



HELMHOLTZ INSTITUT MÜNSTER | HI MS

Ionics in Energy Storage

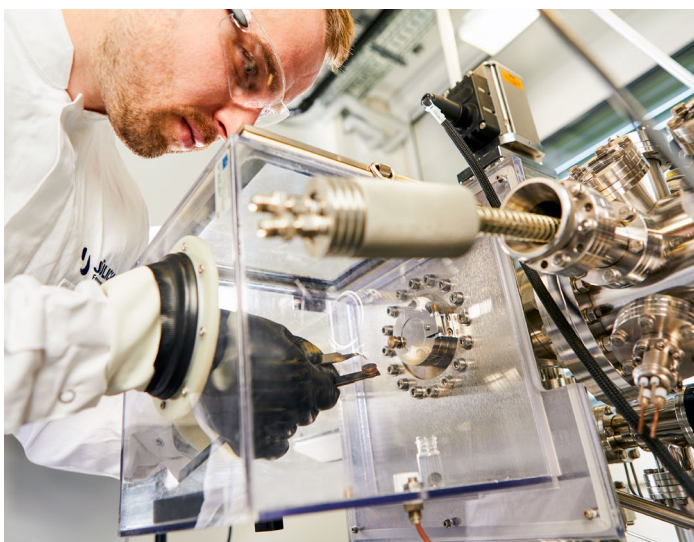


THE ELECTROLYTE: LIFEBLOOD OF THE BATTERY

The Helmholtz Institute Münster (HI MS) researches and develops the batteries of the future based on innovative electrolytes. As the lifeblood of the battery cell, the electrolyte is what enables HI MS to make a significant contribution to the success of e-mobility and the energy transition.

When researching and developing innovative battery cell technologies, scientists at HI MS also ask the key question: how can we ensure the cost-effective, long-term storage of large quantities of generated electricity using a small amount of space?

At the institute, the priority areas of research are the five classes of electrolytes: solid anionic electrolytes, solid cationic electrolytes, polymer electrolytes, liquid electrolytes, and hybrid electrolytes. HI MS' existing expertise and infrastructure covers a broad spectrum of the theory, chemistry, and technology behind electrolytes, battery cells, and battery systems.

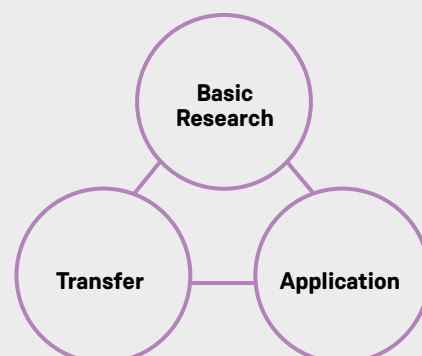


RESEARCH PRIORITIES

- Lithium and Lithium-Ion Batteries
- Cationic and Anionic Solid Ceramic Electrolytes
- Solid, Polymer, Liquid, and Hybrid Electrolytes
- Materials, Processing, and Operando Characterization
- Cell and Battery Systems
- Redox Flow Batteries

As a member of the Helmholtz Association ...

... HI MS pursues its long-term research objectives with a view to preserving and safeguarding natural resources. HI MS provides a unique link between university and non-university research across all technology maturity levels, from basic research right up to application.





SUCCESS THROUGH COOPERATION

In order to develop electrochemical storage concepts for a wide range of applications, HI MS draws together the expertise of three strong partners: Forschungszentrum Jülich, the University of Münster (WWU Münster), and RWTH Aachen University.

Through targeted cooperation with other research institutions and industry, HI MS addresses the challenges posed by the increasing complexity of technological development and innovation processes.

FUNDING

Since 2015, HI MS has received its base-level funding from the Helmholtz Association's programme-oriented funding scheme, 10 % of which is provided by the state of North Rhine-Westphalia and 90 % by the German Federal Government.

HI MS AT A GLANCE

Organization

Forschungszentrum Jülich
 Institute of Energy and Climate Research – IEK
 HI MS Helmholtz Institute Münster (IEK-12)
 Ionics in Energy Storage

Year founded

2014

Director

Prof. Prof. h. c. mult. Dr. Martin Winter

Postal address

Corrensstraße 46, 48149 Münster, Germany

Projects*

- Batterie2020 (BMBF)
- DE-Israel (BMBF)
- DE-Japan (BMBF)
- DE-US (BMBF)
- DE-Taiwan (BMBF)
- Energy Systems of the Future (acatech)
- FestBatt (BMBF)
- Battery 2030+ research initiative (EU)
- NextGenBat (NRW)
- Sense (EU)
- SPIDER (EU)
- VIDICAT (EU)

*Non-exhaustive list

Funding bodies

- Federal Ministry of Education and Research (BMBF)
- Federal Ministry for Economic Affairs and Energy (BMWi)
- German Research Foundation (DFG)
- European Union
- State of North Rhine-Westphalia



CONTACT DETAILS

Helmholtz Institute Münster

Forschungszentrum Jülich GmbH
 IEK-12: Helmholtz Institute Münster (HI MS)
 Corrensstraße 46 · 48149 Münster, Germany

Lisa-Marie Lammerding
 Tel: +49 251 83-36775
 Fax: +49 251 83-36032
 l.lammerding@fz-juelich.de

Further information:
www.hi-ms.de

