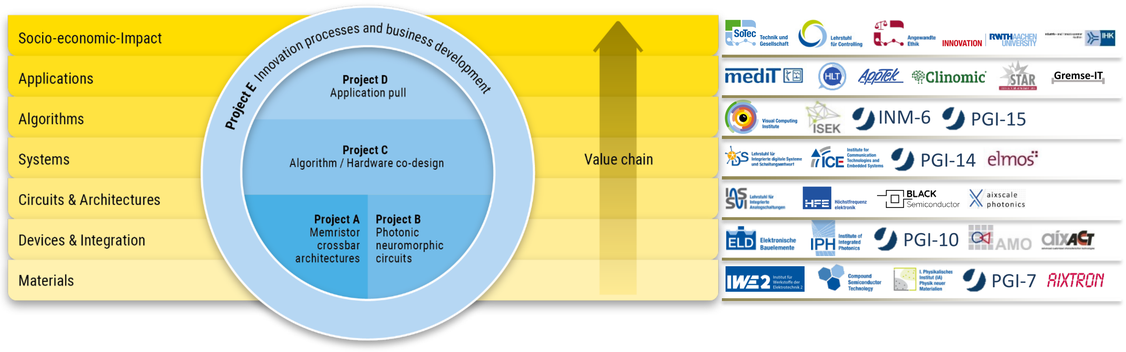
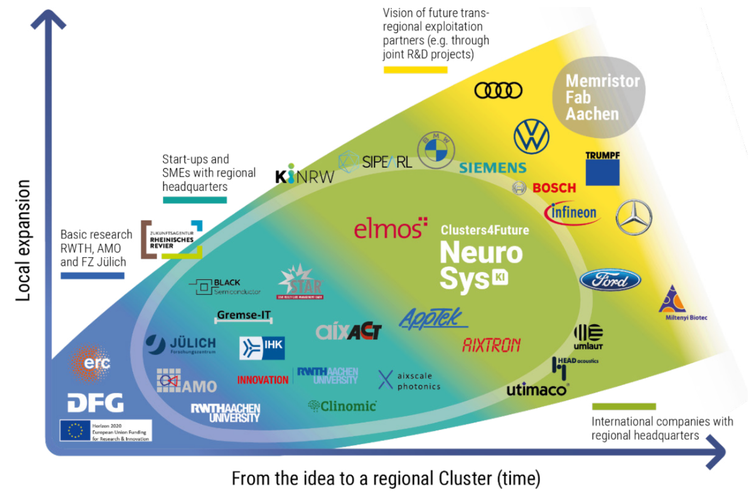
Neuromorphic Computing

Latest activities at ELD and AMO

Neuromorphic Hardware for Autonomous Systems of Artifical Intelligence (AI)





Transdisciplinary Consortium
Physics, material science, neuroscience, engineering, computer science, economics, ethics, sociology

Technology Sovereignty, European Values in AI

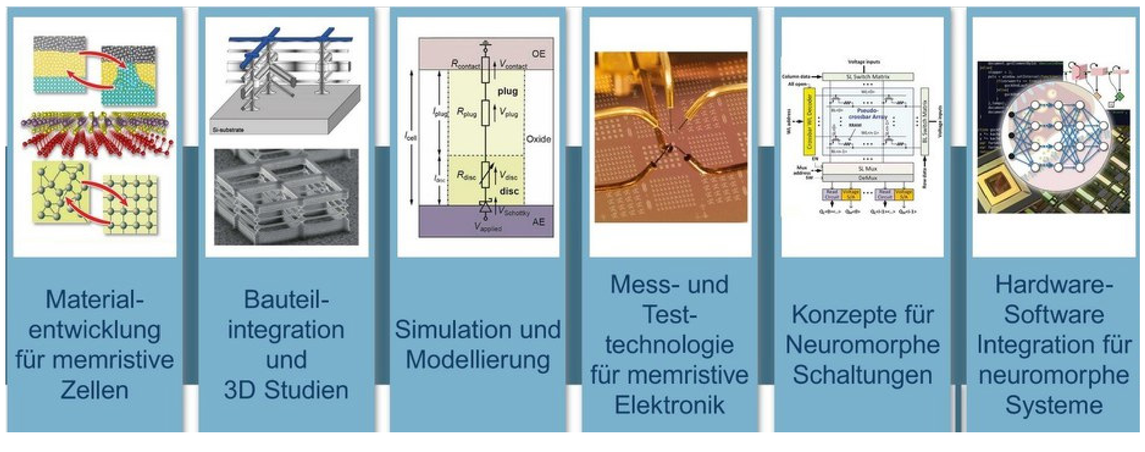
Neuro-Inspired Technology of Artificial Intelligence for Future Electronics

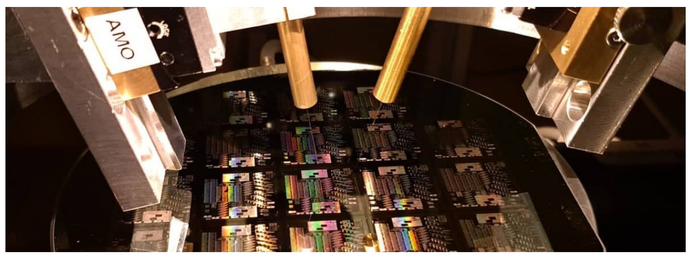
Vision

We see the opportunity for a digitally sovereign Germany with technology leadership in energy-efficient neuromorphic AI. In particular, the Jülich-Aachen region should become a globally visible center for neuromorphic computing.

Mission

NEUROTEC forms a nucleus to a comprehensive neuromorphic technology for artificial intelligence. Extensive fundamental knowledge of memristive materials and devices, integration concepts, modeling, metrology, circuit design, and algorithms to demonstrate neuro-inspired systems of hardware and software for neuromorphic computing.





AMO GmbH

- High-Tech SME / Institute (non-profit)
- Johannes Rau Research Institute
- Research Foundry
- 400 m2 clean room

> 80 staff members

Chair of Electronic Devices

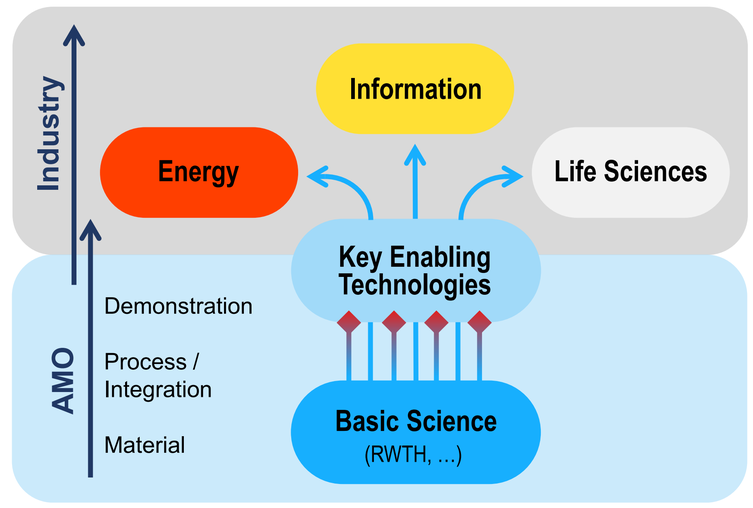
- RWTH Aachen University
- Large European Technical University
- 47.000 students, 10.000 employees
- Aachen, a truly European city

Our Mission

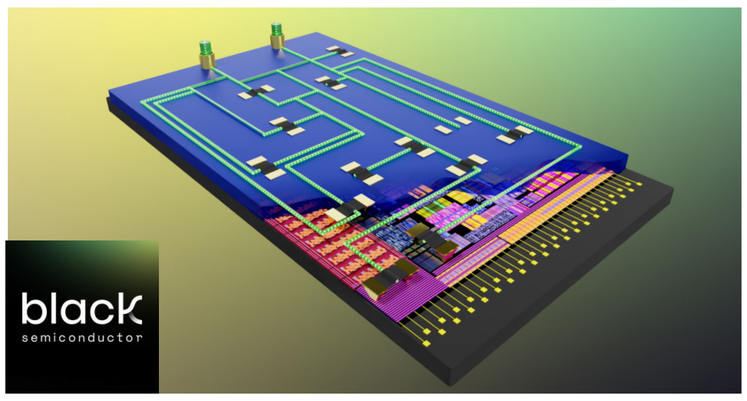
Global Societal Challenges
- Climate Chance
- Aging societies / sustainable health care
- Mobility
- Data Security

Emerging Technologies
- Neuromorphic Computing
- Quantum Technologies
- Bio-/Nanotechnology
- Artificial Intelligence

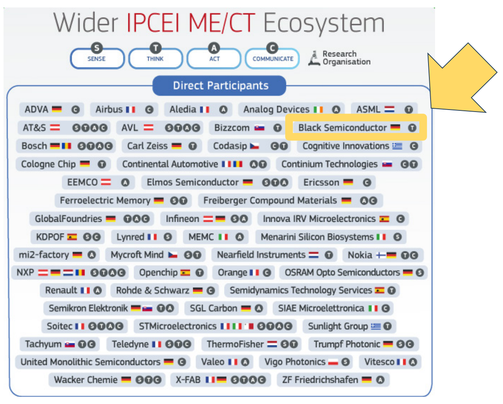
What we do
- Identify Key Enabling Technologies
- Demonstrate applications
- Bridge the innovation gap



Spin-off Success: Black Semiconductor



One of the 68 „Important Projects of Common European Interest“ (IPCEI) by the European Commission!



Dr.-Ing.
Jan van den Hurk
Deputy Head of Chair

Tel.: +49 (0)241 820276
E-Mail: jan.vandenhurk@eld.rwth-aachen.de

Chair of Electronic Devices
Prof. Dr.-Ing. Max C. Lemme
RWTH Aachen University
Otto-Blumenthal-Str. 25 | 52074 Aachen | GERMANY

www.eld.rwth-aachen.de