**Research outputs:**

The demagnetization factor for randomly packed spheroidal particles
Research output: Research - peer-review › Journal article – Annual report year: 2019

A topology optimized switchable permanent magnet system
Bjørk, R. & Insinga, A. R. 2018 In : Journal of Magnetism and Magnetic Materials. 465, p. 106-113
Research output: Research - peer-review › Journal article – Annual report year: 2018

Freeze-casting to create directional micro-channels in regenerators for magnetic refrigeration
Research output: Research - peer-review › Article in proceedings – Annual report year: 2018

Topology Optimization of Segmented Thermoelectric Generators
Lundgaard, C., Sigmund, O. & Bjørk, R. 2018 In : Journal of Electronic Materials. 47, 12, p. 6959–6971
Research output: Research - peer-review › Journal article – Annual report year: 2018

Freeze-casting to create micro-channels in La$_{0.66}$Ca$_{0.33-x}$Sr$_x$Mn$_{1.05}$O$_3$
Christiansen, C. D., Nielsen, K. K., Bordia, R. K. & Bjørk, R. 2017 p. 1
Research output: Research › Poster – Annual report year: 2018

Influence of magnetization on the applied magnetic field in various AMR regenerators
Research output: Research - peer-review › Journal article – Annual report year: 2017

Modeling a material from packing, through sintering and to the final microstructural properties
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Operational test of bonded magnetocaloric plates
Research output: Research - peer-review › Journal article – Annual report year: 2017

Reply to "Comment on 'Performance of Halbach magnet with finite coercivity"
Research output: Research › Comment/debate – Annual report year: 2016

Spatially resolved modelling of inhomogeneous materials with a first order magnetic phase transition
Research output: Research - peer-review › Journal article – Annual report year: 2017

The maximum theoretical performance of unconcentrated solar photovoltaic and thermoelectric generator systems
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Topology optimized permanent magnet systems**
Research output: Research - peer-review › Journal article – Annual report year: 2017

**Undervisere: Her er de fem største problemer med studenterevalueringer**
Research output: Communication › Contribution to newspaper - Comment/debate – Annual report year: 2017

**Unge forskere: Slip ph.d.-uddannelsen fri**
Sørensen, T. J., Bjørk, R., Zinner, N. T., Dalsgaard, P., Niss, K. & Jauffred, L. 2017 In : Altinget.dk. 20.06.2017
Research output: Communication › Contribution to newspaper - Comment/debate – Annual report year: 2017

**Active magnetic regenerator refrigeration with rotary multi-bed technology**

**An Analytical Model for the Influence of Contact Resistance on Thermoelectric Efficiency**
Research output: Research - peer-review › Journal article – Annual report year: 2015

**A thermoelectric power generating heat exchanger: Part I – Experimental realization**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**A thermoelectric power generating heat exchanger: Part II – Numerical modeling and optimization**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Comparing superconducting and permanent magnets for magnetic refrigeration**
Bjørk, R., Nielsen, K. K., Bahl, C. R. H., Smith, A. & Wulff, A. C. 2016 In : A I P Advances. 6, 5, 6 p., 056205
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Effects of flow balancing on active magnetic regenerator performance**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Exploring the efficiency potential for an active magnetic regenerator**
Research output: Research - peer-review › Journal article – Annual report year: 2016

**Generating the optimal magnetic field for magnetic refrigeration**
Research output: Research - peer-review › Article in proceedings – Annual report year: 2016

**Globally Optimal Segmentation of Permanent-Magnet Systems**
Research output: Research - peer-review › Journal article – Annual report year: 2016
Optimally segmented magnetic structures
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2016

Optimally segmented permanent magnet structures
Insinga, A. R., Bjørk, R. & Smith, A. 2016 In : I E E E Transactions on Magnetics. 52, 12, 7 p., 7210306
Research output: Research - peer-review › Conference article – Annual report year: 2016

Optimising Magnetostatic Assemblies

Performance of Halbach magnet arrays with finite coercivity
Research output: Research - peer-review › Journal article – Annual report year: 2016

The lifetime cost of a magnetic refrigerator
Research output: Research - peer-review › Journal article – Annual report year: 2015

The magnetic properties of the hollow cylindrical ideal remanence magnet
Research output: Research - peer-review › Journal article – Annual report year: 2016

Comparing superconducting and permanent magnets for magnetic refrigeration
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Design and experimental tests of a rotary active magnetic regenerator prototype
Research output: Research - peer-review › Journal article – Annual report year: 2015

Direct measurements of the magnetic entropy change
Research output: Research - peer-review › Journal article – Annual report year: 2015

Experimental Studies with an Active Magnetic Regenerating Refrigerator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2015

Hybrid TEG-heat exchanger module for electrical power production
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Modeling constrained sintering of bi-layered tubular structures
Research output: Research - peer-review › Journal article – Annual report year: 2014
Modeling the Microstructural Evolution During Constrained Sintering
Research output: Research - peer-review › Journal article – Annual report year: 2015

Modelling of thermoelectric generators for satellite application
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

Optimization of Permanent Magnet Assemblies
Research output: Research - peer-review › Conference abstract for conference – Annual report year: 2015

Optimization of Permanent Magnet Assemblies
Research output: Research › Poster – Annual report year: 2015

Optimization of the Mechanical and Electrical Performance of a Thermoelectric Module
Research output: Research - peer-review › Journal article – Annual report year: 2015

Segmented Thermoelectric Oxide-Based Module for High-Temperature Waste Heat Harvesting
Research output: Research - peer-review › Journal article – Annual report year: 2015

The efficiency and the demagnetization field of a general Halbach cylinder
Research output: Research - peer-review › Journal article – Annual report year: 2015

The performance of a combined solar photovoltaic (PV) and thermoelectric generator (TEG) system
Bjørk, R. & Nielsen, K. K. 2015 In : Solar Energy. 120, p. 187–194
Research output: Research - peer-review › Journal article – Annual report year: 2015

The Total Lifetime Cost of a Magnetic Refrigerator
Research output: Research - peer-review › Poster – Annual report year: 2015

The universal influence of contact resistance on TEG efficiency
Research output: Research - peer-review › Conference abstract in proceedings – Annual report year: 2015

The Universal Influence of Contact Resistance on the Efficiency of a Thermoelectric Generator
Research output: Research - peer-review › Journal article – Annual report year: 2015

Analysis of the internal heat losses in a thermoelectric generator
Research output: Research - peer-review › Journal article – Annual report year: 2014

Design and initial testing of a compact and efficient rotary AMR prototype
An optimized magnet for magnetic refrigeration
Research output: Research - peer-review › Journal article – Annual report year: 2010

Comparison of adjustable permanent magnetic field sources
Research output: Research - peer-review › Journal article – Annual report year: 2010

Design Concepts for a Continuously Rotating Active Magnetic Regenerator
Research output: Research - peer-review › Article in proceedings – Annual report year: 2010

Magnetocaloric properties of LaFe13−x−yCoxSiy and commercial grade Gd
Research output: Research - peer-review › Journal article – Annual report year: 2010

Review and comparison of magnet designs for magnetic refrigeration
Research output: Research - peer-review › Journal article – Annual report year: 2010

Spatially resolved measurements of the magnetocaloric effect and the local magnetic field using thermography
Research output: Research - peer-review › Journal article – Annual report year: 2010

The demagnetizing field of a non-uniform rectangular prism
Research output: Research - peer-review › Journal article – Annual report year: 2010

Detailed numerical modeling of a linear parallel-plate Active Magnetic Regenerator
Research output: Research - peer-review › Journal article – Annual report year: 2009

Magnetic cooling at Risoe DTU
Research output: Research › Journal article – Annual report year: 2009

Numerical modeling in magnetic refrigeration
Research output: Research › Article in proceedings – Annual report year: 2009

On the optimal magnet design for magnetic refrigeration
Research output: Research - peer-review › Article in proceedings – Annual report year: 2009
Magnetic Cooling at Risø DTU
Research output: Research - peer-review › Article in proceedings – Annual report year: 2008

Optimization and improvement of Halbach cylinder design
Research output: Research - peer-review › Journal article – Annual report year: 2008

Magnetic cooling for use in refrigerators
Research output: Research › Conference abstract for conference – Annual report year: 2007

Projects:

Harvesting Energy with Levitating Magnets
Imbaquingo Muñoz, C. E., Bjørk, R., Bahl, C. & Insinga, A. R.
01/01/2019 → 31/12/2021
Project: PhD

Getting the most out of magnetocaloric materials for high efficiency refrigeration
Erbesdobler, F., Nielsen, K. K., Bahl, C. & Bjørk, R.
Forskningsrådsfinansiering
01/01/2018 → 31/12/2020
Project: PhD

Freeze casting to create micro-channel structures
Christiansen, C. D., Bjørk, R. & Nielsen, K. K.
Forskningsrådsfinansiering
01/01/2017 → 31/12/2019
Project: PhD

Active Magnetic regenerator refrigeration with rotary multi-bed technology
Institut stipendie (DTU)
01/04/2016 → 20/09/2016
Project: PhD

Modeling of shape instabilities occurring during sintering
Tadesse Molla, T., Frandsen, H. L., Bjørk, R., Pryds, N., Hattel, J. H., Bordia, R. K. & Raether, F.
Forskningsrådsfinansiering
15/07/2011 → 30/09/2014
Project: PhD

Modeling and development of permanent magnets for magnetic refrigeration at room temperature
Bjørk, R., Pryds, N., Bahl, C., Smith, A., Hendriksen, P. V., Coey, J. M. D. & Rowe, A.
Forskningsrådsfinansiering
01/04/2007 → 22/09/2010
Project: PhD

Optimised Hybrid Magnets
Forskningsrådsfinansiering
01/06/2013 → 16/11/2016
Project: PhD