

# Welcome to AIMday Materials 2025!



# ÅMA Ångström Materials Academy



Creating new opportunities  
for collaboration and networking within materials science



# ÅMA, Ångström Materials Academy

ÅMA is a **strategic collaboration platform within materials science** that gathers academia, industry and other stakeholders in order to enable new research and develop projects and innovations in the field, so that we can be ready to meet the societal challenges of the future.



ÅMA helps to identify and develop new research areas and collaborations



ÅMA helps to guide the way to research infrastructure



ÅMA facilitates networking activities



# ® AIM DAY

AIMday®  
is a registered  
trademark of  
Uppsala University



# AIMday Materials

- For the 17th time at Uppsala University
- 10 organisations – 20 representatives
- 23 questions/challenges
- 53 academic researchers
- 17 workshops!





# AIMday Materials 2025 Program

Time	Activity
8:00 -	Registration, open all day
8:30 - 8:50	Welcome and introduction, funding opportunities
9:00 - 10:00	Parallel workshops session 1
10:00 – 10:30	Fika and mingle
10:30 – 11:30	Parallel workshops session 2
11:30 – 12:15	Lunch
12:15 – 13:45	Swedish Metals & Minerals Impact Innovation - Open workshop
14:00 – 15:00	Parallel workshops session 3 (Note: WISE is managing a workshop in the old library 11137, “open doors”)
15:00 – 15.30	Fika and networking
15:30 – 16:30	Parallel workshops session 4



## PRACTICAL INFORMATION

- Keep track of your personal programme
- Be in time for your workshops/sessions
- Be active in the discussions
- Be active in networking during the breaks
- Ask us for help and advice
- **The event will be photographed for social media**
- Have fun and make new friends and contacts





# Materials Science and Engineering at Uppsala University

AIMday Materials, 5<sup>th</sup> of February, 2025

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# Broad and Strong Competence!

One of seven Research Strengths at the Faculty of Science and Technology:

## Sustainable Materials and Material Flows

*Departments of*

*Materials Science and Engineering*

*Electrical Engineering*

*Chemistry – Ångström*

*Physics and Astronomy*

*Earth Sciences*

quantum and atomic theory – synthesis and analysis –  
fabrication, testing, and final applications

circular economy and sustainability of the material flow  
– mineral exploration, safe use and management of the rest products



### **Physics**

material theory;  
magnetism; energy materials;  
neutron and photon science;  
ion beam modification and analysis;  
quantum materials; low dimensional  
systems

### **Chemistry**

batteries; electro chemistry;  
solar cells;  
artificial photosynthesis; catalysis;  
metal hydrides, ceramics

### **Engineering**

solar cells;  
nanomaterials for cleaning and  
energy applications;  
optical materials; magnetic materials;  
tribology; additive manufacturing;  
hydrogen embrittlement

### **Earth Sciences**

protection and remediation of  
natural/water resources;  
mineral exploration



# WIS

Physics

material theory;  
magnetism; energy mat  
neutron and photon science;  
ion beam modification and analysis;  
dimensional



## SwedNess

Chemistry

electro chemistry;  
solar cells;  
artificial photosynthesis; catalysis;  
metal hydrides, ceramics



# BATTERY 2030+

## Additive Manufacturing

for the **Life Sciences**  
Competence Centre



### SWEDISH CONSORTIUM FOR ARTIFICIAL PHOTOSYNTHESIS

Engineering

solar cells;  
nanomaterials for cle  
y applicat

## STandUP for ENERGY

Earth Sciences

ection and remediation  
atural/water resources



RawMaterials  
Connecting matters

Co-funded by the  
European Union



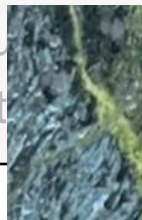
# SOLVE



is; magnetic materials;

additive manufactu

hydrogen embrittlement



mineral exploration



## SMART EXPLORATION RESEARCH CENTER



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# Infrastructures and instrumentation



## National labs

Tandemlab (VR)

Myfab (VR)

ARTEMI (VR)

Super-Adam (VR)

FREIA

Max IV

## WISE Technology Platforms

WISE Additive (UU, CTH, LiU)

Wise-EST (UU, LTU)

Near Ambient Pressure XPS  
(LiU, CTH, UU, SU)

## Labs and Instrumentation

Batteries

XRD

Solar cells

Magnetism

Optics

Synthesis

Analysis

....



# Collaboration and spin-out companies

## Strategic partnership

Hitachi Energy

Volvo Car Corporation

Alleima

Cytiva

## ÅMA – Ångström Materials Academy

– a platform for strategic collaboration in materials science that brings academia, industry and other stakeholders together.

## Collaboration companies, recent examples

Sandvik Coromant

Northvolt

ABB

Scania

Stora Enso

Karl Hedin AB

Tetra Pak

VBN Components

Exmet

Leading Edge Materials

Woxna Graphite

Gränges

SAAB

Midsummer

...

## Spin-outs, examples

*Graphmatech*

*Evolar*

*Peafowl*

*Altris*

*Chromogenics*

*Admantis*

*Disruptive Materials*

*Nova Diamant*

*Rolling Optics*

*Nanologica*

*ÅAC Clyde Space*

*Psilox*

*Ossdsign*

*Inossia*

...



Thank you!

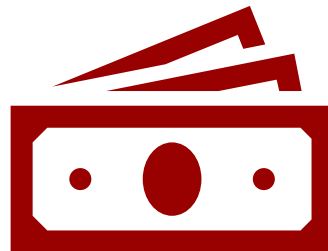


*Photo: Maria Pettersson*

# FUNDING OPPORTUNITIES FOR INDUSTRY-ACADEMIC RESEARCH COLLABORATIONS

Within Materials Science

THIS INFORMATION IS ALSO AVAILABLE FOR DOWNLOAD ON  
<https://aimday.se/materials-2025/>



# Uppsala University Innovation Partnership Office

## POTENTIAL SEED AND OTHER FUNDING POSSIBILITIES

- Prestudy funding: Up to 50 000 SEK – via AIMday or by case. In contact with IPO
- VFS funding: Up to 300 000 SEK – Deadline 14 March ( first draft of the application).
- Node funding: Up to 100 000 SEK – Ongoing. In contact with IPO to check eligibility
- External or EU Funding: - Contact with IPO to check possibilities

**Questions?**

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# The Innovation and Research bill 2024: Investments in Material and Energy Research

- **Advanced Materials**

- A total of SEK 13.5 million is allocated for 2027 to support research on advanced materials. The focus includes the development of materials for improved efficiency in fossil-free energy sources, batteries, semiconductors, and lightweight materials that reduce energy consumption and enhance safety.

- **Excellence Clusters for Breakthrough Technologies**

- Starting in 2028, a major investment of SEK 1.2 billion per year will be made in excellence clusters for breakthrough technologies. This initiative covers both early-stage research and later-stage innovation and application, involving The Swedish Research Council (Vetenskapsrådet) and Vinnova. The aim is to strengthen research in key technological areas critical to Swedish industry and competitiveness, indirectly benefiting materials research as well.

- **Strategic Research Areas**

- In 2027, SEK 200 million will be allocated to new strategic research areas, increasing to SEK 400 million in 2028. These funds will be distributed to universities based on quality assessments and are intended to focus Swedish research on areas where Sweden has strong international competitiveness. While not exclusively dedicated to materials research, these funds can support relevant research in the field

- **Report (link): [Strategic Technologies for Sweden](#)**



# The Innovation and Research bill 2024: Investments in Material and Energy Research

- **Battery Technology and Electrification**

- A strategic investment is being made in battery technology and electrification, with funding directed to leading universities. The research focus includes the development of advanced materials for energy storage solutions. SEK 10.5 million will be set aside in 2025, followed by SEK 17 million in 2026, SEK 29.6 million in 2027, and SEK 48.2 million in 2028 to support battery research

- **Nuclear Technology Research**

- To support the development and implementation of new nuclear energy technologies, funding is allocated for nuclear fundamental research: 20 million in 2025 and 2026, 35 million in 2027, 50 million in 2028

- **Sustainable Extraction of Metals and Minerals**

- The Swedish Research Council is tasked with establishing a program for fundamental research on the sustainable extraction of metals and minerals, covering the entire value chain from exploration to recycling. Additionally, Vinnova will invest SEK 11.6 million in 2025 to participate in the EU Partnership Program in this area.

- **Renewable Energy**

- Research into renewable energy sources such as solar, wind, and hydropower remains a key focus.



# The Innovation and Research bill 2024: Investments in Material and Energy Research

- **Space research**

- Increase the allocation for **space research by SEK 208 million permanently in 2028**. The government intends to establish a national research school with a focus on Sweden's needs in the space field.

- **Civil-Military Synergies**

- The distinction between civilian and military research is becoming increasingly blurred i.e. dual use, highlighting the need for collaboration across sectors. To support this, the **Swedish Defence University (Försvvarshögskolan) will receive funding to coordinate university partnerships** within the framework of Campus Totalförsvvar,

- **Research Infrastructure**

- Sweden's advanced research facilities, such as ESS and MAX IV, are critical for high-quality materials and energy research. Access to such infrastructure is a prerequisite for conducting internationally competitive research in these fields.
- Demand for advanced digital infrastructure is growing. Investments in data storage, analysis, and computational resources are essential for material and energy research, where data-driven methods and simulations

- **Mobility Between Sectors**

- There is a strong emphasis on mobility between academia, industry, and other sectors, fostering knowledge exchange and strengthening industrial competitiveness. There even is talk of a new employment scheme.



# Collaboration possibilities in EU – Work Programs and Partnerships



- **Recyclability and Circularity**
- **Reduced Carbon Footprint and Sustainability**
- **Thermal Functionality**
- **Corrosion-Resistant and Resilient Materials**
- **Substitution of Critical Raw Materials (CRM)**
- **Lightweight Solutions to Reduce Material Usage**
- **Reduced Use of Hazardous Materials**
- **High Power Density in Batteries**

- **Circular Bio Based Europe JU**
- **Built4People**
- **BATT4U**
- **Clean Hydrogen**
- **Clean Energy Transition**
- **Chips JU**
- **Clean Aviation**

# Planing grants for international proposal



<b>5 MAR 2025</b> AT 14:00	<b>14 MAY 2025</b> AT 14:00	<b>10 SEP 2025</b> AT 14:00	<b>12 NOV 2025</b> AT 14:00
Last day in application period	Last day in application period	Last day in application period	Last application date

**11 FEB 2025**  
**AT 14:00**

[Information meeting about Planning Grants for international calls](#)

[LINK](#)



# European Defence fund



[LINK](#)

The EDF is the Commission's instrument to support Research and Development in defence.

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Its main goals are:

- To promote cooperation between companies, including SMEs and research actors throughout the Union.
- To boost defence capability development through investments.
- To help EU companies develop cutting-edge and interoperable defence technologies and equipment.



# Sustainable Battery Value Chain



- The research program **Sustainable Battery Value Chain** focuses on new and existing battery technologies, resource-efficient manufacturing processes, recycling, and the role of the battery value chain from a system perspective
- Planned for calls spring 2025

[LINK](#)

# SSF call for 120 million in Instrument, Technology and Method development



- The grants can be applied for by research engineers, non-faculty researchers, researchers, PhDs and postdocs for the development of new tools and methods, while promoting the grantees' own career paths.
- The call is mainly aimed at researchers and research engineers and **not** at professors, lecturers and people on a tenure track.

[LINK](#)

Last date for applications –

**25 MAR 2025**

**CET 14:00**



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And other important funders to keep your eyes on – take the chance to interact!

**WMS**

**Swedish Metals & Minerals**  
**impact innovation**

