

oct 9 — 2019

Ruhr-Symposium

Functional Magnetic Materials:

Performance Enhancements for Electric Drives and Thermal Management

functional magnetic materials at Ruhr-Symposium

Whether in motor vehicles or wind power generators – Permanent magnets are of enormous global importance for efficient energy conversion. Especially when the use of rare earths can be dispensed with. What is driven must also be cooled: Magnetocaloric materials and processes enable energy-efficient and environmentally responsible cooling technologies. Functional Magnetic Materials: Performance Enhancements for Electric Drives and Thermal Management are therefore the focus of the 6th RUHR Symposium at the University of Duisburg-Essen.



Where?

Fraunhofer-inHaus-Zentrum
Forsthausweg 1
47057 Duisburg



When?

October 9, 2019

Past Speakers



Prof. Dr. Reinhart Poprawe
Member of the Board
Fraunhofer-Gesellschaft

Frank Götzke

Head of New Technologies
Bugatti Engineering GmbH



Organizers



Partners



Speaker 2019



Oliver Wittke
Parliamentary State Secretary
to the Federal Minister
for Economic Affairs and Energy



Jürgen Gassmann
Head of Department
Magnetic Materials,
Fraunhofer Research Institution



Robert Konnerth
Category Management,
BARLOG Plastics GmbH



Prof. Karl Sandeman
Department of Physics,
CUNY City
University of New York



Prof. Vitalij K. Pecharsky
Ames Laboratory,
U.S. Department of Energy,
Iowa State University



Dr. Konstantin Skokov
Functional Materials,
TU Darmstadt



Dr. Thomas Schrefl
Head of Center
for Modeling and Simulation,
Danube University Krems, Austria



Martin Groenefeld
Managing Director,
Magnetfabrik Bonn GmbH



Prof. Andreas Hintennach
Electrochemistry,
Sustainability,
Daimler AG



Prof. Dagmar Goll
Materials Research Institute,
Aalen University



Alexander Barcza
Group Leader Development
Magnetocaloric Materials,
Vacuumschmelze GmbH & Co. KG



Prof. Heiko Wende
Scientific Director CENIDE,
Faculty of Physics,
University of Duisburg-Essen



Bruno Müller
Head of Electric Motors, Schaeffler
Technologies AG u. Co. KG



Dr. Tino Gottschall
Dresden High Magnetic
Field Laboratory,
Helmholtz-Zentrum Dresden

Agenda | October 9, 2019

08:15 **Welcome**

08:30 **Keynotes I**

Oliver Wittke

Parliamentary State Secretary to the Federal Minister for Economic Affairs and Energy

Julian Blum

Project Management Electric Drive Development, Audi AG

09:30 **Keynotes II**

Prof. Vitalij K. Pecharsky

Ames Laboratory, U.S. Department of Energy, Iowa State University
Recent Advances in Caloric Cooling Materials and Technologies

Prof. Karl Sandeman

Department of Physics, CUNY City University of New York, tbc

Coffee Break: 10:45 – 11:15

11:15 **New Permanent Magnets: Automotive Electric Motors**

Prof. Andreas Hintennach

Electrochemistry, Sustainability, Daimler AG

Prof. Dagmar Goll

Materials Research Institute, Aalen University

Dr. Thomas Schrefl

Head of Center for Modeling and Simulation, Danube University Krems, Austria
Computational optimization of permanent magnets

Bruno Müller

Head of Electric Motors, Schaeffler Technologies AG u. Co. KG

Lunch: 13:00 – 14:00

14:00

Magnetocaloric Materials

Dr. Tino Gottschall

Dresden High Magnetic Field Laboratory, Helmholtz-Zentrum Dresden
Multicaloric materials and their characterization

Dr. Alexander Barcza

Group Leader Development Magnetocaloric Materials, Vacuumschmelze GmbH & Co. KG
Industrial development of La-Fe-Si magnetocaloric alloys for energy conversion

Prof. Heiko Wende

Scientific Director CENIDE, Faculty of Physics, University of Duisburg-Essen
Element specific insight into magnetocaloric materials

Robert Konnerth

Category Management, BARLOG Plastics GmbH
KEBABLEND M and MW: Injection moulded plastic bonded magnets

Coffee Break: 15:40 – 16:00

16:00

Magnetic Materials: Optimization and Sustainability

Dr. Konstantin Skokov

Functional Materials, TU Darmstadt
Heavy rare earth free, free rare earth and rare earth free magnets – Vision and reality

Jürgen Gassmann

Head of Department Magnetic Materials, Fraunhofer Research Institution for Materials Recycling and Resource Strategies
Securing the Supply Chain of Rare Earth Elements for Nd-Fe-B Magnets

16:50

Final Talk


Martin Groenefeld


Managing Director, Magnetfabrik Bonn GmbH
3D printing of magnetic materials

Registration

RUHR-SYMPOSIUM — 2019

@ jan.wortberg@ds-automotive.de

 0203 - 306 - 1252

 www.ruhr-symposium.de

Yes, I would like to participate in the
CAR science

**Functional Magnetic Materials:
Performance Enhancements for Electric Drives and Thermal
Management on October 9, 2019 in Duisburg.**

Included is a full-day visit to the congress including refreshments during breaks,
lunch, conference materials and access to the download area of the presentations
presented.

Your participation - please tick the appropriate box

Normal participation 550,- € p.P. plus VAT.

Professors 200,- € p.P. plus VAT.

Research Assistants / PhD Students 100,- € p.P. plus VAT.

Students (Bachelor or Master)* free
Students can participate free of charge after prior registration. Proof required.

Your registration will be confirmed in writing by e-mail. You will not receive an admission ticket, but a name tag on registration on the day of the event, which will enable you to participate.

The invoice will be sent to you by post after the event. The invoice will be issued by D+S Automotive GmbH.

Participant Information

Company

*Name,
First Name*

Position/Dpt.

E-Mail

Telephone

Billing Address

Company

Department

Contact For

Street

ZIP

City

Remarks

Date

 *Signature*

For cancellations after September 19, 2018 we charge an administration fee of 200,- Euro plus VAT. In case of non-appearance the full participation fee is due. However, a substitute can be named.