research › Conference abstract in proceedings – Annual report year: 2006

Formation and subdivision of deformation structures
Publication: Research › Conference abstract for conference – Annual report year: 2006

Formation and subdivision of deformation structures during plastic deformation
Publication: Research - peer-review › Journal article – Annual report year: 2006

Formation and subdivision of deformation structures (poster)
Publication: Research › Conference abstract in proceedings – Annual report year: 2006

Grain maps and grain dynamics - a reconstruction challenge (invited talk)
Poulsen, H. F. 2006
Publication: Research › Conference abstract for conference – Annual report year: 2006

Grain nucleation and grain growth during phase transformations in steel
Publication: Research › Conference abstract in proceedings – Annual report year: 2006

In-situ observation of individual subgrains by 3DXRD during deformation and recovery
Publication: Research › Article in proceedings – Annual report year: 2006

Mapping grains and their dynamics in three dimensions
Publication: Research - peer-review › Conference article – Annual report year: 2006

Non-destructive characterization of recrystallization kinetics using three-dimensional X-ray diffraction microscopy
Publication: Research - peer-review › Journal article – Annual report year: 2006
Optimized algebraic reconstruction technique for generation of grain maps based on three-dimensional x-ray diffraction (3DXRD)
Publication: Research - peer-review › Journal article – Annual report year: 2006

Peak profile analysis of individual grains within bulk metals under tensile deformation (invited keynote)
Publication: Research › Conference abstract for conference – Annual report year: 2006

Phase transformations in steel studied by 3DXRD microscopy
Publication: Research - peer-review › Conference article – Annual report year: 2006

Properties and dynamics of bulk subgrains probed in-situ using a novel X-ray diffraction method (talk)
Publication: Research › Conference abstract in proceedings – Annual report year: 2006

Ultra-high angular resolution 3DXRD for observing bulk subgrains and their dynamics (talk)
Publication: Research › Conference abstract in proceedings – Annual report year: 2006

Visualizing the dynamics of grains and dislocations structures (invited)
Publication: Research › Conference abstract in proceedings – Annual report year: 2006

X-ray microscopy in four dimensions
Publication: Research - peer-review › Journal article – Annual report year: 2006

Discrete tomographic reconstruction of 2D polycrystal orientation maps from X-ray diffraction projections using Gibbs priors
Publication: Research › Conference article – Annual report year: 2005

3DXRD microscopy for the study of solid-state phase transformation kinetics
Publication: Research - peer-review › Conference article – Annual report year: 2005

Algorithms and instrumentation for generating 3D grain maps in polycrystals by 3DXRD
Publication: Research › Conference abstract for conference – Annual report year: 2005

Characterisation of orientation distributions of individual grains within deformed metals
Poulsen, H. F., Lienert, U. & Pantleon, W. 2005 In: Materials Science and Technology. 21, p. 1397-1400
Publication: Research - peer-review › Journal article – Annual report year: 2005
Discrete tomographic reconstruction of 2D polycrystal orientation maps from X-ray diffraction projections using Gibbs priors
Rodek, L., Knudsen, E., Poulsen, H. F. & Herman, G. T. 2005
Publication: Research › Conference abstract for conference – Annual report year: 2005

Image analysis for X-ray studies of the dynamics of individual embedded subgrains during recovery
Publication: Research - peer-review › Journal article – Annual report year: 2005

Mapping grains and their dynamics in 3 dimensions
Publication: Research › Conference abstract for conference – Annual report year: 2005

Measuring strains in grains, sub-grains, glasses and polymers (invited talk)
Publication: Research › Conference abstract for conference – Annual report year: 2005

Multiscale study of internal stress and texture in ferroelectrics
Publication: Research - peer-review › Journal article – Annual report year: 2006

Nucleation of recrystallization observed in situ in the bulk of a deformed metal
Publication: Research - peer-review › Journal article – Annual report year: 2005

Resolving ambiguities in reconstructed grain maps using discrete tomography
Alpers, A., Knudsen, E., Poulsen, H. F. & Herman, G. T. 2005
Publication: Research › Conference abstract for conference – Annual report year: 2005

Resolving ambiguities in reconstructed grain maps using discrete tomography
Publication: Research - peer-review › Conference article – Annual report year: 2005

Total crystallography: 3DXRD for molecular compounds
Sørensen, H. O., Schmidt, S., Vaughan, G. B. M. & Poulsen, H. F. 2005
Publication: Research › Conference abstract for conference – Annual report year: 2005

Ultra-high angular resolution 3DXRD for observing bulk subgrains (poster)
Publication: Research › Poster – Annual report year: 2005

3DXRD - Mapping grains and their dynamics in 3 dimensions
Publication: Research - peer-review › Conference article – Annual report year: 2004

3DXRD – a new probe for materials science
Publication: Research › Doctoral thesis – Annual report year: 2004
3DXRD: Grain maps, grain dynamics and grain refinements
Poulsen, H. F. 2004 In : Crystallography Reviews. 10, p. 29-43
Publication: Research - peer-review › Journal article – Annual report year: 2004

3DXRD - Mapping polycrystals and their dynamics in 3D
Poulsen, H. F. 2004
Publication: Research › Conference abstract for conference – Annual report year: 2004

An algebraic algorithm for generation of three-dimensional grain maps based on diffraction with a wide beam of hard X-rays
Publication: Research - peer-review › Journal article – Annual report year: 2004

Characterising the dynamics of individual embedded dislocation structures
Publication: Research - peer-review › Journal article – Annual report year: 2004

Direct observation of subgrain evolution during recovery of cold-rolled aluminium
Publication: Research - peer-review › Journal article – Annual report year: 2004

Evolving microstructures in carbon steel studied by 3DXRD microscopy
Publication: Research › Article in proceedings – Annual report year: 2004

Ferrite nucleation and growth in medium-carbon steel studied by 3DXRD microscopy
Publication: Research › Article in proceedings – Annual report year: 2004

In-situ investigation of bulk nucleation by X-ray diffraction
Publication: Research - peer-review › Conference article – Annual report year: 2004

In-situ observation of subgrain evolution during static recovery of cold-rolled aluminium
Publication: Research - peer-review › Conference article – Annual report year: 2004

In situ X-ray peak shape analysis of embedded individual grains during plastic deformation of metals
Publication: Research - peer-review › Conference article – Annual report year: 2004
Investigating the effect of grain interaction during plastic deformation of copper
Publication: Research - peer-review › Journal article – Annual report year: 2004

Lattice rotations of individual bulk grains. Part 2: Correlation with initial orientation and model comparison
Publication: Research - peer-review › Journal article – Annual report year: 2004

Measurement of the components of plastic displacement gradients in three dimensions
Publication: Research - peer-review › Conference article – Annual report year: 2004

Measurement of the components of plastic displacement gradients in three dimensions
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Multicrystal approach to crystal structure solution and refinement
Publication: Research - peer-review › Journal article – Annual report year: 2005

Observation of dislocation structure evolution by analysis of X-ray peak profiles from individual bulk grains
Publication: Research › Article in proceedings – Annual report year: 2004

Observation of X-ray peak profiles from individual bulk grains
Lienert, U., Almer, J. D., Jakobsen, B., Poulsen, H. F. & Pantleon, W. 2004
Publication: Research › Conference abstract for conference – Annual report year: 2004

Optimization of an algebraic reconstruction technique for generation of grain maps based on diffraction data
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Orientation changes of individual bulk grains during deformation
Winther, G., Margulies, L. & Poulsen, H. F. 2004 In : TMS Letters. 1, p. 75-76
Publication: Research - peer-review › Conference article – Annual report year: 2004

Reply to the discussion by Aaronson et al. to "Grain nucleation and growth during phase transformations" by S.E. Offerman et al., Science, 298, 1003 (November 1, 2002)
Publication: Research - peer-review › Journal article – Annual report year: 2004

Simultaneous measurement of the strain tensor of 10 individual grains embedded in an Al tensile sample
Publication: Research - peer-review › Conference article – Annual report year: 2004
Solid-state transformations involving solute partitioning: Modeling and measuring on the level of individual grains
Publication: Research - peer-review › Journal article – Annual report year: 2004

Three-dimensional imaging and analysis of internal dynamics in solid bodies using X-ray micro-tomography (poster)
Haldrup, K., Fæster Nielsen, S., Poulsen, H. F., Beckmann, F. & Wert, J. A. 2004
Publication: Research › Poster – Annual report year: 2004

Three-dimensional X-ray diffraction (3DXRD) analysis
Publication: Research › Article in proceedings – Annual report year: 2004

Three-dimensional X-ray diffraction microscopy. Mapping polycrystals and their dynamics
Publication: Research - peer-review › Book – Annual report year: 2004

Three-dimensional X-ray diffraction microscopy using high-energy X-rays
Publication: Research - peer-review › Journal article – Annual report year: 2004

3DXRD - Mapping grains and their dynamics in 3 dimensions
Poulsen, H. F. 2003
Publication: Research › Conference abstract for conference – Annual report year: 2003

3DXRD microscopy
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

3DXRD microscopy (Invited talk)
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

3DXRD microscopy observations on the processes that determine the metallic microstructure
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

A reconstruction method for generation of 3D grain maps
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

A six-dimensional approach to microstructure analysis
Publication: Research - peer-review › Journal article – Annual report year: 2003
Charge-density analysis of YBa$_2$Cu$_3$O$_{6.98}$: Comparison of theoretical and experimental results
Publication: Research - peer-review › Journal article – Annual report year: 2003

Generation of grain maps by an algebraic reconstruction technique
Publication: Research - peer-review › Journal article – Annual report year: 2003

Grain rotation measurements during plastic deformation of polycrystals
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

In situ characterisation of thermomechanical processes
Publication: Research › Article in proceedings – Annual report year: 2003

In-situ observation of highly strained aluminium microstructure dynamics during annealing by 3DXRD microscopy
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

In situ observations on the mechanical stability of austenite in TRIP-steel
Publication: Research - peer-review › Journal article – Annual report year: 2003

In-situ single grain X-ray peak profile measurements during plastic deformation of metals
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

In-situ single grain X-ray peak profile measurements during plastic deformation of metals
Publication: Research › Conference abstract for conference – Annual report year: 2003

Lattice rotations of individual bulk grains. Part 1: 3D X-ray characterization
Publication: Research - peer-review › Journal article – Annual report year: 2003

Measurements of plastic displacement gradient components in three dimensions using marker particles and synchrotron X-ray absorption microtomography
Publication: Research - peer-review › Journal article – Annual report year: 2003

Non-destructive mapping of grains in three dimensions
Publication: Research - peer-review › Journal article – Annual report year: 2003

Oxygen-ordering superstructures in underdoped YBa$_2$Cu$_3$O$_{6.5+}$ studied by hard X-ray diffraction
Publication: Research - peer-review › Journal article – Annual report year: 2003
Reconstruction algorithms at the 3DXRD microscope - an overview  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

Reconstruction of grain boundaries in polycrystals by filtered back-projection of diffraction spots  
Publication: Research - peer-review › Journal article – Annual report year: 2003

Recrystallization kinetics of individual bulk grains in 90 % cold-rolled aluminium  
Publication: Research - peer-review › Journal article – Annual report year: 2003

Recrystallization kinetics of individual bulk grains in a commercial aluminium alloy  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

Simultaneous measurement of the strain tensor of 10 individual grains embedded in an Al tensile sample  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

Single grain peak profile measurements within bulk metals during tensile deformation  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

Status and perspectives of combined 3D imaging and diffraction experiments at the ESRF  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

Structural refinements of the individual grains within polycrystals and powders  
Publication: Research - peer-review › Journal article – Annual report year: 2003

Study of recovery in cold rolled Al using the 3DXRD microscope  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

Superconductivity in an anomalously tetragonal $\text{YB}_2\text{C}_3\text{O}_{6.82}$ single crystal: A possible singularity in the structural phase diagram  
Publication: Research - peer-review › Journal article – Annual report year: 2003

Synchrotron X-ray analysis of highly strained aluminium during in-situ annealing  
Publication: Research › Conference abstract in proceedings – Annual report year: 2003

The three-dimensional X-ray diffraction microscope: 3D maps of grains and grain dynamics in polycrystalline materials  
Publication: Research - peer-review › Journal article – Annual report year: 2003
3DXRD microscopy - a novel tool for materials science
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

3DXRD microscopy - a comparison with neutron diffraction
Publication: Research - peer-review › Journal article – Annual report year: 2003

A computer simulating tool for 3DXRD microscope
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

From 2D to 3D microtexture investigations
Publication: Research - peer-review › Conference article – Annual report year: 2002

Grain dynamics in Bi-2223 tapes measured by the 3DXRD microscope
Publication: Research - peer-review › Journal article – Annual report year: 2002

Grain maps by 3DXRD microscopy
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

Grain nucleation and growth during phase transformations
Publication: Research - peer-review › Journal article – Annual report year: 2002

In-situ characterization of thermomechanical processes
Publication: Research › Conference abstract for conference – Annual report year: 2002

In situ observations on the austenite stability in TRIP-steel during tensile testing
Publication: Research - peer-review › Journal article – Annual report year: 2002

Lattice rotations of individual bulk grains during deformation
Publication: Research - peer-review › Conference article – Annual report year: 2002

Local strain measurements by using marker particles and synchrotron X-ray absorption tomography
Publication: Research › Conference abstract in proceedings – Annual report year: 2002
Local strain measurements by using marker particles and synchrotron X-ray absorption tomography
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

Local strain measurements by using marker particles and synchrotron X-ray absorption tomography
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

Microstructural dynamics of Bi-2223/Ag tapes annealed in 8% O2
Publication: Research - peer-review › Journal article – Annual report year: 2002

Observation of high-resolution diffraction profiles from single grains within polycrystalline metals
Publication: Research › Conference abstract for conference – Annual report year: 2002

Recrystallization studies using the 3DXRD microscope
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

Strain tensor development in a single grain in the bulk of a polycrystal under loading
Publication: Research - peer-review › Journal article – Annual report year: 2002

Structural refinement of the individual grains in a polycrystal
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

A three-dimensional X-ray diffraction microscope for deformation studies of polycrystals
Publication: Research - peer-review › Conference article – Annual report year: 2002

3d X-ray diffraction microscopy of materials (invited talk)
Poulsen, H. F. 2001
Publication: Research › Conference abstract for conference – Annual report year: 2001

3DXRD: A new tool for bridging the length scales in materials science
Publication: Research › Conference abstract in proceedings – Annual report year: 2001

Direct observation of grain boundary wetting by synchrotron radiation imaging techniques
Publication: Research - peer-review › Conference article – Annual report year: 2001

Growth kinetics of individual cube grains as studied by the 3D X-ray diffraction microscope
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001
High spatial resolution strain measurements within bulk materials by slit-imaging
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001

In situ measurement of grain rotation during deformation of polycrystals
Publication: Research - peer-review › Journal article – Annual report year: 2001

Mapping of grain boundaries in 3D
Publication: Research › Conference abstract in proceedings – Annual report year: 2001

Mesoscale structural characterization within bulk materials by high-energy X-ray microdiffraction
Publication: Research - peer-review › Journal article – Annual report year: 2001

Microstructural dynamics in Bi-2223/Ag tapes
Publication: Research - peer-review › Book chapter – Annual report year: 2001

Microstructural evolution at the initial stages of annealing in a Bi-2223 multifilament tape
Publication: Research - peer-review › Journal article – Annual report year: 2001

Optimization of BSCCO/Ag tapes with the help of TEM
Publication: Research › Conference abstract for conference – Annual report year: 2001

Plastic deformation and recrystallization studied by the 3D X-ray microscope
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001

Quantification of minor texture components by hard X-rays
Publication: Research - peer-review › Journal article – Annual report year: 2001

Relation between texture and critical current density of textured YBa$_2$Cu$_3$O$_x$ plates
Publication: Research - peer-review › Journal article – Annual report year: 2001

Source size conserving broad band monochromators of fixed exit geometry for high energy synchrotron radiation
Publication: Research - peer-review › Journal article – Annual report year: 2001
Surface science with SR
Poulsen, H. F. 2001
Publication: Research › Conference abstract for conference – Annual report year: 2001

Three-dimensional maps of grain boundaries and the stress state of individual grains in polycrystals and powders
Publication: Research - peer-review › Journal article – Annual report year: 2001

Three dimensional strain measurements in bulk materials with high spatial resolution
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001

Tracking: A method for structural characterization of grains in powders or polycrystals
Publication: Research - peer-review › Journal article – Annual report year: 2001

Transmission electron microscopy investigation of Bi-2223/Ag tapes
Publication: Research - peer-review › Journal article – Annual report year: 2001

X-ray microscopy. Imaging
Poulsen, H. F. 2001
Publication: Research › Conference abstract for conference – Annual report year: 2001

3D characterization of grains in powders or polycrystals
Publication: Communication › Journal article – Annual report year: 2000

A conical slit for three-dimensional XRD mapping
Publication: Research - peer-review › Journal article – Annual report year: 2000

A high energy microscope for local strain measurements within bulk materials
Publication: Research - peer-review › Article in proceedings – Annual report year: 2000

Anisotropic dynamical scaling in a weakly 3D system: The case of oxygen ordering in YBa2Cu3Ox
Publication: Research - peer-review › Journal article – Annual report year: 2000

Application of high-energy synchrotron radiation for texture studies
Publication: Research - peer-review › Journal article – Annual report year: 2000

A three-dimensional X-ray diffraction microscope for deformation studies of polycrystals
Publication: Research › Conference abstract in proceedings – Annual report year: 2000
Characterization of deformation structure and recrystallization in a tensile deformed [110] aluminum single crystal
Publication: Research › Article in proceedings – Annual report year: 2000

Kinetics of individual grains during recrystallization
Publication: Research - peer-review › Journal article – Annual report year: 2000

Recrystallization in 3D
Publication: Research › Article in proceedings – Annual report year: 2000

Three dimensional mapping of grain boundaries
Publication: Research › Article in proceedings – Annual report year: 2000

Three dimensional maps of polycrystalline materials
Publication: Research › Conference abstract in proceedings – Annual report year: 2000

A focusing multilayer analyser for local diffraction studies
Publication: Research - peer-review › Journal article – Annual report year: 1999

A high energy X-ray microscope for the local structural characterization of bulk materials
Publication: Research › Journal article – Annual report year: 1999

An in situ study of the annealing behaviour of BiSCCO Ag tapes
Publication: Research › Journal article – Annual report year: 1999

Comparison of experimental techniques for characterization of through-thickness texture variations
Publication: Research - peer-review › Article in proceedings – Annual report year: 1999

Cooling behavior of BSCCO/Ag tapes
Publication: Research - peer-review › Journal article – Annual report year: 1999

Cooling studies of BSCCO/Ag tapes in 8% oxygen
High energy synchrotron strain scanning on highly plastically deformed torsion samples

In situ study of equilibrium phenomena and kinetics in a BiSCCO Ag tape

Local strain measurement techniques in bulk materials

Materials science applications of high energy synchrotron radiation

Microstructure, texture and critical current of Ag-sheathed 2223 multifilament tapes

Plastic deformation, recrystallization and internal stresses studied by a new 3D X-ray microscope

Superstructure formation and the structural phase diagram of $\text{YBa}_2\text{Cu}_3\text{O}_{7+x}$

Synkrotronstudier af BISCO/Ag bånd
Poulsen, H. F. 1999 In : *Tidsskrift for Dansk Keramisk Selskab.* 2, 2, p. 29

An in situ diffraction study of a solid oxide fuel cell system

A novel DC Magnetron sputtering facility for space research and synchrotron radiation optics

A triple-crystal diffractometer for high-energy synchrotron radiation at the HASYLAB high-field wiggler beamline BW5
Focusing Optics for High-Energy X-ray Diffraction
Publication: Research - peer-review › Conference article – Annual report year: 1998

Future trends: Texture analysis for structure-sensitive properties
Publication: Research - peer-review › Journal article – Annual report year: 1998

In-situ synchrotron studies of the annealing behaviour of high Tc BSCCO/Ag-tapes
Publication: Research › Conference abstract in proceedings – Annual report year: 1998

Materials science applications of high energy synchrotron radiation
Publication: Research › Conference abstract in proceedings – Annual report year: 1998

Microstructure analysis with hard synchrotron radiation
Publication: Research › Conference abstract in proceedings – Annual report year: 1998

Structural phase diagram of oxygen ordering in the high-Tc superconductor YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Conference abstract in proceedings – Annual report year: 1998

Structural studies of BSCCO/Ag-tapes by high-energy synchrotron X-ray diffraction
Publication: Research › Journal article – Annual report year: 1998

Superstructure formation and structural phase diagram of YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Conference abstract for conference – Annual report year: 1998

Three dimensional X-ray diffraction using high energy synchrotron radiation
Publication: Research › Conference abstract in proceedings – Annual report year: 1998

Through-thickness texture variations determined non-destructively by high energy synchrotron radiation
Publication: Research - peer-review › Journal article – Annual report year: 1998

Use of image-processing tools for texture analysis of high-energy X-ray synchrotron data
Dynamics of oxygen ordering in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ studied by neutron and high-energy synchrotron x-ray diffraction

An in-situ diffraction study of a solid oxide fuel cell system
Sörby, L., Poulsen, F. W., Poulsen, H. F. & Garbe, S. 1997

Annealing of Ag-clad BiSCCO tapes studied in-situ by high-energy synchrotron x-ray

Applications of high-energy synchrotron radiation for structural studies of polycrystalline materials

A synchrotron x-ray diffraction study of the local residual strains around a single inclusion in an Al/W metal-matrix composite
Poulsen, H. F., Lorentzen, T., Feidenhans'l, R. & Liu, Y. L. 1997

Bi-2223 tapes for power applications

Dynamics of oxygen ordering in $\text{YBa}_2\text{Cu}_3\text{O}_{6+x}$ studied by neutron and high-energy synchrotron x-ray diffraction

Focusing optics for high energy x-ray diffraction

High energy x-ray scattering for materials science
Poulsen, H. F. 1997
In-situ studies of air electrodes in solid oxide fuel cells at 850 deg.C using synchrotron diffraction
Publication: Research › Article in proceedings – Annual report year: 1997

Local strain contours around inclusions in wire-drawn Cu/W composites
Publication: Research - peer-review › Journal article – Annual report year: 1997

Strain profiling in thin films by synchrotron radiation - a novel technique
Publication: Research › Conference abstract for conference – Annual report year: 1997

The prospect of a 3D high energy probe for materials science
Publication: Research › Conference abstract in proceedings – Annual report year: 1997

Three dimensional mapping of materials science properties using high energy synchrotron radiation
Publication: Research › Conference abstract in proceedings – Annual report year: 1997

Alignment of high-Tc superconducting crystallites in silver cladding studied by high-energy synchrotron x-ray diffraction
Publication: Research › Conference abstract for conference – Annual report year: 1996

Anvendelse af høj energi synkrotronstråling i materialeforskningen
Poulsen, H. F. 1996
Publication: Research › Conference abstract for conference – Annual report year: 1996

Anvendelser af synkrotronforskning indenfor materialeforskningen ved AFM
Publication: Research › Journal article – Annual report year: 1996

Dynamics of oxygen ordering in YBa2Cu3O6+x studied by neutron and high-energy synchrotron x-ray diffraction
Publication: Research › Conference abstract for conference – Annual report year: 1996

High energy synchrotron radiation: a new tool for texture and strain determinations
Publication: Research › Conference abstract in proceedings – Annual report year: 1996

High energy synchrotron radiation: A new tool for texture and strain determinations
Publication: Research › Conference abstract in proceedings – Annual report year: 1996

Højenergi røntgenstråling, et vigtigt værktøj i materialeforskningen
Poulsen, H. F. 1996 In : RisøNyt. 2, p. 6-7
Publication: Communication › Journal article – Annual report year: 1996
In-situ synchrotron x-ray diffraction on BiSCCO-tapes during annealing
Publication: Research › Conference abstract for conference – Annual report year: 1996

Investigation of local texture by high energy synchrotron radiation
Publication: Research › Conference abstract for conference – Annual report year: 1996

Local structure determination in polycrystalline materials using high energy synchrotron radiation
Publication: Research › Conference abstract in proceedings – Annual report year: 1996

Local texture analysis using high energy synchrotron radiation
Publication: Research › Article in proceedings – Annual report year: 1996

Powder diffraction at high energies
Poulsen, H. F. 1996
Publication: Research › Conference abstract for conference – Annual report year: 1996

Structural phase transitions in bulk YBa$_2$Cu$_{3-x}$O$_{6+X}$ with x=0.35 and x=0.36
Publication: Research › Journal article – Annual report year: 1996

Amorphous silica studied by high energy x-ray diffraction
Publication: Research › Journal article – Annual report year: 1995

Amorphous silica studied by high energy x-ray diffraction
Publication: Research - peer-review › Journal article – Annual report year: 1995

Applications of high energy synchrotron radiation within metallurgy
Poulsen, H. F. 1995
Publication: Research › Conference abstract for conference – Annual report year: 1995

Current induced phase change in strontium doped lanthanum manganite: A synchrotron study of a perovskite solid oxide fuel cell electrode at 1000 deg. C
Publication: Research › Conference abstract for conference – Annual report year: 1995

Diffraction on disordered materials using ‘neutron-like’ photons
Publication: Research › Journal article – Annual report year: 1995

Investigation of structural phase transitions in perovskites using high energy synchrotron radiation
Publication: Research › Journal article – Annual report year: 1995
Multiple scattering in synchrotron studies of disorder materials
Publication: Research - peer-review › Journal article – Annual report year: 1995

Observation of Ortho-III correlations by neutron and hard x-ray scattering in an untwinned YBa2Cu3O6.77 single crystal
Publication: Research › Journal article – Annual report year: 1995

Random-field structural transition in YBa2Cu3O6.5
Publication: Research › Journal article – Annual report year: 1995

Structural phase diagram of YBa2Cu3O6+x
Poulsen, H. F. 1995
Publication: Research › Conference abstract for conference – Annual report year: 1995

Synchrotron radiation diffraction: A novel tool for recrystallization studies in bulk μm³ sized local areas
Publication: Research › Article in proceedings – Annual report year: 1995

The local perfection of massive gradient crystals studied by high-energy x-ray diffraction
Publication: Research - peer-review › Journal article – Annual report year: 1995

The resolution function of a triple-crystal diffractometer for high-energy synchrotron radiation. II. Dispersive Laue geometry
Publication: Research - peer-review › Journal article – Annual report year: 1996

Experimental investigations of oxygen ordering and atomic displacements in the Ortho-II phase of YBa2Cu3O6.5 by neutron and synchrotron x-ray diffraction
Publication: Research › Conference abstract in proceedings – Annual report year: 1994

High energy synchrotron radiation. A new probe for condensed matter research
Publication: Research - peer-review › Journal article – Annual report year: 1995

Simultaneous neutron and x-ray refinement of Ortho-II superstructure in YBa2Cu3O6.5
Publication: Research › Conference article – Annual report year: 1994

Studies of oxygen ordering in oxygen deficient and metal ion doped YBa2Cu3-yM+yO6+x (M = Al, Fe, Co) high Tc superconductors
The line shape of the Ortho-II superstructure reflection in YBa$_2$Cu$_3$O$_{6.5}$
Publication: Research › Conference article – Annual report year: 1994

Effects of Co, Fe, and Al doping on the oxygen disordering and superconducting transition temperature of YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Conference article – Annual report year: 1993

Oxygen-ordering phenomena in YBa$_2$Cu$_3$O$_{6+x}$ studied by Monte Carlo simulation: PHASE-DIAGRAM, STRUCTURE FACTOR AND OXYGEN EQUILIBRIUM PRESSURE
Publication: Research › Journal article – Annual report year: 1993

Structure and superconductivity in Co doped YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Journal article – Annual report year: 1993

Oxygen order and superconductivity in pure and doped YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Conference abstract in proceedings – Annual report year: 1992

Solving the 3-D ASYNNNI model on the connection machine
Publication: Research › Conference abstract in proceedings – Annual report year: 1992

Structure and superconductivity in Co, Fe, and Al doped YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Conference abstract for conference – Annual report year: 1992

The role of disorder and defect structures in high temperature superconductivity
Publication: Research › Conference abstract for conference – Annual report year: 1992

Ageing and structural stability of oxygen in the YBaCuO superconductor via a diffusion model
Publication: Research - peer-review › Journal article – Annual report year: 1991

Antiferromagnetism and metallic conductivity in Nb$_{12}$O$_{29}$
Publication: Research - peer-review › Journal article – Annual report year: 1991

Computer simulation of phase separation and ordering processes in low-dimensional systems
Dynamical scaling of oxygen ordering in YBa2Cu3O7-δ

Electrical and magnetic properties of Nb2O5-γ crystallographic shear structures

International interesse for superleder-teori

Lattice gas simulation of oxygen ordering in YBa2Cu3O6+x showing dynamical scaling

Modelling the relationships between oxygen ordering and superconductivity transition temperature in YBa2Cu3O6+x

Oxygen Ordering and Superconductivity in the High Tc Superconductor YBa2Cu306+x
Poulsen, H. F. 1991 Risø National Laboratory. 96 p. (Denmark. Forskningscenter Risø. Risoe-R; No. 608(EN)).

Relation between superconducting transition temperature and oxygen ordering in YBa2Cu3O6+x

Study of the structural phase diagram, oxygen bulk in-diffusion, and equilibrium partial pressure of YBa2Cu3O6+x

Temporal variation of superconductivity transition temperature and dynamical scaling of oxygen ordering in YBa2Cu3O6+x

Twin-domain size and bulk oxygen in-diffusion kinetics of YBa2Cu3O6+x studied by neutron powder diffraction and gas volumetry

Structural phase diagram and equilibrium oxygen partial pressure of YBa2Cu3O6+x
Structural phase diagram and equilibrium oxygen partial pressure of YBa$_2$Cu$_3$O$_{6+x}$
Publication: Research › Journal article – Annual report year: 1990

The structural phase diagram and oxygen equilibrium partial pressure of YBa$_2$Cu$_3$O$_{6+x}$ studied by neutron powder diffraction and gas volumetry
Publication: Research › Journal article – Annual report year: 1990

Oxidation Kinetics in Oxygen Deficient YBa$_2$Cu$_3$O$_{7-x}$ Studied by Neutron Powder Diffraction
Publication: Research - peer-review › Journal article – Annual report year: 1989

Projects:

High Resolution X-ray Diffraction Contrast Tomography
15/11/2017 → 14/11/2020
Project: PhD

Multiscale coarsening studied by Dark Fields X-ray Microscopy
Kutsal, M. & Poulsen, H. F.
01/11/2017 → 31/10/2020
Project: PhD

Multi-Scale 3D Imaging of Heterogeneous Nucleation in Ferroelectrics
Ormstrup, J., Poulsen, H. F., Matheiesen, R. & Simons, H.
15/06/2017 → 14/06/2020
Project: PhD

3D imaging center
01/01/2016 → 01/01/2021
Project

Dark Field X-ray Microscopy of energy materials
Sierra Trujillo, J. X., Bowen, J. R., Jørgensen, P. S. & Poulsen, H. F.
15/06/2015 → 14/07/2018
Project: PhD

Structural reorganization during cyclic deformation
Diederichs, A. M., Pantleon, W. & Poulsen, H. F.
01/06/2015 → 31/05/2018
Project: PhD

Computer Simulation of the 3D structure of Materials
Zhang, J., Poulsen, H. F. & Voorhees, P.
01/02/2015 → 31/01/2018
Coarsening of polycrystalline structures
Ahl, S. R. & Poulsen, H. F.
01/10/2014 → 10/02/2018
Project: PhD

Alliance for Imaging and Modelling of Energy Applications
01/01/2014 → 31/12/2018
Project

Multi-scale mapping of strain mechanisms in lead-free piezoceramics
Majkut, M., Schmidt, S., Oddershede, J., Poulsen, H. F., Clausen, B. & Grant Webber, K.
15/03/2013 → 22/06/2016
Project: PhD

3D Neutron Diffraction (3DND) methodology
15/02/2013 → 23/09/2016
Project: PhD

Nanofabrication of Next-Generation X-Ray Optical Components
Stöhr, F., Poulsen, H. F., Hansen, O., Jensen, F., Thomsen, E. V., Franssila, S. & Schroer, C. G.
15/12/2012 → 28/04/2016
Project: PhD

Methods to determine fast-ion distribution functions from multidiagnostic measurements
Jacobsen, A. S., Naulin, V., Salewski, M., Poulsen, H. F., Bindslev, H. & Sharapov, S.
01/09/2012 → 09/12/2015
Project: PhD

Miljøvenlige, organiske solceller med kontrolleret nanostruktur, baseret på partikler i vandig dispersion
01/06/2012 → 30/09/2015
Project: PhD

3D Studies of Coarsening Kinetics of Individual Grains
01/09/2008 → 29/03/2012
Project: PhD

Synchrotron studies and modelling of the dynamics of dislocation structures
01/03/2008 → 31/08/2011
Project: PhD

Strukturelle egenskaber af superledende BSCCO/Ag bånd under afkøling
01/02/1998 → 18/09/2001
Project: PhD
Activities:

X-ray imaging methods for mapping orientations and strains in grains
Poulsen, H. F. (Speaker)
20 Nov 2009
Activity: Talks and presentations › Conference presentations

3DXRD - potential applications at PETRA
Poulsen, H. F. (Speaker)
23 Jun 2009
Activity: Talks and presentations › Conference presentations

3DXRD studies of nano-metals
Poulsen, H. F. (Speaker)
15 Jun 2009 → 16 Jun 2009
Activity: Talks and presentations › Conference presentations