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Publications:

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

Colloids for Catalysts: A Concept for the Preparation of Superior Catalysts of Industrial Relevance
Publication: Communication › Journal article – Annual report year: 2018

Continuous Hydrothermal Flow Synthesis of LaCrO3 in Supercritical Water and Its Application in Dual-Phase Oxygen Transport Membranes
Publication: Research - peer-review › Journal article – Annual report year: 2018

Investigating particle size effects in catalysis by applying a size controlled and surfactant-free synthesis of colloidal nanoparticles in alkaline ethylene glycol - The case study of the oxygen reduction reaction on Pt
Publication: Research - peer-review › Journal article – Annual report year: 2018

A toolbox to study precious metal nano- catalysts: surfactant free synthesis, characterization and catalytic activity
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

Coarsening of carbon black supported Pt nanoparticles in hydrogen
Publication: Research - peer-review › Journal article – Annual report year: 2017

Continuous Hydrothermal Flow Synthesis of Functional Oxide Nanomaterials Used in Energy Conversion Devices
Publication: Research › Ph.D. thesis – Annual report year: 2017

In situ TEM analysis of a symmetric solid oxide cell in oxygen and vacuum–cation diffusion observations
Publication: Research - peer-review › Journal article – Annual report year: 2017

In situ TEM study of the coarsening of carbon black supported Pt nanoparticles in hydrogen
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2017

In Situ Transmission Electron Microscopy In Materials Science - Possibilities and Prospects
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

On the Properties and Long-Term Stability of Infiltrated Lanthanum Cobalt Nickelates (LCN) in Solid Oxide Fuel Cell Cathodes
Publication: Research - peer-review › Journal article – Annual report year: 2017
Structural evolution during calcination and sintering of a (La0.6Sr0.4)0.99CoO3-δ nanofiber prepared by electrospinning
Publication: Research - peer-review › Journal article – Annual report year: 2017

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

Coarsening of Pd nanoparticles in an oxidizing atmosphere studied by in situ TEM
Publication: Research - peer-review › Journal article – Annual report year: 2016

Comparison of ultramicrotomy and focused-ion-beam for the preparation of TEM and STEM cross section of organic solar cells
Publication: Research - peer-review › Journal article – Annual report year: 2016

Effects of strong cathodic polarization of the Ni-YSZ interface
Publication: Research - peer-review › Journal article – Annual report year: 2016

Electron microscopy investigations of changes in morphology and conductivity of LiFePO4/C electrodes
Publication: Research - peer-review › Journal article – Annual report year: 2016

High-Performance Microchanneled Asymmetric Gd0.1Ce0.9O1.95-δ-La0.6Sr0.4FeO3.5-Based Membranes for Oxygen Separation
Publication: Research - peer-review › Journal article – Annual report year: 2016

In-Situ Transmission Electron Microscopy on Operating Electrochemical Cells
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

In SITU Transmission Electron Microscopy on Operating Electrochemical CELLS
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2016

Large CZTS Nanoparticles Synthesized by Hot-Injection for Thin Film Solar Cells
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Long-Term Stability of Anode-Supported Solid Oxide Fuel Cells with a Co-Sintered Cathode Backbone and Infiltrated La0.95Co0.4Ni0.6O3 (LCN) Electro-Catalyst
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2016

Nanocomposite YSZ-NiO Particles with Tailored Structure Synthesized in a Two-Stage Continuous Hydrothermal Flow Reactor
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2016

Scandium-doped zinc cadmium oxide as a new stable n-type oxide thermoelectric material
Publication: Research - peer-review › Journal article – Annual report year: 2016

Simulation, design and proof-of-concept of a two-stage continuous hydrothermal flow synthesis reactor for synthesis of functionalized nano-sized inorganic composite materials
Publication: Research - peer-review › Journal article – Annual report year: 2016

Synthesis of ligand-free CZTS nanoparticles via a facile hot injection route
Publication: Research - peer-review › Journal article – Annual report year: 2016
Elektrolyse gør al energi fra vindmøller værdifuld
Publication: Communication › Internet publication – Annual report year: 2015

Analysis of the Interphase on Carbon Black Formed in High Voltage Batteries
Publication: Research - peer-review › Journal article – Annual report year: 2015

Analysis of the Interphase on Carbon Black Formed in High Voltage Batteries
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Eliminating degradation in solid oxide electrochemical cells by reversible operation
Publication: Research - peer-review › Journal article – Annual report year: 2014

Enhancement of the chemical stability in confined δ-Bi2O3
Publication: Research - peer-review › Letter – Annual report year: 2015

Environmental TEM study of the dynamic nanoscaled morphology of NiO/YSZ during reduction
Publication: Research - peer-review › Journal article – Annual report year: 2015

Long Term Stability Investigation of Solid Oxide Electrolysis Cell with Infiltrated Porous YSZ Air Electrode Under High Current
Publication: Research - peer-review › Journal article – Annual report year: 2015

Low - voltage FIB/SEM Tomography for 3D Microstructure Evolution of LiFePO4/C Electrode
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2015

Low-voltage FIB/SEM Tomography for 3D Microstructure Evolution of LiFePO4/C Electrode
Publication: Research - peer-review › Conference article – Annual report year: 2016

Structure and crystallinity of water dispersible photoactive nanoparticles for organic solar cells
Publication: Research - peer-review › Journal article – Annual report year: 2015

NiO/YSZ Reduction for SOFC/SOEC Studied In Situ by Environmental Transmission Electron Microscopy
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2014

NiO/YSZ Reduction for SOFC/SOEC Studied In Situ by Environmental Transmission Electron Microscopy
Publication: Research - peer-review › Conference article – Annual report year: 2014

SOFC anode reduction studied by in situ TEM
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Alloyed Ni-Fe nanoparticles as catalysts for NH₃ decomposition
Publication: Research - peer-review › Journal article – Annual report year: 2012

Effect of Particle Morphology on the Ripening of Supported Pt Nanoparticles
Publication: Research - peer-review › Journal article – Annual report year: 2012

Quantification of tip-broadening in non-contact atomic force microscopy with carbon nanotube tips
Publication: Research - peer-review › Journal article – Annual report year: 2012

Structure–activity relationships of Pt/Al₂O₃ catalysts for CO and NO oxidation at diesel exhaust conditions
Publication: Research - peer-review › Journal article – Annual report year: 2012
Ostwald ripening in a Pt/SiO2 model catalyst studied by in situ TEM
Publication: Research - peer-review › Journal article – Annual report year: 2011

Sintering of oxide-supported Pt and Pd nanoparticles in air studied by in situ TEM
Publication: Research › Ph.D. thesis – Annual report year: 2011

Catalytic Soot Oxidation studied by ETEM
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Direct Observations of Oxygen-induced Platinum Nanoparticle Ripening Studied by In Situ TEM
Publication: Research - peer-review › Journal article – Annual report year: 2010

In situ TEM studies of catalysts for diesel engine exhaust abatement
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Size-selective aerobe oxidation by sinter stable gold nanoparticles embedded in zeolite crystals
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Size-selective Oxidation with Au nanoparticles embedded in Zeolite Crystals
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Substrate Size-Selective Catalysis with Zeolite-Encapsulated Gold Nanoparticles
Publication: Research - peer-review › Journal article – Annual report year: 2010

Catalytic Soot Oxidation studied by ETEM
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2009

Direct observations of CeO2-catalyzed soot oxidation at the nano-scale using environmental transmission electron microscopy
Publication: Research - peer-review › Journal article – Annual report year: 2008

Catalytic soot oxidation studied by Environmental Transmission Electron Microscopy
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2008

Ceria-catalyzed soot oxidation studied by environmental transmission electron microscopy
Publication: Research - peer-review › Journal article – Annual report year: 2008

Direct observations of catalytic soot oxidation on a nano-scale
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2008

In situ studies of catalytic soot oxidation by means of Environmental Transmission Electron Microscopy (ETEM)
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2008

In situ studies of CeO2-catalyzed soot oxidation by means of Environmental Transmission Electron Microscopy
Publication: Research › Book – Annual report year: 2008

Projects:

3D electron microscopy of nanostructures in energy devices
Project: PhD
3D imaging center
Project

In situ transmission electron microscopy on operating electrochemical cells
Project

In-situ transmission electron microscopy on operating electrochemical cells
Project: PhD

Green Production of Nanomaterials for Energy Conversion
Project: PhD

Ædelmetalatalysatore til rensning af nøg fra dieselmotorer
Project: PhD

Activities:

In situ TEM study of the coarsening of carbon black supported Pt nanoparticles in hydrogen
Activity: Talks and presentations › Conference presentations