Peter Stanley Jørgensen - DTU Orbit (16/10/2018)
Jørgensen, Peter Stanley
psjq@dtu.dk
Department of Energy Conversion and Storage - Senior Researcher
Imaging and Structural Analysis

Research outputs:

Complementary analyses of aging in a commercial LiFePO4/graphite 26650 cell
Research output: Research - peer-review › Journal article – Annual report year: 2018

Characterization of three dimensional transport networks in a long-term tested solid oxide electrolysis cell
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Sample Design and Preparation Techniques for Dynamic Microstructural Studies of High Temperature Electrochemical Cells
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2018

Three dimensional characterization of nickel coarsening in solid oxide cells via ex-situ ptychographic nano-tomography
Research output: Research - peer-review › Journal article – Annual report year: 2018

A Decade of Solid Oxide Electrolysis Improvements at DTU Energy
Research output: Research - peer-review › Conference article – Annual report year: 2017

A Physically-Based Equivalent Circuit Model for the Impedance of a LiFePO4/Graphite 26650 Cylindrical Cell
Research output: Research - peer-review › Journal article – Annual report year: 2017

Enhanced densification of thin tape cast Ceria-Gadolinium Oxide (CGO) layers by rheological optimization of slurries
Research output: Research - peer-review › Journal article – Annual report year: 2017

Estimation of current constriction losses via 3D tomography reconstructions in electrochemical devices: a case study of a solid oxide cell electrode/electrolyte interface
Research output: Research - peer-review › Journal article – Annual report year: 2017

Ex-situ tracking solid oxide cell electrode microstructural evolution in a redox cycle by high resolution ptychographic nanotomography
Research output: Research - peer-review › Journal article – Annual report year: 2017
In operando studies of an yttria stabilized zirconia electrolyte supported symmetric solid oxide cell by Dark field X-ray Microscopy at ID06
Research output: Research › Poster – Annual report year: 2018

In operando studies of an yttria stabilized zirconia electrolyte supported symmetric solid oxide cell by Dark field X-ray Microscopy at ID06
Research output: Research › Conference abstract for conference – Annual report year: 2018

In operando studies of ScYSZ electrolyte supported symmetric solid oxide cell by X-ray Diffraction at ESRF, ID06 Beamline
Research output: Research › Poster – Annual report year: 2018

Microstructural Characterization of Ni/YSZ Electrodes in a Solid Oxide Electrolysis Stack Tested for 9000 Hours
Research output: Research › peer-review › Journal article – Annual report year: 2017

Microstructural Characterization of Ni/YSZ Electrodes in a Solid Oxide Electrolysis Stack Tested for 9000 Hours
Research output: Research › peer-review › Conference abstract in proceedings – Annual report year: 2017

Tracking Solid Oxide Cell Microstructure Evolution by High Resolution 3D Nano-Tomography
Research output: Research › Ph.D. thesis – Annual report year: 2017

Using Dark Field X-Ray Microscopy To Study In-Operando Yttria Stabilized Zirconia Electrolyte Supported Solid Oxide Cell
Research output: Research › Conference abstract for conference – Annual report year: 2018

A Decade of Improvements for Solid Oxide Electrolysis Cells. Long-Term Degradation Rate from 40%/Kh to 0.4 % Kh
Research output: Research › peer-review › Conference abstract in journal – Annual report year: 2016

A TEM study of morphological and structural degradation phenomena in LiFePO4-CB cathodes: Morphological and structural degradation in LiFePO4-CB cathodes
Research output: Research › peer-review › Journal article – Annual report year: 2016

Current Constriction at Electrode/Electrolyte Interfaces in Solid Oxide Cell Electrochemical Devices Calculated Via 3D Reconstructions
Research output: Research › peer-review › Conference abstract in journal – Annual report year: 2016

Electrodeposition of metallic 3D surface-profiles for superconductor tapes
Research output: Research › peer-review › Conference abstract for conference – Annual report year: 2016
Electron microscopy investigations of changes in morphology and conductivity of LiFePO4/C electrodes
Research output: Research - peer-review › Journal article – Annual report year: 2016

Improved electrodes and gas impurity investigations on alkaline electrolyzers
Research output: Research - peer-review › Poster – Annual report year: 2016

Relaxation of stresses during reduction of anode supported SOFCs
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

Thermo-Chemo-Mechanical Response of Solid Oxide Cells during Reduction and Cooling
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2016

Colloidal stabilization of cerium-gadolinium oxide (CGO) suspensions via rheology
Research output: Research - peer-review › Journal article – Annual report year: 2015

Computation of Effective Steady-State Creep of Porous Ni–YSZ Composites with Reconstructed Microstructures
Kwok, K., Jørgensen, P. S. & Frandsen, H. L. 2015 In : Journal of the American Ceramic Society. 98, 9, p. 2873–2880
Research output: Research - peer-review › Journal article – Annual report year: 2015

Degradation Studies on LiFePO4 cathode
Research output: Research - peer-review › Conference article – Annual report year: 2015

Dictionary Based Segmentation in Volumes
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Dictionary Based Segmentation in Volumes
Research output: Research - peer-review › Poster – Annual report year: 2016

Effect of Aging on the Electrochemical Performance of LSM-YSZ Cathodes
Research output: Research - peer-review › Journal article – Annual report year: 2015

Enabling Flexible Polymer Tandem Solar Cells by 3D Ptychographic Imaging
Research output: Research - peer-review › Journal article – Annual report year: 2014
Instability and growth of nanoscale Ce$_{0.8}$Gd$_{0.2}$O$_1.9$/NiO infiltrate in Sr$_{0.99}$Ti$_{0.9}$Nb$_{0.1}$O$_3$-$Zr$$_{0.84}$Y$_{0.16}$O$_{1.92}$ anodes for solid oxide fuel cells
In : Journal of Power Sources. 258, p. 297-304

Investigation of nano scaled electro catalysts in ceramic solid oxide fuel cell anodes based on niobium modified strontium titanate

Micromechanical Modeling of Solid Oxide Fuel Cell Anode Supports based on Three-dimensional Reconstructions
European Fuel Cell Forum, 10 p. B1109

Microstructure analysis of vacuum plasma sprayed electrodes for alkaline electrolysis

On the accuracy of triple phase boundary lengths calculated from tomographic image data

Long-Term Stability of LSM-YSZ Based Cathodes

Performance of Electrolyte Supported Solid Oxide Fuel Cells with STN Anodes

Transmission Electron Microscopy Specimen Preparation Method for Multiphase Porous Functional Ceramics

Microstructural evolution of nanosized Ce$_{0.8}$Gd$_{0.2}$O$_1.9$/Ni infiltrate in a Zr$_{0.84}$Y$_{0.16}$O$_{1.92}$-Sr$_{0.94}$Ti$_{0.9}$Nb$_{0.1}$O$_{3-5}$ based SOFC anode under electrochemical evaluation
Unsupervised Assessment of Subcutaneous and Visceral Fat by MRI
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009

Automated 3D FIB-SEM analysis of solid oxide fuel cells
Research output: Research › Poster – Annual report year: 2008

Automatic quantitative image analysis of micrographs
Research output: Research › Article in proceedings – Annual report year: 2008

Robust automatic high resolution segmentation of SOFC anode porosity in 3D.
Research output: Research › Article in proceedings – Annual report year: 2008

Automatic assessment of intrabdominal fat by MRI
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2007

Boundary based segmentation of 2D electron microscope images. Ph.D. presentation
Jørgensen, P. S. 2007
Research output: Research › Paper – Annual report year: 2007

Projects:

Physical model priors for tomogram segmentation
Brenne, E. O., Jørgensen, P. S. & Dahl, V. A.
Marie Curie (EU-stipendium) m/virksomhed
01/08/2018 → 31/07/2021
Project: PhD

Electrodeposition of Metallic 3D Surface-Profiles for Superconductor Tapes
Wulff, A. C., Andersen, S. Z., Jørgensen, P. S., Nielsen, P. H. & Bentien, A.
22/08/2016 → 12/02/2017
Project: Research

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

In-situ 3D microstructure characterisation of solid oxide fuel cells using X-ray tomography methods
Forskningsrådsfinansiering
15/08/2014 → 13/12/2017
Project: PhD

Automatic Quantitative Image Analysis of 3D Micrographs
Forskningsrådsfinansiering
01/03/2007 → 22/09/2010
Project: PhD
RESelyser: Hydrogen from RES: pressurised alkaline electrolyser with high efficiency
Bowen, J. R., Jørgensen, P. S. & Bentzen, J. J.
FCH JU
01/11/2011 → 30/04/2015
Project: Research

Activities:

Solid oxide fuel cells – from a materials science perspective
Jørgensen, P. S. (Participant)
16 May 2011
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

Workshop on Image Analysis in SOFC Degradation Research
Jørgensen, P. S. (Participant)
9 Sep 2010
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

Towards automated 3D electrode microstructure characterization from a data analysis perspective
Jørgensen, P. S. (Speaker)
6 Jul 2010
Activity: Talks and presentations › Conference presentations