Research outputs:

**Preparation of super-hydrophilic polyphenylsulfone nanofiber membranes for water treatments**
Research output: Research - peer-review › Journal article – Annual report year: 2019

**Alcohol dehydrogenase on inorganic powders: Zeta potential and particle agglomeration as main factors determining activity during immobilization**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Communication—Perovskite Electrochemical System for Highly Selective NOx Reduction of Diesel Engine Exhaust**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_{3-δ} nanofiber cathode for intermediate-temperature solid oxide fuel cells by water-based sol-gel electrospinning: Synthesis and electrochemical behaviour**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**New water treatment research activities at DTU Energy**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2018

**Selective location and migration of poly(methyl methacrylate)-grafted clay nanosheets with low grafting density in poly(methyl methacrylate)/poly(styrene-co-acrylonitrile) blends**
Research output: Research - peer-review › Journal article – Annual report year: 2018

**Advanced fabrication of porous ceramic multilayers for membrane applications**
Research output: Research › Conference abstract in proceedings – Annual report year: 2017

**Advanced manufacturing of porous ceramic structures for use in energy applications (invited)**
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2017

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

**Evolution of concentration fluctuation during phase separation of polystyrene/poly (vinyl methyl ether) blend in the presence of nanosilica**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Glass transition of poly (methyl methacrylate) filled with nanosilica and core-shell structured silica**
Research output: Research - peer-review › Journal article – Annual report year: 2017
In situ TEM study of the coarsening of carbon black supported Pt nanoparticles in hydrogen
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2017

Structural evolution during calcination and sintering of a (La$_{0.6}$Sr$_{0.4}$)$_{0.99}$CoO$_3$$_{3.5}$ nanofiber prepared by electrospinning
Research output: Research - peer-review › Journal article – Annual report year: 2017

Unlocking the Electrocatalytic Activity of Chemically Inert Amorphous Carbon-Nitrogen for Oxygen Reduction: Discerning and Refactoring Chaotic Bonds
Research output: Research - peer-review › Journal article – Annual report year: 2017

Polymer solution, fiber mat, and nanofiber membrane-electrode-assembly therewith, and method of fabricating same
Research output: Research › Patent – Annual report year: 2016

LSCF fibers for IT-SOFCs applications: synthesis and morphological analysis
Research output: Research › Conference abstract for conference – Annual report year: 2016

Shaping our energy future by electrospinning
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Method for producing and controlling the morphology of metal-oxide nanofiber and/or nanotube catalysts.
Research output: Research › Patent – Annual report year: 2016

Electrospinning for Solid Oxide Fuel Cells
Research output: Research - peer-review › Book chapter – Annual report year: 2015

Fabrication of doped Titania (TiO2) nano-catalysts in the shape of nanofibers
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Graphene oxide and hyperbranched polymer-toughened hydrogels with improved absorption properties and durability
Research output: Research - peer-review › Journal article – Annual report year: 2015

Controlling fuel crossover and hydration in ultrathin proton exchange membrane-based fuel cells using Pt-nanosheet catalysts
Research output: Research - peer-review › Journal article – Annual report year: 2014

Pre-Stretched Low Equivalent Weight PFSA Membranes with Improved Fuel Cell Performance
Research output: Research - peer-review › Journal article – Annual report year: 2014

Three-Dimensional Nanofiber Cathode for Low Temperature and High Temperature Fuel Cells
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2014

Shaping our Energy Future with Electrospinning
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2013

Three-dimensional Nanofiber Cathode for Low Temperature and High Temperature Fuel Cells
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2014

Three-dimensional Nanofiber Cathode for Low Temperature and High Temperature Fuel Cells
Research output: Research › Conference abstract for conference – Annual report year: 2014
Nanofiber electrode and method of forming same
Research output: Research › Patent – Annual report year: 2012

Preparation of Stable Pt-Clay Nanocatalysts for Self-humidifying Proton Exchange Membrane Fuel Cells
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2012

Crystallinity Enhancement of Nafion Electrolyte Membranes Assisted by a Molecular Gelator
Research output: Research - peer-review › Journal article – Annual report year: 2012

Electrospun Nanofiber Cathode for Hydrogen/Air Fuel Cells
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2011

High-Performance Nanofiber Fuel Cell Electrodes
Research output: Research - peer-review › Journal article – Annual report year: 2011

Nanofiber cathodes for low and high humidity hydrogen fuel cell operation
Research output: Research - peer-review › Conference article – Annual report year: 2011

Electrospinning Pt/C Catalysts into a Nanofiber Fuel Cell Cathode
Research output: Research › Journal article – Annual report year: 2010

High Conductivity Perfluorosulfonic Acid Nanofiber Composite Fuel-Cell Membranes
Research output: Research - peer-review › Journal article – Annual report year: 2010

Morphology and performance of stretched PFSA for direct methanol fuel cells
Research output: Research - peer-review › Conference article – Annual report year: 2010

New Membrane Morphologies for PEM Fuel Cells
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Performance and Durability of Stretched PFSA Membranes for Hydrogen/Air Fuel Cells
Research output: Research - peer-review › Conference abstract in journal – Annual report year: 2010

Preparation of Stable Exfoliated Pt–Clay Nanocatalyst
Research output: Research › Journal article – Annual report year: 2009

Exfoliated Pt-clay/nafion nanocomposite membrane for self-humidifying polymer electrolyte fuel cells
Research output: Research - peer-review › Journal article – Annual report year: 2008

Projects:

Membrane reactors for industrial applications
Project: PhD

Advanced materials and structuring for gas storage applications: Structuring of metal-organic frameworks (MOFs) into nanofibers for methane storage
Project: PhD

Design and Structuring of electrospun nanofiber membrane for high temperature proton exchange membrane fuel cells
Project: PhD
Design and structuring of electrospun nanofiber non-Pt catalysts and electrode for high temperature proton exchange membrane fuel cells
Project: PhD

Investigation of metallic-ceramic 3D network-structures for solid oxide fuel cell technology
Project: Research

New Concepts for Efficient Immobilization of Enzymes in Inorganic Membrane Reactors
Project: PhD

Shaping our Energy Future with Electrospinning
Project: Research

Activities:

Structuring of metal-organic frameworks into nanofibers for methane storage
Activity: Examinations and supervision › Supervisor activities

Design and structuring of electrospun nanofiber non-Pt catalysts and electrode for high temperature PEMFCs
Activity: Examinations and supervision › Supervisor activities

Design of electrospun nanofiber electrode for high temperature proton exchange membrane fuel cells
Activity: Examinations and supervision › Supervisor activities

Advanced fabrication of porous ceramic multilayers for membrane applications
Activity: Talks and presentations › Conference presentations

Enzymatic reactor on ceramic substrate for CO2 conversion
Activity: Examinations and supervision › Supervisor activities

Electrospin our Energy Devices
Activity: Talks and presentations › Conference presentations

Shaping our Energy Future with Electrospinning
Activity: Talks and presentations › Conference presentations

3-Dimensional Nanofiber Electrodes for Solid Oxide Fuel Cells and Proton Exchange Membrane Fuel Cells
Activity: Talks and presentations › Conference presentations