

# Strategic grants

— building knowledge  
for a new future

*Knut and Alice  
Wallenberg  
Foundation*

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## Strategic grants — building knowledge for a new future

Since the turn of the millennium, Knut and Alice Wallenberg Foundation's strategic initiatives have helped create networks in Sweden that build competence in life sciences, mathematics, data, AI, software technologies, quantum technology and material science.

The board of the Foundation identifies strategic programs with the objective to develop competence of relevance for Sweden, both the society at large as well as the industry. Main instruments to build competence are international recruitment of young scientists, large graduate schools, and research arenas to foster interaction with industry.

Besides the strategic criteria, strategic areas must be of the highest scientific quality. Strategic programs are subject to international expert evaluation according to the same principles as researcher-initiated projects within the Foundation. The objective of strategic programs is to support basic research but also to build competence in critical areas for Sweden. Collaboration between academia, industry and society within the strategic program is of crucial importance for transferring knowledge from basic research to

innovations and products. The strategic programs will altogether have graduate schools educating 1,300 PhDs out of which 325 will be industrial PhDs. In addition, the programs will finance 600 postdocs out of which at least 120 will be industrial postdocs. Research arenas, where scientists at the universities and industry collaborate to conduct research, develop joint concepts, and showcase results in demonstrations are included in most of the programs.

In total the Foundation will grant SEK 13 billion over 12 years for research within the strategic programs, with the objective to build competence in critical areas for Swedish academia and industry.

So why are we doing this?

“We believe that excellent basic research and collaboration with industry is crucial for the progress of this country”.

*Peter Wallenberg Jr  
Chair Knut and Alice Wallenberg Foundation*





## WASP — Wallenberg AI, Autonomous Systems and Software Program

*SEK 4.9 billion for 2015–2031  
SEK 6.2 billion in total, with  
co-financing from the universities  
and Swedish industry*

The program is an initiative to support basic research, postgraduate education, and recruitment in the field of autonomous systems, software technologies and AI.

The WASP-program promotes the development of know-how and expertise in a large number of fields in which vehicles, robots and complex software-intensive systems with intelligence achieve autonomy in interaction with humans. This knowledge is essential for Swedish research to keep pace with development of the connected society, in which a growing number of systems also become autonomous.

WASP supports industrial collaboration through industrial PhDs, industrial postdocs and joint research arenas with academia and industry – WARA. There are five research arenas where researchers and industry partners

collaborate to conduct research, develop joint concepts, and showcase results in demonstrations. More than 60 industrial companies are today collaborating with WASP including Ericsson, Saab, ABB, SEB, Algoryx, Spotify, EA Games, Axis Communications.

Universities participating in WASP: Chalmers University of Technology, KTH Royal Institute of Technology, Lund, Umeå University, and Linköping University as host university. Affiliated groups of excellence at Uppsala University, Örebro University and Luleå University of Technology.

*Director*  
*Professor Anders Ynnerman*  
[wasp-sweden.org](http://wasp-sweden.org)



# Life Science

For many years Knut and Alice Wallenberg Foundation has supported Swedish life science. The Foundation has since the year 2000 spent SEK 4 billion and plans to fund another 4 billion in life science including Data-driven life science.

## DDLS — Data-driven life science

*SEK 3.1 billion for 2020–2032  
SEK 3.5 billion in total, with  
co-financing from the universities  
and the Swedish industry*

The initiative on data-driven life science spans basic research in fields such as new therapeutics, epidemiology and infection biology, precision medicine and diagnostics, evolution, and biodiversity, as well as cell and molecular biology. These fields are central striving to improve human quality of life and wellbeing, and to safeguard biodiversity and create sustainability.

The goal of the program is to build broad expertise throughout the country to ensure the future need for researchers in data-driven life science, both in the academic world and in industry.

The program is hosted by SciLifeLab in collaboration with Wallenberg Centres for Molecular Medicine, WCMM.

DDLS will support industrial collaboration through industrial PhDs and industrial postdocs

*Director  
Professor Olli Kallioniemi  
[scilifelab.se](http://scilifelab.se)*

## WCMM — Wallenberg Centres for Molecular Medicine

*SEK 1 billion for 2014–2028.  
SEK 1.5 billion in total, with  
co-financing from the regions  
and the universities*

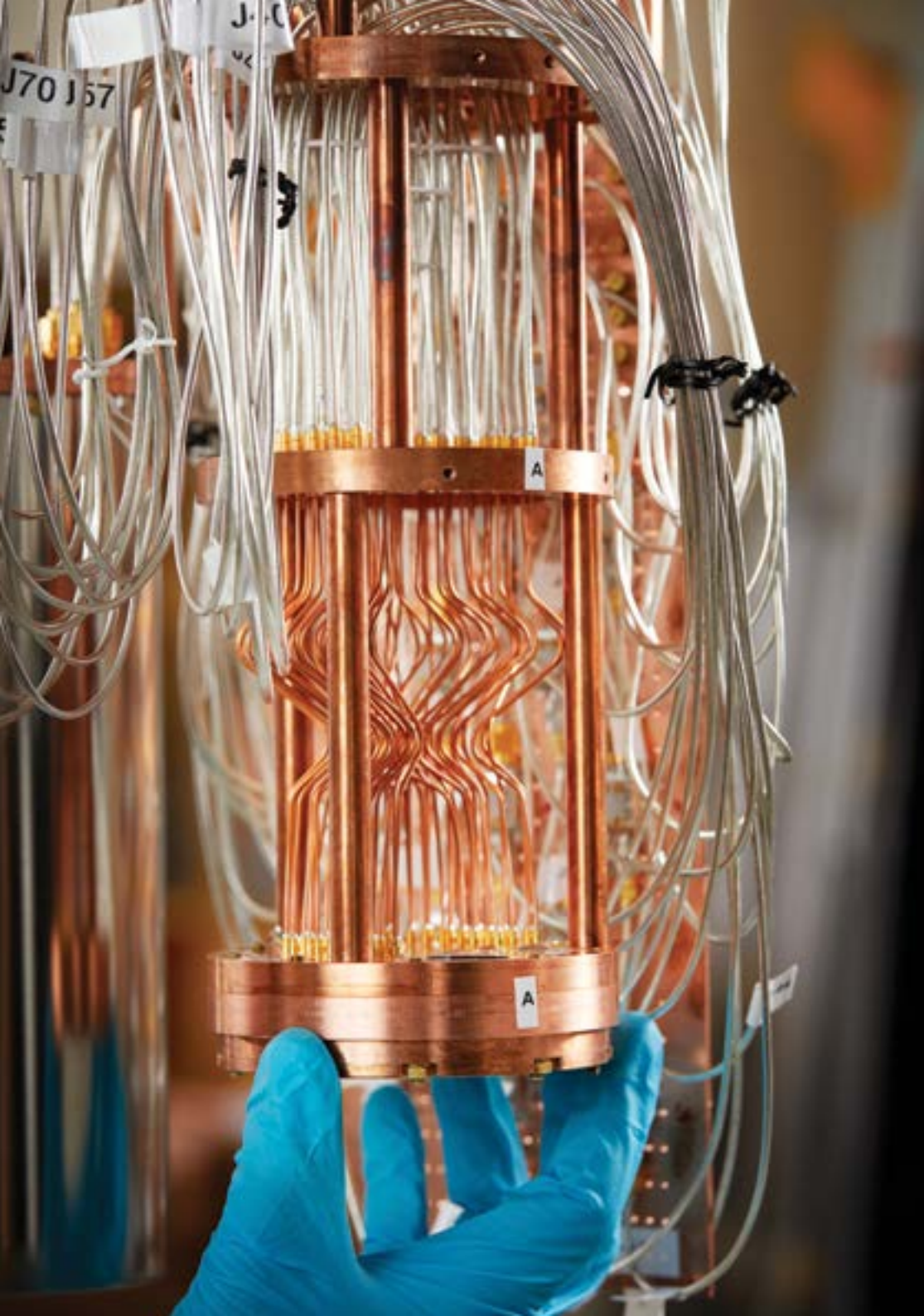
The common denominator for research under the umbrella of WCMM is “translation” – from molecule to human. In practice, this entails attempts to understand and “translate” the molecular mechanisms underlying various diseases.

Wallenberg Centres for Molecular Medicine consists of four centers at Gothenburg, Linköping, Lund and Umeå Universities, in collaboration with the respective health care regions. In WCMTM Gothenburg is also AstraZeneca a partner.

The four centers have different specialties, conducting research in

fields such as cancer, infection biology, neuroscience, metabolic diseases including diabetes, regenerative medicine, genomics, bioscience, as well as the border zone between medicine and technology.

*Directors  
Gothenburg; Professor Staffan Edén,  
Lund; Professor Gunilla Westergren-Thorsson,  
Umeå; Professor Lars Nyberg,  
Linköping; Professor David Engblom.  
[kaw.wallenberg.org](http://kaw.wallenberg.org)*



## WACQT — Wallenberg Centre for Quantum Technology

*SEK 1,4 billion for 2018–2029  
SEK 1.6 billion in total, with  
co-financing from the universities  
and the Swedish industry*

Wallenberg Centre for Quantum Technology is a center focused on research programs in four areas of quantum technology.

Chalmers University of Technology is responsible for quantum computing and quantum simulation. KTH Royal Institute of Technology is responsible for quantum communication, and Lund University for development of quantum sensing.

One goal of the program is to build a 100-qubit superconducting quantum computer, and thereby establish long-term cutting-edge expertise in the field, both in the academic world, and in industry.

WACQT supports industrial collaboration through industrial PhDs,

industrial postdocs, and a research arena with a quantum computing test bed.

This second quantum computer at Chalmers will be open free of charge for industry and academia. The new WACQT quantum computer is accompanied by a quantum helpdesk that allow Swedish companies and researchers to solve problems using quantum technology.

Six major industrial companies are WACQT partners; Saab, ABB, AstraZeneca, Ericsson, Jeppesen and Volvo Group.

*Director*  
*Professor Per Delsing*  
[chalmers.se](https://chalmers.se)



## WWSC — Wallenberg Wood Science Center

*SEK 1 billion for 2009–2028  
SEK 1.3 billion in total with  
co-financing from the universities  
and the Swedish industry*

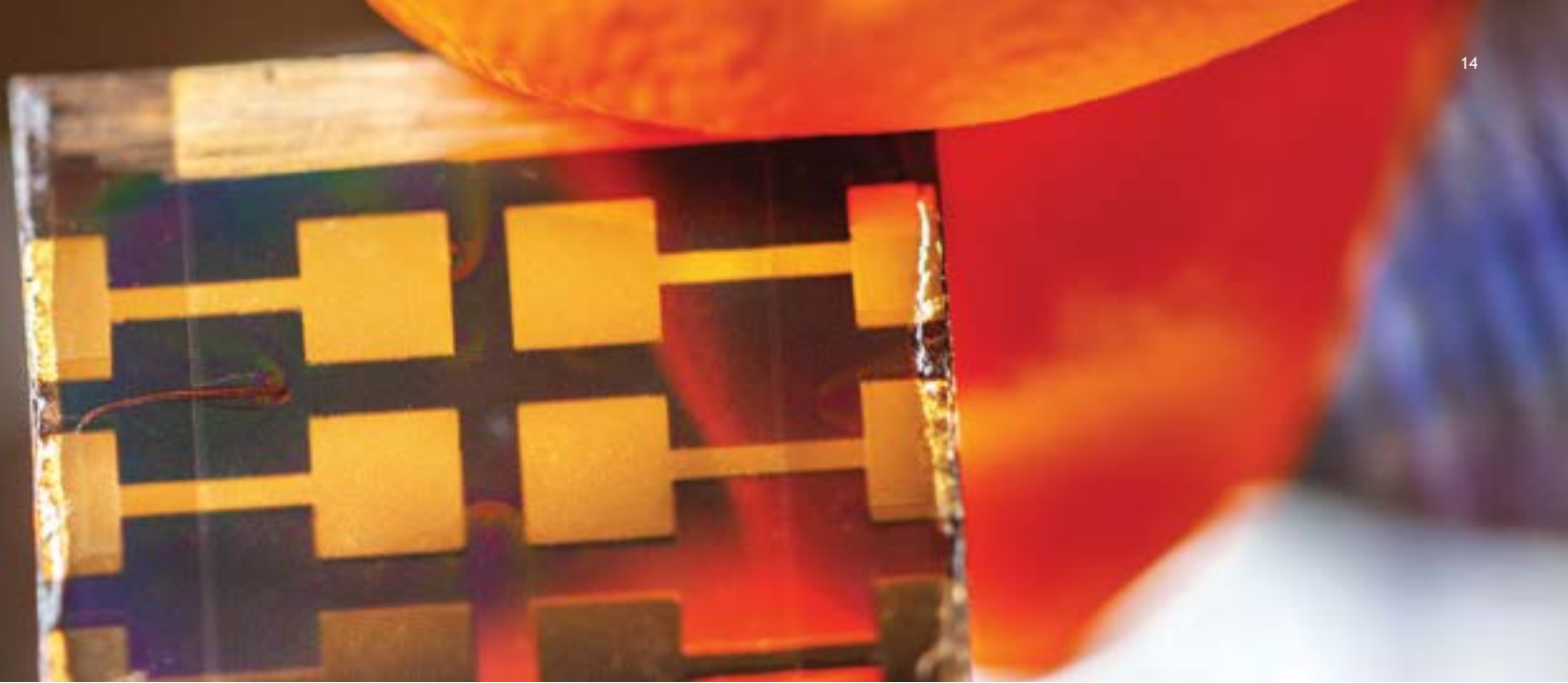
Research at the Wallenberg Wood Science Center focuses on enabling the creation of new, sustainable products from raw materials from Swedish forests by exploiting more of the wood. Ideas include creating stronger and flame-resistant materials, porous materials, new materials for energy storage and bio-based electronics and replacing oil with wood-based raw materials in the manufacture of plastics. The research has already borne fruit in the form of paper that is magnetic, conductive, and fire-resistant. The sustainability dimension has gradually come to occupy a central position in the program.

WWSC is a joint research center operated in collaboration between KTH Royal Institute of Technology, Chalmers University of Technology and Linköping University.

WWSC supports industrial collaboration through industrial PhDs and industrial postdocs and collaboration with Treesearch, a platform including eight forest companies.

*Director*  
*Professor Eva Malmström Jonsson*  
[wwsc.se](http://wwsc.se)





## WISE — Wallenberg Initiative Material Science for Sustainability

*SEK 2.7 billion for 2022–2033  
SEK 3.2 billion in total, with  
co-financing from the universities  
and the Swedish industry*

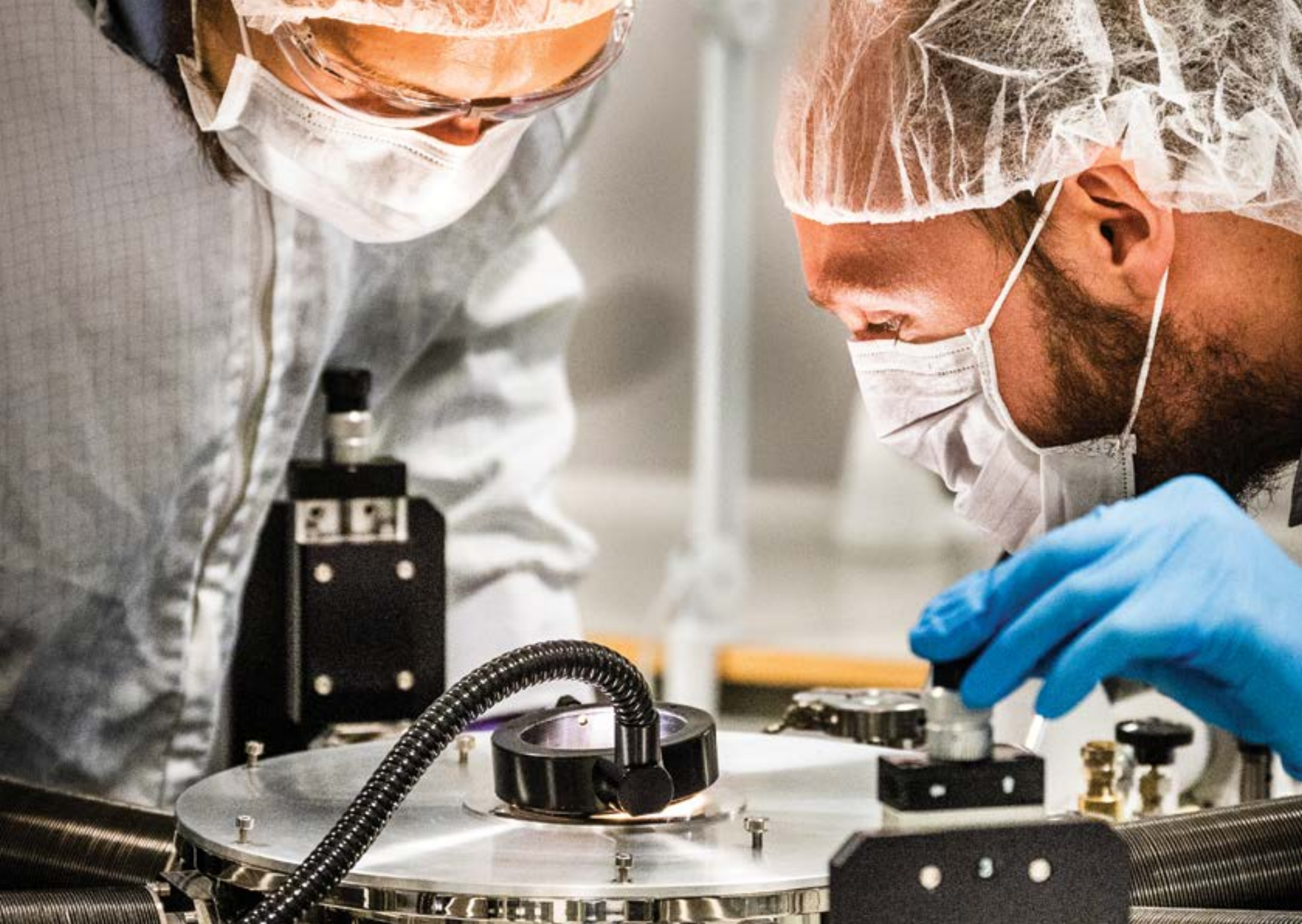
The objective of the Wallenberg Initiative Material Science for Sustainability is to create conditions for a sustainable society by researching the next generation of ecofriendly materials and manufacturing processes. The program will also facilitate better technologies for future energy systems, and to technologies and new materials to combat pollution and toxic emissions.

WISE supports industrial collaboration through industrial PhDs, industrial postdocs and research arenas between academy and industry – WIRA.

Universities participating in WISE: Uppsala University, Lund University, KTH Royal Institute of Technology, Chalmers University of Technology, Stockholm University, Luleå Technical University and Linköping University, which is also hosting the program.

*Directors  
Professors Magnus Berggren  
and Olle Eriksson  
[wise-materials.org](https://wise-materials.org)*





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